

**2001 Selected  
Amendments to the  
*Imagine Bothell...*  
Comprehensive Plan  
and Bothell  
Municipal Code**

*Revision and re-issuance of  
portions concerning CPA-  
2001-5 and CPA-2001-6*

An integrated SEPA/GMA document

# City of Bothell

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March 15, 2002

**SUBJECT: Revision and re-issuance of portions of an integrated State Environmental Policy Act / Growth Management Act document concerning the 2001 Selected Amendments to the *Imagine Bothell...Comprehensive Plan and Bothell Municipal Code***

Dear Recipient:

In November, 2001, the Bothell Department of Community Development issued an integrated State Environmental Policy Act (SEPA) / Growth Management Act (GMA) document which described and analyzed the policy implications and likely environmental impacts of five potential Plan and Code amendments.

The Department has revised and re-issued portions of this document concerning two of the potential amendments:

Name of potential amendment	Nature of revision
CPA-2001-5, Building heights and residential density in designated activity centers	<ul style="list-style-type: none"><li>• Refinement of traffic, water and sewer impact analyses, and consequent recommendation that the Six Year Transportation Improvement Program incorporate projects to accommodate forecasted growth under the proposed amendments</li><li>• Reduction in maximum allowed height to be considered in regional activity centers from 150 to 100 feet, except for certain manufacturing processes requiring taller structures, per 2/4/02 Council direction</li></ul>
CPA-2001-6, Wetland impact mitigation	<ul style="list-style-type: none"><li>• Retention of "no net loss of acreage" language as it applies to Category 1 wetlands</li><li>• Incorporation of latest DOE replacement ratios</li><li>• Clarification of meaning of regulations</li></ul>

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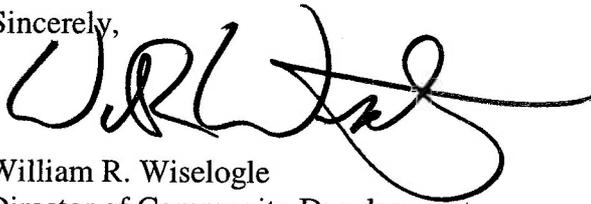
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These sections are being re-issued effective March 22, 2002. Written comments on the policy or environmental analyses or any other aspect of CPA-2001-5 or CPA-2001-6 are invited and will be accepted until 5 p.m. April 22, 2002. Comments should be mailed or delivered to the City of Bothell Community Development Department, 9654 NE 182<sup>nd</sup> Street, Bothell, WA 98011.

Any comments received will be answered and incorporated into a Final Environmental Impact Statement (FEIS) to be issued shortly after the close of the comment period. The City Council may act on the proposed Plan and Code amendments any time after issuance of the FEIS.

Please contact the undersigned at (425) 486-8152 or at [bill.wiselogle@ci.bothell.wa.us](mailto:bill.wiselogle@ci.bothell.wa.us) if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'WR Wiselogle', written over a horizontal line.

William R. Wiselogle  
Director of Community Development

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# I. Introduction (revised)

## Purpose

This document consists of revised descriptions and analyses of two of five potential amendments to the *Imagine Bothell...* Comprehensive Plan and implementing Bothell Municipal Code amendments currently under consideration by the Bothell City Council. This is a supplement to a document issued in November, 2001, which described and analyzed all five of the amendments. Copies of the original document are available at the Bothell Community Development Department, 9654 NE 182<sup>nd</sup> Street, Bothell.

The revisions to two of the proposed amendments – 2001-CPA-5, concerning building heights and residential density in designated centers; and 2001-CPA-6, concerning wetland mitigation – were prompted by new Council direction, in the case of 2001-CPA-5, and new analytical information, in the case of both proposed amendments. This document is intended to be used by the public and the Bothell City Council in concert with the original document issued in November to evaluate whether any or all of the potential amendments, or modifications thereof, should be approved.

In accordance with Washington Administrative Code (WAC) Sections 197-11-210 through -235, this document integrates the descriptions and policy analyses of the potential amendments with the environmental review of plan alternatives required by the State Environmental Policy Act (SEPA).

This integrated SEPA / GMA document is structured such that the evaluation of the planning issues and alternatives associated with the proposed Plan and Code amendments are contained in Chapter III, and the analysis of the potential environmental impacts associated with the proposed amendments are contained in Chapter IV.

A threshold SEPA determination issued by the City on October 11, 2001 found that the environmental impacts of the five potential amendments were likely to be significant and thus warranted preparation of an Environmental Impact Statement (EIS). As provided for in the WAC, the Draft Environmental Impact Statement (DEIS) is incorporated in this document.

Interested persons are encouraged to comment on the DEIS. Any comments received will be answered and incorporated into a Final Environmental Impact Statement (FEIS), which will be issued as a supplement to this document.

The information in this document may be supplemented by public testimony in hearings to be conducted by the City Council. The City Council will deliberate on the information in this document plus public testimony, and will take final action on the potential amendments.

The remainder of this introduction provides background on this Plan amendment process.

## **Initiation of 2001 Plan amendments**

On March 19, 2001, the City Council initiated a round of four selected Plan and Code amendments to be considered directly by the Council, and reserved the option to add other amendments to its deliberations. On April 23 and October 1, 2001, the Council initiated two additional Plan and Code amendments. One of the original amendments, proposing Plan and Code amendments in the Waynita Valley, was denied by the Council in a preliminary round of hearings (see Screening Round below), leaving five potential amendments for consideration in the final round of hearings. Bothell Municipal Code Section 11.18.060 gives the Council the authority to consider and act upon any suggested amendments directly without referring the suggested amendment to its advisory body (such as the Planning Commission) for recommendation.

There are other Plan amendment requests waiting to be considered. These amendment requests will be included in the major Plan update, which is currently in progress. The major Plan update, the first complete overhaul of the Plan since its 1994 adoption, is revisiting all 13 of the Planning Area-wide elements and all 13 Subarea plans. This two-year process is expected to be completed by the end of 2003.

## **Screening round**

Bothell Municipal Code Section 11.18.060 gives the City Council the authority to prioritize suggested Plan amendments for further consideration and to defer to future years or decline to further consider suggested amendments.

Accordingly, consideration of the 2001 potential Plan amendments began on March 19, 2001 with a screening round conducted by the City Council to determine which potential amendments should be considered now, which should be postponed to a future Plan update, and which should not be considered.

The City Council received initial presentations and testimony and conducted screening hearings on March 19, April 23, May 29, June 25, and July 23, 2001. The City Council considered a total of five potential amendments during these hearings and decided that one of the five original potential amendments, concerning potential Plan and Code amendments in the Waynita Valley, should not be considered further, leaving four potential amendments for more detailed consideration.

In addition, on October 1, 2001, the Council initiated Plan and Code amendments concerning the potential repeal of language calling for no net loss of wetland acreage in mitigation projects. In total, five potential amendments were selected for more detailed consideration.

This integrated SEPA/GMA document was originally issued effective November 8, 2001, with written comments due by 5 p.m. December 10, 2001.

## **Final round**

The Council began its final round of hearings on December 3, 2001, continued the hearing to February 4, and further continued the hearing to April 1.

At the December hearing, the Council authorized refinement of impact analyses on the building height amendments (CPA-2001-5) to reflect realistic growth assumptions, and at the February hearing the Council expressed its desire to reduce the maximum height to be considered in the City's two regional activity centers from 150 to 100 feet, except for certain manufacturing processes which require taller structures.

In addition, following the February hearing staff received comments on the wetland mitigation amendments (CPA-2001-6) from the Department of Ecology, and the results of an assessment of wetland mitigation projects in Washington, which together convinced staff that revisions to these amendments were warranted.

Due to the above events, the Bothell Community Development Department has revised and is re-issuing portions of the integrated SEPA/GMA document which concern potential amendments CPA-2001-5 and CPA-2001-6.

The date of issuance is March 22, 2002, and comments on any aspect of these two amendments are due by 5 p.m. April 22, 2002. Comments will be answered and incorporated in a final environmental impact statement (FEIS) expected to be issued shortly after the comment deadline. The Council may act on all five of the amendments any time after issuance of the FEIS.

## II. Fact Sheet (revised)

**Proposal title:** 2001 Selected Amendments to the *Imagine Bothell...* Comprehensive Plan and Bothell Municipal Code - An integrated SEPA / GMA document.

**Proposal description and location:** Consider and adopt any, all or none of five potential amendments to the *Imagine Bothell...* Comprehensive Plan and the Bothell Municipal Code. These potential amendments are summarized below.

- CPA-2001-2, Area east of 120<sup>th</sup> Avenue NE and 39<sup>th</sup> Avenue SE – Repeal of use restrictions based solely on slope percentage. Eliminate the prohibition of office and multi-family residential uses on slopes greater than 15% on certain properties within the North Creek Valley Subarea of the *Imagine Bothell...* Comprehensive Plan and remove the R 2-5 designation, leaving the area designated R 11-15, OP. The corresponding change in zoning would be from R 4, R 15, OP to R 15, OP.
- CPA-2001-3, Gibson – Re-designation from R 6-10 to R 11-15. Amend the Canyon Park Subarea Land Use Policy 11 and the Plan map, and corresponding zoning, to re-designate a single subject property from R 6-10 to R 11-15 (R 8d to R 15 zoning), to match the designation of property that is under the same ownership immediately to the north of the subject property. The subject property is located approximately 380 feet south of 228<sup>th</sup> St SE and west of 19<sup>th</sup> Ave SE and is approximately one acre in size.
- CPA-2001-4, MVSO expansion. Extend the Motor Vehicle Sales Overlay (MVSO) to include the R 11-15, OP, CB, LI designated property located at 12542 NE 180<sup>th</sup> St.
- CPA-2001-5, Building heights and residential density in designated Activity Centers. Amend the maximum building heights in the Thrasher's Corner, Canyon Park and downtown Community Activity Centers and the Canyon Park and North Creek Regional Activity Centers, and remove residential density limitations in the Canyon Park and Downtown Community Activity Centers and in portions of the Canyon Park and North Creek Regional activity Centers. The maximum building height in the Community Activity Centers would be increased from 35 feet to 65 feet; the maximum building height in the Canyon Park Regional Activity Center would be increased from 48 feet to 100 feet, except for certain manufacturing processes which require taller structures; the maximum building height on the valley floor of the North Creek Regional Activity Center would be decreased from unlimited to 100 feet, except for certain manufacturing processes which require taller structures; the maximum building height on the east slope of the North Creek Regional Activity Center would be increased from 35 feet to 65 feet; and the maximum building height on the southwest slope of the North Creek Regional Activity Center would be decreased from unlimited to 65 feet. Taller buildings adjacent to residential areas would be subject to greater setbacks and landscape buffering than are presently required. Where residential density limitations would be removed, the number of units attainable would be controlled by site and building envelope regulations.

- CPA-2001-6, Wetland impact mitigation. Modify Plan and Code language which currently calls for no net loss of wetland acreage. Retain the acreage preservation requirement for Category 1 wetlands, but allow more flexibility in methods to mitigate impacts to Category 2 and 3 wetlands. Language mandating no net loss of wetland functions and values would remain. The effect of the amendments would be to allow alterations to qualifying Category 2 and 3 wetlands to be compensatorily mitigated by methods including creation, restoration and enhancement, the last of which preserves wetland system functions and values but may result in a net loss of wetland acreage. In addition, the amendments would incorporate the latest Department of Ecology recommended replacement ratios, and would clarify the regulations.

**Proponents:** Individual property owners in Bothell requested potential amendments CPA-2001-2 and CPA-2001-3. City staff requested consideration of CPA-2001-4. The Council requested consideration of CPA-2001-5 and CPA-2001-6.

**Lead agency:** City of Bothell  
18305 101st Avenue NE  
Bothell, WA 98011

**Responsible SEPA official and contact person:** William R. Wiselogle, Director  
Department of Community Development  
City of Bothell  
9654 NE 182<sup>nd</sup> Street  
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(425) 486-8152

**Licenses/permits/approvals needed:** The proposed Plan amendments will be reviewed directly by the City Council, which will conduct public hearings and may adopt any, all or none of the potential amendments. Concurrently, the City Council will also consider proposed Code amendments to City development regulations to implement the proposed Plan amendments. Adoption of amendments would be by ordinance.

**Authors and principal contributors:** Bothell Community Development Department staff. Entranco, Inc. prepared Appendix A, Transportation Concurrency Analysis. Appendix B, Water / Sewer Environmental Impact Study, was prepared by Gray & Osborne Consulting Engineers.

**Date of issue:** March 22, 2002

**Comments due date:** 5:00 p.m. April 22, 2002

**Time and place of public hearings:** The next Council hearing following this revision and re-issuance of CPA-2001-5 and CPA-2001-6 is scheduled for April 1.

**Date final action is anticipated:** Council adoption of an ordinance adopting amendments to the *Imagine Bothell...* Comprehensive Plan and to the Bothell Municipal Code is expected to occur in May following completion and issuance of the final environmental impact statement on the proposed amendments.

**Prior environmental reviews related to this proposal:** This DEIS is an original document and adopts no previously issued environmental reviews. A list of documents referenced in this DEIS is included in Appendix C.

**Cost of copies of integrated SEPA / GMA document:** To be determined

**III.**  
**Proposed Findings,  
Conclusions and Staff  
Recommendations,  
including GMA Policy  
Analysis**

*Revised*

**2001 Selected Amendments to the *Imagine Bothell...*  
Comprehensive Plan and Bothell Municipal Code**

**CPA-2001-5  
Building height and residential density in designated  
activity centers**

**Proposed Findings and Conclusions,  
and Staff Recommendation**

**Summary**

Amendment initiated by:	City Council
Geographic location:	Thrasher's Corner, Canyon Park and Downtown Community Activity Centers, and Canyon Park and North Creek Regional Activity Centers.
Requested amendment:	Revise allowable building heights and residential densities
Alternatives:	Amend building heights and residential densities in one or more activity centers, but not in all; approve lower heights; retain but modify density caps; make no changes
Hearing bodies:	Planning Commission, Landmark Preservation Board and City Council.
Dates considered:	Planning Commission - October 4, 11 and 25; November 8 and 15; and December 6, 13 and 20, 2000; and January 3, 2001. Landmark Preservation Board - October 17, 2000; February 27, March 20, April 24 and July 19, 2001 City Council - February 20, March 5, July 23 and December 3, 2001; February 4 and April 1, 2002
Staff recommendation:	Adopt amendments as revised by Council to reduce maximum height in regional activity centers from 150 to 100 feet, except for certain manufacturing processes; incorporate needed transportation improvements in Six Year Transportation Improvement Program
City Council Action:	<b>To be added upon completion of Council deliberations</b>

## Proposed Findings

**Note** – These Proposed Findings combine Planning Commission Findings concerning Building Height Code Amendments affecting the Thrasher's Corner and Canyon Park community activity centers and the Canyon Park and North Creek regional activity centers with proposed Staff Findings concerning Building Height Plan Amendments affecting the above-described areas, Building Height Plan and Code Amendments affecting the Downtown community activity center, and Residential Density Plan and Code Amendments for the Canyon Park and Downtown community activity centers and the Canyon Park and North Creek regional activity centers.

1. **Person requesting amendment.** The City Council initiated Code amendments to consider revisions to allowable building heights in designated activity centers in June, 2000. The Planning Commission held hearings and deliberated on these Code amendments, and forwarded a recommendation to the Council in January, 2001. In March, 2001, the Council expanded the scope of the amendments to include Plan amendments as well. In July, 2001, the Council further expanded the scope of the Plan and Code amendments to include consideration of amendments to repeal the residential density limit in certain activity centers and to instead allow site and building envelope regulations to control the number of dwelling units obtainable on a parcel. In December, 2002, the Council initiated amendments to the Transportation and Capital Facilities elements as a precaution in case such amendments turned out to be necessary to be consistent with changes in the Land Use element or subarea plans. In February, 2002, the Council stated its desire to reduce the maximum height to be considered in the Canyon Park and North Creek regional activity centers from 150 feet to 100 feet, except for manufacturing uses which required taller structures.
2. **City of Bothell staff contact.** Bill Wiselogle, Community Development Department, 9654 NE 182<sup>nd</sup> Street, Bothell (425-486-8152).
3. **Geographic location.** The proposed amendments would apply to the Thrasher's Corner, Canyon Park and Downtown community activity centers, and the Canyon Park and North Creek regional activity centers. See **Exhibits 1 and 2.**
4. **Existing and proposed Comprehensive Plan policy and zoning.** Because of the complexity of these amendments, this information is presented in table form on the next page. "R-AC" in the table stands for Residential – Activity Center, and would be a new plan designation and zoning classification. Both Planning Commission and Staff recommendations are included. No Planning Commission recommendations were changed, with the exception of a revision requested by the Council to reduce the maximum building height allowed in regional activity centers from 150 feet to 100 feet, not including certain manufacturing processes

which required additional height. Staff recommendations are in addition to the Planning Commission recommendations, and deal with the Downtown community activity center and with the residential density Plan and Code amendments, neither of which issues were deliberated by the Commission. See **Exhibits 1 and 2** for complete text and maps, and **Exhibits 4 and 5** for analyses of residential and employment capacity, and anticipated growth, with and without the amendments.

Activity Center	Plan designation		Zoning classification		Allowed building height	
	Existing	Proposed	Existing	Proposed	Existing	Proposed
Thrasher's Corner CAC	OP, CB	OP, CB No change	OP, CB	OP, CB No change	35 ft.	65 ft. with conditions
Canyon Park CAC	OP, CB; R 11-15, OP, CB	R-AC, OP, CB	OP, CB; R 15, OP, CB	R-AC, OP, CB	35 ft.	65 ft. with conditions
Downtown CAC	R 11-15, OP, CB; CE	R-AC, OP, CB	R 15, OP, CB	R-AC, OP, CB	35 ft.	65 ft. with conditions; higher for perf. arts ctr., w/ conditions
Canyon Park RAC	OP, CB; OP, LI; OP, CB, LI; R 11-15, OP, LI	OP, CB; OP, LI; OP, CB, LI; R-AC, OP, LI	OP, CB; OP, LI; OP, CB, LI; R 15, OP, LI	OP, CB; OP, LI; OP, CB, LI; R-AC, OP, LI	48 ft.	100 ft. with conditions; higher for certain manufacturing processes, with conditions
North Creek RAC – valley floor	R 11-15, OP, CB, LI	R-AC, OP, CB, LI	R 15, OP, CB, LI	R-AC, OP, CB, LI	Unlimited with conditions	100 ft. with conditions; higher for certain manufacturing processes, with conditions
North Creek RAC – East hillside	R 2-5, R 11-15, OP	R 2-5, R 11-15, OP No change (Note – CPA-2 would delete R 2-5)	R 4, R 15, OP	R 4, R 15, OP No change (Note – CPA-2 would delete R 4)	35 ft.	65 ft. with conditions
North Creek RAC – Southwest hillside	R 11-15, OP	R 11-15, OP No change	R 15, OP	R 15, OP No change	Unlimited with conditions	65 ft. with conditions

In the community activity centers, the purpose of raising building heights and adopting a building envelope approach to residential density is to promote pedestrian-oriented mixed-use development and consequently the sustained vitality and economic health of these centers, while maintaining a scale of development that supports, rather than overwhelms, ground-level shopping, dining, socializing, and other desired activity.

In the regional activity centers, the purpose of establishing a 100-foot height limit applicable to both the Canyon Park and North Creek centers – raising the current limit in Canyon Park but lowering the current limit in North Creek - is to provide sufficient capacity for future employment growth to be able to attract new businesses and retain existing businesses which desire to expand, without having to designate additional land for employment growth in surrounding areas currently designated for residential uses; and to ensure relatively equal development potential and uniform aesthetics between the two regional activity centers.

The conditions referred to in the above table under “Allowed building height, Proposed” are summarized as follows:

- Within the Thrasher’s Corner, Canyon Park and Downtown community activity centers, buildings over 35 feet would be required to devote at least 10 percent of the area of the average story to externally-oriented at-grade space for retail, dining, personal services, cultural / entertainment activities or similar uses. Such buildings would also be required to devote at least 40 percent of the area of the average story to parking, either within or under the building or within a separate parking structure. The purpose of these requirements is to ensure the kind of compact, pedestrian-friendly, mixed-use development pattern desired in the community activity center.
- In addition to the above conditions which apply to all community activity centers, additional conditions are proposed for the Downtown center to protect and preserve the historic scale of the Main Street area. Buildings fronting Main Street, 101<sup>st</sup> and 102<sup>nd</sup> would be required to step the third and higher stories back from the front lot line by 20 feet, and the Landmark Board would be charged with reviewing and commenting on development proposals within the Central Business Special District.
- Due to their unique design requirements, performing arts centers in the Downtown community activity center would be allowed to be taller than 65 feet, provided that the footprint of the portion higher than 65 feet comprised no more than 10 percent of the roof area.
- In all activity centers, buildings over 35 feet would be subject to increased setbacks from residentially designated and zoned properties of three feet

horizontally for every one foot in building height over 35 feet, and increased landscaping buffers of .25-foot for every foot in building height over 35 feet.

- In the regional activity centers, buildings over 100 feet would be allowed only if a manufacturing process required a taller structure. In such cases, any height over 100 feet could not be devoted to offices, meeting rooms, cafeterias or any other employee-intensive uses.
5. **Reasonable alternatives to the proposed amendment.** The Council may amend building height and/or residential density policies and regulations for all, some or none of the activity centers.
  6. **Existing conditions.** The existing designated community and regional activity centers vary in type, stage and character of development.

The Downtown community activity center is where Bothell originated, in the late 1800's, and still contains a number of buildings from the early 1900's. Redevelopment over the years has introduced some variety in Downtown architecture, but the area retains a historic character and scale, as well as a pronounced pedestrian orientation. The Main Street area has seen a number of businesses come and go over the years, but recent entrepreneurial activity has resulted in a number of new tenants. The nearby University of Washington, Bothell and Cascadia Community College have created a moderate boost for area businesses.

The Thrasher's Corner and Canyon Park community activity centers appear to contain no development from prior to 1960 (apart from an abandoned barn and stone cottage at SR 527 and Filbert Road), and most development has occurred since the mid-1980's. These are auto-oriented areas providing goods and services to surrounding residents but little in the way of distinguished architecture or public spaces to entice a visitor to linger. However, their locations at key arterial intersections suggest that they will continue to attract and retain tenants.

The Canyon Park and North Creek regional activity centers have developed since the early 1980's as archetypal suburban business parks. The first developments consisted of one-story office-warehouse buildings, but demand over time has shifted to office and high technology research and assembly uses. The typical building constructed over the past several years is a two- to three-story office building, occasionally with under-building parking. An economic analysis conducted in 1999 projected full buildout (not counting any redevelopment) around 2004 based on growth rates at the time. Growth has slowed substantially over the last year, but the fact remains that the amount of vacant land for development in these centers is dwindling.

7. **Pertinent Plan and Zoning history.** The current plan policies and map designations for the activity centers were adopted as part of the original *Imagine Bothell...* Comprehensive Plan in 1994, and the zoning regulations to implement the Plan were adopted in 1996. There have been amendments affecting these areas since then, most recently in 2000 and 2001 when a Community Business designation was added to the Canyon Park regional activity center, and a Motor Vehicle Sales Overlay designation was added to parts of each of the activity centers.
8. **Applicable county-wide planning policies (King and Snohomish Counties).** Since the affected activity centers lie in both King and Snohomish Counties, both counties' CPPs apply.

The proposed amendments would be consistent with CPPs in both counties that promote provision of adequate land to accommodate future urban development; intensities and densities sufficient to support transit; affordable housing; and pedestrian-oriented development.

The proposed building height and residential density amendments would result in 8.5 percent less employment capacity, and 25.8 percent more population capacity, than is permitted under current regulations within the affected activity centers combined (see **Exhibits 4 and 5**). Employment capacity within the centers under existing regulations is 70,916, and under the amendments would decrease to 64,906. Population capacity within the centers under existing regulations is 8,113, and under the amendments would increase to 10,207.

In the case of employment, Bothell should have enough capacity with or without the amendments to accommodate future business growth for several decades, based on historic employment growth rates. This presumes substantial future redevelopment of the North Creek Valley in taller buildings, however, as the areas currently having the most jobs are almost completely developed in low-intensity one-, two- and three-story buildings.

In the case of population, additional capacity may be needed in the future somewhere in the City, as a City-wide capacity analysis indicates little developable or redevelopable land left for residential uses after the current GMA target year of 2012. An increase in residential capacity within the activity centers could help the City meet its GMA obligation to accommodate a fair share of the region's population growth (see detailed discussion in Finding 9 below).

9. **Policy analysis – Land Use Element.**
  - a. Goal LU-G6. This goal calls for the City “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 20-year term of the Plan.”

As of the end of 2001, which represents 9/20, or 45 percent, of the 20-year planning period, Bothell had achieved 48 percent of its allocated population growth, and 150 percent of its allocated employment growth. (See **Exhibit 3** for a detailed discussion of actual growth v. growth targets.) In other words, the City was roughly on track to meet its population goals by 2012, and has already far exceeded its 20-year employment goals.

The initial planning period was 1992-2012, and OFM, the counties and the cities are in the preliminary stages of determining how much population and employment growth needs to be accommodated over the following 10 years, from 2012-2022.

As one component of this exercise, cities and counties are examining how much population and employment capacity would remain under current regulations at 2012, assuming the jurisdictions achieve or exceed their allocations by then. Each of these is described in turn – with implications for the proposed Plan and Code amendments – in the following paragraphs.

Population. For the 1992-2012 period, Bothell was assigned a 20-year population growth allocation of 12,185 to 14,685 additional residents (King County assigned its targets via ranges). Adding the average of these two numbers – 13,435 – to the 1992 population of 24,153 produces a total target 2012 population of 37,588.

According to a City-wide land capacity analysis, the total current population capacity under existing regulations is 38,033. The difference between current capacity and target 2012 population is 38,033-37,588, or 445. It is likely that Bothell will be requested to accept more than 445 additional residents over the period from 2012 to 2022.

The proposed Plan and Code amendments would increase population capacity within the affected activity centers by an estimated 2,094 persons, and thus would enable the City to accommodate more population past 2012 (see **Exhibits 4 and 5**) Moreover, concentrating additional population capacity within activity centers could minimize or avoid the need to increase densities within established single family residential areas outside of such centers.

Employment. For the period from 1992-2012, Bothell was assigned a 20-year employment growth allocation of 4,697 to 6,147 additional jobs. Adding the average of these two numbers – 5,422 – to the 1992 employment of 10,935 produces a target 2012 employment of 16,357.

As related above, Bothell, with an estimated 7,965 new jobs since 1992, has already exceeded the 20-year growth target by 50 percent. Total estimated jobs in 2001 City-wide numbered 18,900, or 2,543 more than the target 2012 employment of 16,357.

With respect to Bothell having already exceeded its employment goals, staff believes that this finding is more a function of under-allocation by the counties at the outset of the planning period than of unexpectedly high job creation in Bothell. When the employment allocations first came out in 1992, staff felt that neither King nor Snohomish Counties fully recognized the potential of the business parks at the south end of what was then known as the Technology Corridor. The employment allocations were far below the combined capacities of the business parks, and did not recognize the influx of businesses happening at that time, much less provide for realistic future job growth.

It is likely that in the next round of employment allocations, Bothell's role as a major regional employment center will finally be recognized by King and Snohomish Counties, and, as a consequence, the City will be requested to accept more jobs.

In contrast to the City's population capacity, Bothell has substantial employment capacity remaining, under both the existing regulations and the proposed amendments. Within the community and regional activity centers, total estimated employment capacity under existing regulations is 70,916. The proposed amendments would reduce this capacity by 6,010, to 64,906.

Employment capacity within the community and regional activity centers under the existing regulations is 52,016 more than the current number of jobs City-wide: under the proposed amendments the difference decreases to 46,006. In either case, there appears to be enough surplus capacity to accommodate the City's share of regional job growth for decades to come, based on Puget Sound Regional Council employment forecasts.

As stated previously, this analysis assumes substantial redevelopment within activity centers – particularly on the North Creek valley floor, where building height is limited only by setbacks. Currently, the activity centers are nearly fully developed in buildings of one, two and three

stories. To utilize more of the employment capacity, these buildings would have to be demolished and taller buildings erected in their place.

Most of Bothell's jobs are in the North Creek and Canyon Park regional activity centers. Insofar as most of the buildings in these centers are less than 20 years old, significant redevelopment is not expected for a number of years, regardless of whether or not the amendments are approved.

The Growth Management Act requires cities and counties to accommodate their fair share of growth within their particular urban growth area. The fair share is usually expressed as a minimum target, but the GMA does not preclude accommodating a larger amount of population or employment. The Central Puget Sound Growth Management Hearings Board reinforced this principle in *Benaroya v. Redmond*. Therefore, maintaining a sizable surplus employment capacity – under either the existing regulations or the proposed amendments – is consistent with the GMA.

- b. Policy LU-P5. The proposed Plan amendments would create a new residential land use designation, Residential – Activity Center, under policy LU-P5. In this designation, the number of units attainable on a property would be controlled by the site and building envelope development regulations.
- c. Policy LU-P8. Land Use policy LU-P8 calls for protecting neighborhoods from intrusion by incompatible uses. One of the reasons for establishing building heights sufficient to accommodate future employment growth is to eliminate pressure to re-designate adjacent residential land for office and light industrial uses.

At the same time, taller buildings may constitute a visual intrusion into nearby neighborhoods. Recognizing this possibility, the amendments provide for substantial setbacks when any building over 35 feet would be near a residential area.

One final point concerning policy LU-P8 is that concentrating population in activity centers would alleviate pressure on the City to increase densities in existing single family areas beyond the four-dwelling-unit-per-acre “brightline” decreed by the Central Puget Sound Growth Hearings Board as the minimum acceptable density within urban growth areas (not counting large environmentally sensitive areas of high rank order and value).

The proposed Plan and Code amendments are consistent with the remainder of the Land Use Element policies.

10. **Policy analysis – Natural Environment Element.** The proposed amendments are not in conflict with any policies in this element.
11. **Policy analysis – Housing Element.** The proposed amendments would promote housing policies calling for mixed-use development and provision of affordable housing. The amendments would not be in conflict with any policies in this element.
12. **Policy analysis – Economic Development Element.** The proposed amendments would promote economic development policies which support mixed-use development, structured parking, and pedestrian-oriented, distinctive centers. The amendments would not be in conflict with any policies in this element.
13. **Policy analysis – Parks and Recreation Element.** The proposed amendments would not be in conflict with any policies in this element.
14. **Policy analysis – Human Services Element.** To the degree that the proposed amendments would allow a performing arts center at the height proponents desire, the amendments would support human services policies promoting “a range of cultural opportunities to enlighten and entertain the community.”
15. **Policy analysis – Historic Preservation Element.** In the Downtown community activity center, in or around which most of Bothell’s historic resources are clustered, the proposed amendments have been crafted to protect the historic character and scale of the Main Street area. The amendments would not be in conflict with any policies in this element.
16. **Policy analysis – Urban Design Element.** The proposed amendments are not in conflict with any policies in this element.
17. **Policy analysis – Annexation Element.** The proposed amendments are not in conflict with any policies in this element.
18. **Policy analysis – Utilities Element.** The proposed amendments are not in conflict with any policies in this element.
19. **Policy analysis – Conservation Element.** The proposed amendments are not in conflict with any policies in this element.
20. **Policy analysis – Transportation Element.** The Growth Management Act (GMA) requires that comprehensive plans include level of service (LOS) standards for all locally owned arterials to serve as a gauge to judge performance of the system and to determine future needed improvements based on planned

land uses, subject to funding capability. The GMA and other sections of state law also require that jurisdictions maintain a six year transportation improvement program which identifies projects necessary to maintain the adopted LOS, based on the comprehensive plan land use element.

*Imagine Bothell...* Transportation Policies TR-P1, -P2 and -P3 establish LOS standards for City arterials, state highways and freeways and interchanges, respectively. Generally, these policies establish an LOS of D (intersection delays of 25.1 – 40 seconds) at all arterial intersections except for certain heavily-used intersections where LOS E/F (over 40 seconds delay) is tolerated for no longer than 1.5 hours during peak commute periods. The LOS D standard does not apply to I-405 or its interchanges. In addition, in 1998 the GMA was amended to exempt state owned facilities “of state-wide significance” from concurrency requirements. In Bothell, such facilities include I-405 and SR 522.

New development is required to maintain the adopted level of service, except where exempt, as discussed above. If a proposed development would cause the LOS on a locally owned transportation facility to decline below the adopted standard, as determined by the City, the developer is required – concurrent with the development - to provide transportation improvements or strategies to achieve the LOS. According to the GMA, “concurrent with the development” means that improvements or strategies are in place at the time of the development, or that a financial commitment is in place to complete the improvements or strategies within six years.

If a proposed development is found to cause the LOS to decline below the adopted standard, and the prospective developer is unable or unwilling to incorporate improvements or strategies to achieve the LOS, the City is required to deny the development.

The City hired a transportation consultant to analyze system demand v. capacity under the existing regulations and the proposed amendments, to determine how the transportation system would be impacted in each case, whether improvements would be necessary to accommodate growth, and if so, what those improvements might entail.

The consultant prepared two analyses. The first analysis prepared by the consultant assumed that development and redevelopment would reach the calculated population and employment capacity by 2022. The consultant projected traffic demand and suggested needed improvements for the years 2007 (the end of the current six year transportation improvement program) and 2022 (the typical 20-year planning horizon) based on this assumption. However, insofar as existing employment capacity is almost four times existing employment – and thus adequate to accommodate employment growth for a number of decades

beyond 2022, at historic rates of growth – assuming the capacity would be reached by 2022 led to unrealistically high traffic projections and facilities needs for the impact analysis years.

Consequently, staff generated more realistic growth rates based on forecasts by the Puget Sound Regional Conference, adjusted where necessary to reflect unique circumstances within the activity centers (see **Exhibit 4**). Please note that amending Plan designations or zoning regulations does not mean that redevelopment in accordance with the changed Plan and Code would immediately ensue. Indeed, in recently developed portions of the activity centers the chances of redevelopment any time soon are very remote. Nevertheless, for the purposes of analysis, staff assumed that the proposed amendments would stimulate a moderate amount of redevelopment (20 percent in most cases) throughout the affected activity centers taken as a whole.

Based on this assumption, the projected 2007 activity centers population from this analysis amounted to 1,858 under the existing regulations and 2,143 - 2,309 under the proposed amendments; projected 2022 population amounted to 2,329 under the existing regulations and 3,176 – 3,341 under the proposed amendments. Projected 2007 activity centers employment amounted to 24,824 under the existing regulations and 26,776 – 28,738 under the proposed amendments; projected 2022 employment amounted to 31,960 under the existing regulations and 34,216 – 36,474 under the proposed amendments.

The above analysis was prepared before the Council decided to reduce the maximum allowable building height to be considered in the Canyon Park and North Creek regional activity centers from 150 to 100 feet. After Council gave that direction, staff prepared an analysis showing the effect of the reduction in maximum height on population and employment capacity (see **Exhibit 5**). The reduction reduced employment capacity under the proposed amendments from 87,298 to 64,906, which is 6,010, or 8.5 percent, less than the employment capacity under the existing regulations. The reduction reduced population capacity under the proposed amendments from 12,429 to 10,207, which is still 2,094, 25.8 percent, more than the population capacity under the existing regulations.

Staff did not analyze how the reduction in capacity might affect the growth estimates. It was assumed that the projected growth under the proposed amendments might be moderately but not dramatically less as a result of the reduction in height, since the change would affect only the Canyon Park regional activity center and the valley floor of the North Creek regional activity center, and would not change allowed building height in the Thrasher's Corner, Canyon Park and Downtown community activity centers, or the east or southwest hillsides of the North Creek regional activity center.

**Please note that the transportation consultant's second analysis – which replaces the first as Appendix A - was based on the capacity and growth analysis in Exhibit 4, which assumed a 150-foot maximum building height in the Canyon Park and North Creek regional activity centers. The consultant's work was well under way when the Council decided to reduce the maximum height considered from 150 to 100 feet. Due to the amount of time and money already expended, the consultant was not requested to revise the analysis to reflect the lower heights. Changing the maximum height considered made a substantial difference in population and employment capacity, but would not have affected 20-year growth so dramatically. Thus, traffic generation under the proposed amendments would decrease somewhat under a 100-foot maximum height scenario, but not so much as to render the consultant's findings irrelevant. The reader is encouraged to keep in mind that actual traffic volumes under the 100-foot scenario would be lower than those indicated in the consultant's findings for the proposed amendments.**

The concurrency analysis concluded that by 2007 the No Action alternative would generate 2,560 additional peak hour trips and the Proposed Action alternative would generate 5,041 new trips, or an increase of 2,481 p.m. peak hour trips under the proposed amendments. The analysis found that all of the City's 35 designated concurrency intersections would be affected with three or more project trips with or without the proposed amendment.

The results of the 2007 LOS analysis showed that the control delay did not vary greatly at the majority of concurrency intersections between the existing regulations and proposed amendments. However, the LOS worsened at 13 intersections under the proposed amendments as compared to the existing regulations.

Under the existing regulations, five intersections in 2007 would operate at LOS E or worse, compared to eight intersections operating at that LOS under the proposed amendments. The mitigation proposed by the consultants to improve operations to LOS D for the five intersections failing under the existing regulations is the same mitigation as proposed for those intersections under the proposed amendments. Additional mitigation would be necessary for the three intersections which would fail concurrency under the proposed amendments but not under the existing regulations.

Mitigation for identified 2007 traffic impacts under the existing regulations or the proposed amendments should be incorporated into the City's Six Year Transportation Improvement Program.

By 2022 the proposed amendments would generate 2,998 more trips than the existing regulations. The consultants performed a screenline analysis (see **Appendix A** for description) to determine 2022 capacity needs throughout the City under both existing regulations and the proposed amendments. The results indicated that under either the existing regulations or the proposed amendments, total lane demand would not exceed lane capacity in any direction. However, under the proposed amendments, lane demand in the westbound and southbound directions increased by one travel lane, and in the northbound direction increased by three travel lanes.

21. **Policy analysis – Capital Facilities Element.** The Growth Management Act requires that plans forecast the future needs for capital facilities such as water and sewer systems, address the proposed locations and capacities of expanded or new capital facilities, and incorporate at least a six-year plan that will finance capital facilities within projected funding capacities and clearly identifies sources of public money for such purposes.

Accordingly, a consultant was hired to perform an analysis to determine whether the proposed amendments would be likely to create any greater need for water or sanitary sewer capital facilities improvements than might result under the current regulations.

Please see the discussion in Finding 20 above regarding derivation of population and employment growth rates under the existing regulations v. the proposed amendments.

**Please note that, as was the case with the transportation analysis, the water and sanitary sewer analysis was under way before the Council reduced the maximum height to be considered from 150 to 100 feet, and the consultant was not requested to modify the analysis accordingly. Again, changing the maximum height considered made a substantial difference in population and employment capacity, but would not have affected 20-year growth so dramatically. Thus, water and sanitary sewer impacts under the proposed amendments would decrease somewhat under a 100-foot maximum height scenario, but not so much as to render the consultant’s findings irrelevant. The reader is encouraged to keep in mind that actual water and sanitary sewer impacts under the 100-foot scenario would be less than those indicated in the consultant’s findings for the proposed amendments.**

The consultant found the following:

- a. “Since the City and Alderwood Water and Wastewater District are supplied through wholesale purchase, the ability to provide domestic water supply will not be significantly affected. Agreements with wholesale

purveyors should be reviewed to ensure that there are no negative impacts, such as increased rates or demand charges, due to the increased use.”

- b. “Service pressure will be an issue at some elevations within the service areas. Building booster pumps will be required to provide pressure to higher floors.”
- c. “Increased fire flow requirements due to the increase in building heights will have the largest impact on water service in the study areas. Increased fire flow requirements may require off-site distribution and transmission improvements at the expense of the developer or the utility and/or fire pumps within the building to pump water to the upper levels. Coordinating with transportation improvements can minimize the expense of utility improvements.”
- d. “The proposed amendments at buildout capacity would increase average sewage flow in the Bothell / Alderwood sewer system by approximately .76 million gallons per day, and increase the peak flow by approximately 2.27 million gallons per day.”
- e. “The proposed amendments will have no impact on the gravity sewers in the Thrasher’s Corner Community Activity Center, Canyon Park Regional Activity Center, Canyon Park Community Activity Center, or North Creek Regional Activity Center.”
- f. “Approximately 2,000 feet of sewers in the Canyon Park Community Activity Center appear to be undersized. These sewers would be undersized regardless of whether or not the rezoning occurs.”
- g. “The proposed amendments may cause some local surcharging during storms in the Downtown Community Activity Center. If sewers in the downtown area are properly designed, then the surcharge should not be problematic. However, if surcharging is already occurring downtown, then a field survey and hydraulic model of downtown sewers is recommended to predict the extent of potential sewer surcharges and/or overflows.” In response to this statement, Bothell Public Works Superintendent Mac McDonald has reported that no surcharging is occurring within the Downtown Community Activity Center.

In accordance with the GMA, the City maintains a Water Comprehensive Plan, a Sanitary Sewer Comprehensive Plan and a Water and Sanitary Sewer System Plan Growth Management Act Supplement. The Supplement provides for growth-related water and sanitary sewer system expansions to be financed by developers (pages W-20 and -21 and SS-10 of the Supplement). Therefore, any growth-

related improvements to the water system to meet fire flow requirements (consultant finding c above), or to the Canyon Park community activity center sanitary sewer system to expand capacity (consultant finding f above), would be the responsibility of developers to finance and construct. (Please note that City staff are completing work on an update of the water plan, and will soon begin an update of the sanitary sewer plan.)

22. **Finding specific to Planning Commission deliberations.** In its deliberations on building height in the Thrasher's Corner and Canyon Park community activity centers and Canyon Park and North Creek regional activity centers, the majority of the Commission favored the following amendments:

- a. Increasing the allowable building height in the Canyon Park and Thrasher's Corner community activity centers from 35 to 65 feet, subject to incorporation of retail space in the building and incorporation of parking within the building or in a separate structure;
- b. Increasing the allowable building height in the Canyon Park regional activity center from 48 to 150 feet;
- c. Increasing the allowable building height within some portions of the North Creek subarea from 35 to 65 feet, and reducing allowable building height in other portions of the subarea from unlimited to 150 feet, or from unlimited to 65 feet.

In addition, buildings over 35 feet in height in both the regional and community activity centers would be subject to additional setbacks and landscape buffering from residential zoning boundaries.

Although a number of issues were settled by split vote, Commissioners requested that one such issue in particular be noted in the findings. This issue concerned allowable building height for multi-family dwellings within the Canyon Park and North Creek regional activity centers.

A minority of Commissioners supported limiting multi-family dwellings to no higher than 35 feet. These Commissioners said they felt that allowing multi-family development above 35 feet would be intrusive to nearby single family areas, through noise, light and glare, and loss of privacy. These Commissioners said they did not feel that offices and other uses higher than 35 feet would be similarly intrusive, since they would not generate round-the-clock activity.

The majority of Commissioners did not support this view, and the request to limit height of multi-family dwellings failed.

23. **DCTED review.** The proposed Plan and Code amendments were transmitted to the state Department of Community, Trade and Economic Development for its review pursuant to Section 365-195-620 of the Washington Administrative Code (WAC). No comments on these amendments have been received.
24. **SEPA review.** An evaluation of likely environmental impacts of these amendments is contained in the SEPA Environmental Analysis portion of this integrated document.

Following completion of the comment period on these proposed amendments, all comments will be addressed and a Final Environmental Impact statement will be issued.

25. **Hearings.** The Planning Commission held hearings and deliberated on the proposed building height Code amendments as they concerned all activity centers but Downtown on October 4, 11 and 25; November 8 and 15, and December 6, 13 and 20, 2000; and January 3, 2001.

The Landmark Preservation Board held meetings and deliberated on the proposed building height Code amendments as they concerned the Downtown community activity center on October 17, 2000; and February 27, March 20, April 24 and July 19, 2001.

The City Council held hearings and deliberated on the Planning Commission's recommendation regarding the building height Code amendments as they concerned all activity centers but Downtown on February 20 and March 5, 2001. The Council held a hearing and deliberated on the building height Plan and Code amendments as they concerned all activity centers on July 23, and December 3, 2001; and February 4 and April 1, 2002.

26. **Public testimony.** Testimony was received and duly considered by the Planning Commission, Landmark Preservation Board and City Council. Written testimony received by the City Council on these proposed amendments since the start of hearings on the final round of deliberations through March 14, 2002 comprises Exhibits 6 – 12.
27. **List of exhibits.**
  1. Proposed Plan amendments (includes existing Plan policies and map designations).
  2. Proposed Code amendments (includes existing zoning regulations and map classifications).
  3. Actual growth v. growth targets in Bothell, memo dated January 9, 2002.
  4. Building height and residential density Plan and Code amendments – Analysis of population and employment capacities and projected growth

5. Comparison of employment and population capacities in Canyon Park and North Creek regional activity centers, and in all centers combined, under current allowed heights, 150 feet and 100 feet.
6. Comments submitted by Eric T. Hoierman, dated December 6, 2001.
7. Comments submitted by Chuck Carlson, dated December 12, 2001.
8. Comments submitted by Michael P. Challenger, dated January 7, 2002.
9. Comments submitted by Dulane Crist, dated February 4, 2002.
10. Comments submitted by Linda Little, dated February 4, 2002.
11. Comments submitted by Renee Mang, dated February 7, 2002.
12. Comments submitted by Michael P. Challenger, dated February 11, 2002.

## **Proposed Conclusions**

1. The proposed Plan and Code amendments would promote vibrant and sustainable community activity centers. Within the Downtown community activity center, the proposed amendments would protect the historic scale of storefront development along Main Street. The proposed amendments would accommodate the unique design requirements of performing arts facilities in the Downtown community activity center, while imposing bulk controls to ensure that such a facility would not overwhelm its surroundings.
2. The proposed Plan and Code amendments would reduce the potential adverse visual impacts of very tall buildings in the North Creek Valley by lowering the height limit from unlimited to 100 feet, or about seven stories. Moreover, by imposing a 100-foot height limit in the Canyon Park regional activity center as well, the proposed amendments would ensure equal development opportunities and uniform aesthetics between the two centers. The proposed amendments would appropriately allow certain manufacturing processes to exceed 100 feet, provided none of the space over that height would be utilized for employee-intensive uses.
3. The proposed Plan and Code amendments would incorporate increased setbacks and landscaping requirements to minimize visual impacts of buildings over 35 feet tall on surrounding residential properties.
4. Insofar as the proposed Plan and Code amendments, as compared to existing regulations, would result in a modest increase in activity center population capacity, from 8,113 to 10,207, and a significant decrease in employment capacity, from 70,916 to 64,906, the long-term impacts on capital facilities needs are not likely to substantially differ between the proposed amendments and existing regulations. The transportation analysis indicated that under either the existing regulations or the proposed amendments, improvements to the

transportation system would be necessary. Since the GMA requires transportation facilities to be adequate to accommodate growth at adopted levels of service, the City's Six Year Transportation Improvement Program needs to incorporate these improvements. The proposed amendments may result in the need for localized improvements to water and sanitary sewer facilities, which would be the responsibility of developers to provide, but would not require system-wide improvements.

5. The proposed Plan and Code amendments have been reviewed for consistency with the *Imagine Bothell... Comprehensive Plan* and, with the understanding that the Six Year Transportation Improvement Program would be updated as described in Conclusion 3 above, have been found to be consistent.
6. The proposed Plan and Code amendments are in the best interest of the public health, safety and welfare.

### **Staff Recommendation**

Based on these proposed Findings and Conclusions, the Community Development Department recommends that the City Council adopt proposed Plan and Code Amendments CPA-2001-5 and incorporate in the Six Year Transportation Improvement Program the necessary improvements to accommodate projected growth under the amendments at adopted levels of service.

# 2001 Selected Plan and Code Amendments

## CPA-2001-5 Building height and residential density in designated activity centers

### Proposed Plan amendments *Revised March, 2002*

Proposed new language shown in *underlined italics*

Proposed deletions shown in ~~underlined strikethrough~~

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**Note – Only the first page of the Executive Summary required any revisions for this amendment.**

# Executive Summary

The Bothell Comprehensive Plan provides direction for a wide variety of City decisions affecting the form and function of the community over the next 20 years. In terms reflective of Bothell's river-based origins, the Plan charts a course for the City towards a desired future, one envisioned and articulated by its residential and business communities.

The Plan is all new, but builds on and incorporates many of the principles from the 1971 Plan which this document replaces. This Plan also satisfies the requirements of the state Growth Management Act.

The Plan is divided into three main sections, generally increasing in level of detail and specificity:

1. A *vision* of Bothell's future, providing overall guidance for all subsequent portions of the Plan;
2. Thirteen *Planning Area-wide elements*, comprising goals, policies and recommended actions for individual areas of community life (e.g., housing, transportation) in which City government plays a role;
3. Thirteen *Subarea Plans*, comprising the refinement of the Planning Area-wide elements for distinct residential or business areas.

The Plan defines a Planning Area, which consists of land within the current city limits plus unincorporated territory which might potentially annex to the city, and allocates land uses within the Planning Area. In summary, the Plan provides for the following broad land use allocation:

- Single family residential development ranging in density from one to eight dwelling units per acre and comprising the predominant land use within the Planning Area, at 70 per cent of the total Planning Area;
- Multiple family residential development mixed within or in close proximity to the City's activity centers, and ranging from eight to fifteen units per acre, with higher densities allowed for senior housing and within designated activity centers, subject to conditions;
- Two regional office/light industrial activity centers, at North Creek and Canyon Park;
- Three Two community retail/services activity centers entirely within the Planning Area, at Thrasher's Corner, Canyon Park and downtown Bothell;
- Two community retail/services activity centers extending across Planning Area boundaries, at Thrasher's Corner and Pontius Road;
- Four neighborhood retail/services activity centers;

**Note – Only the first page of the Land Use element Goals, Policies and Actions; the page preceding the one containing the proposed revisions (for context); the page containing the proposed revisions; and following pages with related policy-numbering changes have been printed. No other changes to this element were proposed for this amendment.**

# Land Use Goals, Policies and Actions

## Goals

- LU-G1 To delineate, through collaborative interjurisdictional processes in King and Snohomish Counties, Urban Growth Areas sufficient to permit the urban growth projected to occur in the two counties for the next 20 years.
- LU-G2 To define a Bothell Planning Area, within the King and Snohomish County Urban Growth Areas, which comprises the land within the existing city limits plus unincorporated land within identified potential annexation areas to which Bothell may feasibly provide future urban services, either directly or by contract, over the 20-year term of the Plan.
- LU-G3 To create a vibrant, sustainable, family-oriented community through the balanced allocation of land for housing, commerce, industry, recreation, transportation, open space, cultural resources and other uses.
- 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-G5 To ensure consistency among land use designations near jurisdictional planning boundaries.
- 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 20-year 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 the aesthetic needs of the citizens of Bothell, to protect critical areas including floodprone lands, and to conserve fish and wildlife habitat.
- LU-G8 To preserve the 'feathered edge' visual transition from treed hillsides to sky which is an important part of Bothell's aesthetic character.

LU-P5 The City shall maintain a Comprehensive Plan Map (see **Figure LU-5**) for the purpose of illustrating the proposed allocation of land uses throughout the Bothell Planning Area. Land uses shall be categorized by the following designations. It is intended that these designations 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.

**1. Residential, One or Fewer Dwelling Units Per Acre (R 1).**

This designation shall provide for residential uses at a maximum density of one dwelling unit per acre. This designation is appropriate for land lacking the full range of public facilities and services necessary to support urban development. Land designated R 1 Growth Reserve shall be subject to periodic review to determine whether extension of public facilities and services and designation of urban land uses are appropriate to accommodate projected growth.

**2. Residential, Two to Five Dwelling Units Per Acre (R 2-5).**

This designation shall provide for primarily single family residential development at a range of densities between two and five dwelling units per acre and compatible uses such as schools and churches where the full range of public facilities and services to support urban development exist. Aggregation of dwelling units in multiple family configurations may be appropriate if compatibility with nearby existing single family development can be achieved.

Generally, this designation is appropriate for most land in the planning area suitable for residential use with the exception of land located convenient to principal arterials and/or business and commercial activity centers, where higher densities are warranted.

**Policies**  
(continued)

This designation may be implemented by more than one zoning

classification. Determination of the appropriate zoning classification shall take into account the density of nearby existing development and the capacities of existing and projected public facilities.

**3. Residential, Six to Ten Dwelling Units Per Acre (R 6-10).**

This designation shall provide for primarily single family residential development at a range of densities between six and ten dwelling units per acre and compatible uses such as schools, churches and day care centers where the full range of public facilities and services to support urban development exist. Aggregation of dwelling units in multiple family configurations may be appropriate if compatibility with nearby existing single family development can be achieved.

Generally, this designation is appropriate for land located convenient to principal arterials and/or business and commercial activity centers where a transition between higher densities and lower densities is warranted, or where natural limitations in the transportation system or

other public facilities (such as a lack of cross streets due to topography) preclude higher densities.

This designation may be implemented by more than one zoning classification. Determination of the appropriate zoning classification shall take into account the density of nearby existing development and the capacities of existing and projected public facilities.

4. ***Residential, Eleven to Fifteen Dwelling Units Per Acre (R 11-15).***  
This designation shall provide for multiple family residential development at a range of densities between 11 and 15 dwelling units per acre plus compatible uses such as schools, churches and day care centers where the full range of public facilities and services to support urban development exist.

Generally, this designation is appropriate for land which is located convenient to principal arterials and to business and commercial activity centers. *Within the activity centers themselves, higher densities may be appropriate, through the Residential – Activity Center designation (see below).*

This designation may be implemented by more than one zoning classification. Determination of the appropriate zoning classification shall take into account the density of nearby existing development and the capacities of existing and projected public facilities.

5. ***Residential – Activity Center (R-AC).***  
*This designation shall provide for multi-family 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 specific density is prescribed; the number of units which may be constructed on an individual property or within the center shall be controlled by site and building regulations concerning height, parking, landscaping, setbacks and other aspects of development.*

6. 5. ***Specialized Senior Housing Overlay (SSHO).***  
This overlay designation shall allow specialized senior housing development (for persons 62 years of age and over and their spouses and/or live-in caregivers) at densities higher than normally permitted within R 1, R 2-5 and/or R 6-10 residential designations in specified locations where such development has been determined to be appropriate due to proximity to facilities

## Policies (continued)

and services which especially benefit the elderly. The particular

density for a Specialized Senior Housing Overlay, as well as policies concerning the design and/or operation of specialized senior housing, shall be set forth in the Subarea Plan in which the SSHO is located. The Specialized Senior Housing Overlay provides for an additional use within, but does not replace, the underlying plan designation.

**7. 6. Mobile Home Park (MHP).**

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

**8. 7. Office-Professional (OP).**

This designation shall include personal and professional service businesses which commonly locate in office buildings, such as banks, medical and dental clinics, accounting, law, real estate, insurance, travel agencies and similar businesses.

**9. 8. Neighborhood Business (NB).**

This designation shall comprise retail and service businesses which serve the limited item convenience shopping and personal service needs of the immediate surrounding neighborhood.

**10. 9. Community Business (CB).**

This designation comprises most retail, dining, entertainment and similar businesses which are conducted primarily indoors. Such uses include but are not limited to grocery stores, drug stores, furniture stores, clothing stores, book stores, music stores, restaurants, movie theaters, and bowling alleys.

**11. 10. General Commercial (GC).**

This designation comprises more intensive retail and service uses than described under Community Business above. General Commercial uses typically require outdoor display and/or storage of merchandise and tend to generate noise as a part of their operations. Such uses include but are not limited to auto, boat and recreational vehicle sales lots, tire and muffler shops, equipment rental, and mini-warehouses and vehicle storage.

Within certain subareas, a Motor Vehicle Sales Overlay may be placed within specific locations. These sites are subject to special regulations as promulgated in the subarea.

**12. 11. Motor Vehicle Sales Overlay (MVSO)**

This overlay designation shall allow motor vehicle sales on properties designated Community Business (CB) in specified locations where such development has been determined to be appropriate due to meeting three or more of the following criteria:

- a. abut an arterial street;
- b. adjacent to an intersection of two State Routes;
- c. the presence of intense retail activities in the vicinity including proximity to properties currently conducting motor vehicle sales; and
- d. the presence of an existing screening type landscape buffer or the ability to create such a buffer between any property designated MVSO and residential properties.

Policies concerning the design and/or operation of motor vehicle sales shall be set forth in the Subarea Plan in which a MVSO is located. The Motor Vehicle Sales Overlay provides for an additional use within, but does not replace, the underlying plan designation.

**13. 12. Light Industrial (LI).**

This designation comprises non-polluting manufacturing and processing, wholesaling, warehousing and distribution and other similar

activities. Such uses tend to require large buildings and to generate more large truck traffic than do other types of land uses.

~~14. 13.~~ **Mixed Use (MU).**

This designation does not indicate a land use by itself, but is intended to be utilized where integrated development of more than one type of land use within a property or area is desired. Such integrated development may include but not be limited to coordinated building design, signage, landscaping and access.

**Policies**  
(continued)

~~15. 14.~~ **Civic-Educational (CE).**

This designation shall include but not be limited to such public facilities as schools, libraries, community centers, police stations, fire stations, and municipal or school district administration buildings. Potential sites for civic-educational facilities shall be denoted on the plan map by the letters CE in brackets to indicate that a facility is appropriate in an area but that the exact location may not yet be determined. Depiction of a potential site for a civic-educational facility shall not supersede the underlying plan designation.

~~16. 15.~~ **Park (P).**

This designation shall include public neighborhood, community and regional parks and recreation facilities. Potential sites for parks and recreation facilities shall be denoted on the plan map by the letter P in brackets to indicate that a facility is appropriate in an area but that the exact location may not yet be determined. Depiction of a potential park site shall not supersede the underlying Comprehensive Plan designation.

~~17. 16.~~ **Open Space (OS).**

This designation shall be assigned to land which has been preserved as undisturbed natural open space, through acquisition by the City or other public entity, transfer of development rights, or other mechanism. Potential dedicated open space is denoted on the land use allocation map by the letters OS in brackets to indicate that preservation of land as open space is appropriate, but that the exact location and amount of land to be reserved may not yet be determined. It is intended that a corridor with a minimum width of 50 feet to enhance wildlife movement shall be preserved within these areas. Depiction of potential open space shall not supersede the underlying Comprehensive Plan designation. The basis for establishment of an open space system shall be the existing network of heavily treed steep slopes, wetlands and waterway corridors depicted in **Figure LU-6**.

A second component of open space is the aesthetic concept termed the 'feathered edge'. The feathered edge comprises the silhouette of hillside or hilltop coniferous trees against the sky, and is an important part of Bothell's visual character. Such treed areas also provide habitat and retard erosion and runoff. Trees which constitute the feathered edge typically are those located along ridgelines and for a

distance of 50 to 75 feet or more downhill from the ridgelines. The City shall strive to preserve the feathered edge through the imposition of clearing restrictions on development proposals located on or near ridgelines and hilltops. The feathered edge is mapped on **Figure LU-7**.

**18. 17. Transit facility (T).**

This designation shall include transit facilities including but not limited to park and ride lots, transit centers and stations, and dedicated transit rights of way. Potential transit facilities shall be denoted on the plan map by the letter T in brackets to indicate that a transit facility is appropriate in an area but that the exact

location may not yet be determined. Depiction of a potential transit

facility shall not supersede the underlying Comprehensive Plan designation.

**19. 18. Utility facility (U).**

This designation shall include utility facilities including but not limited to water tanks, electrical distribution substations, microwave and other transmission towers, and high-voltage electrical transmission corridors. Potential utility facilities shall be denoted on the plan map by the letter U in brackets to indicate that a utility facility is appropriate in an area but that the exact location may not yet be determined. Depiction of a potential utility facility shall not supersede the underlying Comprehensive Plan designation.

**20. 19. Critical Area (depicted on critical areas maps).**

Critical areas include wetlands, areas with a critical recharging effect on aquifers used for potable water, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas. Within these areas City policies and regulations may restrict development to a lesser density or intensity than that allowed by the underlying plan designation. Critical areas are depicted on critical areas maps separate from the Land Use map. The critical areas maps are intended to alert users to the likely existence of critical areas, and should not be construed as providing an exact depiction of the location, extent of those areas, or their exact character. Critical areas within designated open space corridors shall be of the highest priority for preservation.

Critical areas regulations are intended to protect environmentally sensitive portions of properties without unduly limiting development on environmentally unconstrained portions. The City recognizes that in order to be effective, this approach relies heavily on enforcement of critical areas regulations. The City shall monitor developments containing critical areas for any degradation to those critical areas resulting from violations of regulations. Should it be found that the level of protection mandated by the regulations is not being achieved, the City shall consider additional or alternative approaches including

**Policies**  
(continued)

**Note** – Only those pages of the Shelton View subarea plan elements which contain any amendments, plus any preceding or following pages necessary for continuity, have been printed.

# Shelton View / Meridian / 3<sup>rd</sup> SE Subarea Plan Elements

## Land Use

### Policies

Note: Many of the Land Use Policies are graphically depicted in Figure 11, Land

#### Use Designations.

1. Maintain the overall single family residential character of the subarea.
2. Land containing a critical area or areas is subject to regulations which may reduce the density or intensity of development allowed to less than that indicated by the plan designation.
3. In-home uses should not negatively impact the residential character of neighborhoods through signage or intensity of use.
4. The storage yard on the northeast corner of Meridian and 240th Street SE should not be expanded or intensified. Eventually, this use should be replaced with conforming uses.
5. Land located at the southwest quadrant of the intersection of 228th and Meridian to a depth of approximately 200' south of 228th is appropriate for development in neighborhood business uses (NB at north edge of map).
6. The land at the northeast corner of the subarea, within the Canyon Park community activity center, is appropriate for residential dwellings at densities controlled by site and building envelope regulations; multi-family development at a density of 15 dwelling units per acre, office-professional; and/or community business uses, subject to availability of necessary utilities and compliance with critical areas regulations and other city standards (**R-AC R-11-15, OP, BC** in northeast corner of map). A detailed description of the desired character of development within the Canyon Park community activity center may be found in the Canyon Park / Thrasher's Corner Subarea Plan. Adjacent land to the west, south of 228th between 7th and 9th Avenues SE, is appropriate for office-professional development (**OP** in northeast portion of map). Development should be planned in such a manner as to provide for a transition of building mass and density from the

greatest mass and density near the intersection of 228th and SR 527 to the least mass and density abutting single family residential areas to the west. The portion of this area west of 9th should derive its access from 228th at the 9th Avenue traffic signal. Where this area abuts single family development to the west, a buffer should be installed utilizing fences, walls, berms, dense, fast-growing landscaping, and/or other noise-absorbing and sight-obscuring techniques and materials.

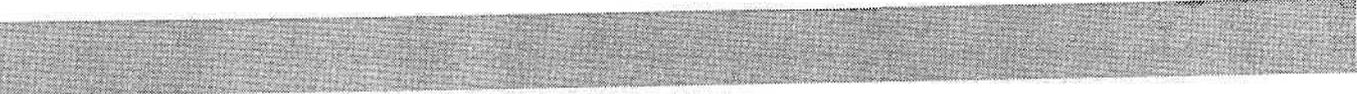
7. The Snohomish County PUD substation south of 228th Street west of SR 527 is designated Utility to reflect current use (**U** in northeast corner of map).
8. Land located along the steep western slopes of the subarea is appropriate for single family development at a maximum density of 3 units per acre, subject to availability of necessary utilities, compliance with critical area regulations, and development impact mitigation (**R 2-5** on west edge of map).
9. The area surrounding 3rd Avenue SE, north of 240th Street SE (including the

property at the northeast corner of 3rd and 240th, which fronts primarily on 3rd), is designated for one dwelling unit or less per acre to reflect its existing character and anticipated long-term constraints on provision of urban facilities to the area (**R 1** in eastern portion of map). The area is not served by sanitary sewers and the likelihood of extension of sewers to this area during the term of the plan is remote. Moreover, 3rd Avenue itself is developed to minimal rural standards, and for a considerable distance lacks the full right-of-way width necessary for urban-level street improvements. Traffic on 3rd Avenue should therefore be limited to that generated by properties which directly access onto 3rd. Connecting 3rd with Meridian or 7th Avenue SE via new east-west streets is not warranted due to the inability of 3rd to adequately accommodate through traffic.

10. The land at the southeast quadrant of Meridian and 228th Street is appropriate for residential development at a density of eight dwelling units per acre, subject to availability of necessary utilities and compliance with critical areas regulations and other city standards (**R 6-10** on north edge of map).
11. The FEMA property, the DNR property immediately to the east, and Shelton View Elementary School are appropriately designated Civic-Educational to reflect current and anticipated future uses (**CE** in northwest portion of map).
12. The Northwest Mobile Estates mobile home park south of 228th and east of Meridian provides affordable detached single family housing. A Mobile Home Park designation is warranted to recognize and protect this land use (**MHP** along north edge of map).

If in the future the owner of the mobile home park desires to redevelop, the plan designation for this property should be revisited to determine the appropriate land use in the context of the overall single family character of the Shelton View subarea. Any proposal to redevelop the property should provide for relocation assistance to mobile home residents living in the park at the time.

13. The remainder of the subarea is appropriate for single family development at a maximum density of 4 to 5 dwelling units per acre, subject to availability of necessary utilities and compliance with critical areas regulations and other city standards (**R 2-5** in central portion of map).



## *Housing*

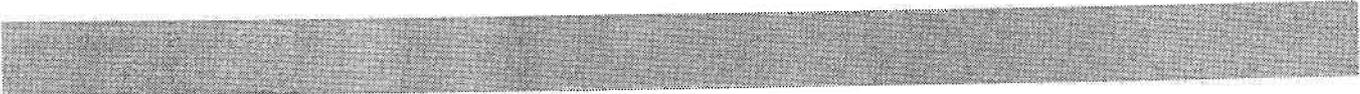
### **Policies**

1. Provide for a range of housing alternatives within the subarea for persons of

varying incomes and lifestyles. Reference is made to the Land Use policies above, which provide for densities of 1 to 15 units per acre within portions of the subarea outside the Canyon Park community activity center, and higher densities within that center.

### **Actions**

1. Initiate rezoning of properties as warranted to implement the Housing policies.



## *Economic Development*

### **Policies**

1. Provide opportunities for neighborhood-oriented businesses.

### **Actions**

**Note** – The original Comprehensive Plan incorporated language from a 1986 Snohomish County Plan amendment which limited development potential around the SR 527 / 228<sup>th</sup> Street intersection. Increasing building heights and residential densities would almost certainly allow more development than permitted under this language. However, any development in this area would still be subject to the City's concurrency and mitigation regulations. Therefore, the language has been proposed to be deleted

**Note** – Although not related to the building height and residential density Plan and Code amendments, language concerning the widening of 228<sup>th</sup> Street is proposed to be deleted since this project has been completed.

## Transportation

### Policies

**Note:** Certain Transportation Policies are graphically depicted on the Arterials,

Bicycle Route and Pedestrian Facilities maps; street cross-sections; and other figures included in the Planning Area Wide Transportation Element.

1. The following roads within the subarea are classified as arterials:

- |   |   |
|---|---|
| a. Freeway / Limited Access Highway or Principal Arterial | None                                      |
| b. Minor Arterial   | 228th Street SE and SW<br>Meridian Avenue |
| c. Collector  | 240th Street SE and SW                    |

Meridian and 228th 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, a coordinated street tree program and meandering of sidewalks/walkways, if practical.

Meridian Avenue shall be improved to three to five lanes as necessary to maintain or achieve the City's adopted traffic level of service standard (LOS D, with certain exceptions—see Transportation Element). Improvements in the 228th corridor west of 9th Avenue SE shall be designed to take into consideration the adopted LOS standard and the substantial testimony received by the Planning Commission in its Comprehensive Plan deliberations requesting that 228th Street not be widened beyond three lanes (one lane each direction with a center turn lane) in order to preserve the residential character of the area. These objectives may be in conflict. Both roads should contain bicycle paths.

~~The following language concerning traffic generated by land uses in the extreme northeast corner of the subarea is adapted from the 1986 amendments to the Snohomish County Alderwood Area Plan and is hereby incorporated in the Bothell Comprehensive Plan:~~

~~It is the City's expressed intent to require appropriate mitigation measures which will assure sufficient road system capacity at the intersection of SR 527 and 228th Street SE in accordance with adopted level of service standards. Due to the limited capacity of the intersection, particular attention will have to be paid to operation of the intersection during the peak hour. Since trip generation and peak hour characteristics of non-through traffic~~

~~vary with types of land uses, new developments at the intersection may have to be~~

~~limited to land uses which will not use up all of the projected peak hour capacity. If not controlled, these developments could restrict the ability of others to develop in the area.~~

~~To accomplish the goals and objectives of the Plan, the following requirements should be met:~~

- ~~a. The ultimate design of the intersection of SR 527 and 228th Street SE should not exceed the design proposed in the original Snohomish County Department of Public Works Design Report for 228th Street SE (22 approach lanes) plus a short right turn lane for the west to northbound traffic.~~
- ~~b. Development in the northwest, southwest and southeast quadrants of this intersection should be limited to land uses which do not generate more than 23 trips per peak hour per acre.~~
- ~~c. This peak hour trip per acre limit does not imply any limits on off peak hour trip generation. Land uses in areas designated for business use may exceed 23 trips per hour per acre during non-peak hours.~~
- ~~d. Traffic impacts shall be mitigated in accordance with adopted City policies and regulations.~~

2. The following bicycle routes are designated for the subarea:

- a. Class I (separated path)      228th Street SE and SW  
Meridian Avenue
- b. Class III (signed on  
roadway)                              240th Street SE

Class III routes should be signed as soon as possible. Class I routes should be signed to meet Class III standards until construction to Class I standards is completed. On steep portions of 228th Street, the bicycle lanes should be separated from the roadway, if practical, in order to ensure safe travel for bicyclists. Signage of roads as Class III routes shall require prior determination of the safety of the identified road(s) for bicycle travel.

3. The following pedestrian facilities are designated to ensure safe pedestrian access to schools in the subarea:

**Note** – Only those pages of the Country Village subarea plan elements which contain amendments, plus any preceding or following pages necessary for continuity, have been printed.

# Country Village / Lake Pleasant / 527 Corridor Subarea Plan Elements

## *Land Use*

**Note:** Many of the Land Use Policies are graphically depicted in Figure 11, Land Use Designations.

### **Policies**

1. Overall, appropriate land uses within the subarea comprise a mix of single family, townhouse, multi-family, office-professional, community business and general commercial uses of moderate intensity, balancing the nature of SR 527 as a primary arterial against topographic limitations to future additional east-west access roads.
2. Land containing a critical area or areas is subject to regulations which may reduce the density or intensity of development allowed to less than that indicated by the plan designation.
3. Land within this subarea which is located near the intersection of SR 527 and 228th Street SE, within the Canyon Park community activity center, and would logically access onto SR 527 is appropriate for community business, office-professional and/or residential dwellings at densities controlled by site and building envelope regulations ~~multi-family development at a density of 15 dwelling units per acre~~, subject to availability of necessary utilities and compliance with critical area regulations and other development standards and mitigation requirements (**R-AC R-11-15**, **OP**, **CB** at north end of map). A detailed description of the desired character of development within the Canyon Park community activity center may be found in the Canyon Park / Thrasher's Corner Subarea Plan. Buffering, to include but not be limited to such techniques as fences, walls and dense, fast-growing landscaping, should be installed to mitigate noise and visual impacts of these uses on the residential development to the west.

## *Housing*

### **Policies**

1. Provide for a range of housing alternatives within the subarea for persons of

varying incomes and lifestyles. Reference is made to the Land Use policies above, which provide for densities of 3 to 15 units per acre within portions of the subarea outside the Canyon Park community activity center, and higher densities within that center.

### **Actions**

1. Initiate rezoning of properties as warranted to implement the Land Use and

Housing policies.

## *Economic Development*

### **Policies**

1. Through implementation of the neighborhood village concept at the intersection of

SR 527 and 240th, and of the office professional, community business and general commercial designations elsewhere in the subarea, provide opportunities for businesses and services.

**Note – These proposed Plan amendments have been revised to incorporate Council direction from February 4, 2002, to reduce the maximum allowable building height to be considered in the Canyon Park regional activity center from 150 to 100 feet, except for certain manufacturing processes. Only those pages of this subarea plan which contain proposed amendments, plus any preceding or following pages necessary for continuity, have been printed.**

# Canyon Park / Thrasher's Corner Subarea Plan Elements

## Land Use

### Policies

Note: Many of the Land Use Policies are graphically depicted on Figure 12, entitled

#### Land Use Designations.

1. The Canyon Park / Thrasher's Corner subarea should continue to develop as community and regional activity centers, while expanding opportunities for multi-family residential development to promote affordable housing close to employment, shopping and services.

*The Thrasher's Corner and Canyon Park community activity centers should provide a shopping, dining, and entertainment focal point for those who live and work within the center or nearby. The maximum height of buildings in these centers should be 4 to 6 stories, or around 65 feet, to permit a vibrant and mutually supportive mix of retail, service, and office uses (at Thrasher's Corner) or retail, service, office and residential uses (at Canyon Park) while maintaining a sense of connectedness between the uppermost floors and street-level activity. In the Canyon Park community activity center, residential development should not be restricted to a specific density, but should be controlled by site and building envelope regulations, to promote a variety of housing types in sufficient numbers to support a range of activities within the center. Around the edges of these areas, appropriate setbacks should be applied to protect surrounding lower-intensity uses. Development of taller buildings should incorporate structured parking to keep the area compact and walkable. Public gathering places should be included in developments to promote socializing.*

*The Canyon Park regional activity center should provide opportunities for businesses to start and to grow in Bothell, and for employees to work close to*

home. The maximum height of buildings in this center should be 7 to 10 stories, or around 100 feet, with additional height up to a total of around 150 feet permitted only to accommodate manufacturing processes which require a tall structure but few employees. Providing for buildings of such height would ensure that sufficient employment capacity exists to accommodate extended future growth within the existing boundaries of the area, thereby utilizing infrastructure efficiently and avoiding pressure to expand into established residential areas. Such buildings would be compatible with the scale of the valley setting: around the edges of the area, however, appropriate setbacks should be applied to protect surrounding lower-intensity uses. Within a portion of the Canyon Park regional activity center, residential development is appropriate at densities controlled by site and building envelope regulations, to promote a variety of housing types in close proximity to places of work.

2. Land containing a critical area or areas is subject to regulations which may reduce the density or intensity of development allowed to less than that indicated by the plan designation.
3. New development is subject to availability of necessary utilities, critical area regulations, and other development standards and mitigation requirements. Snohomish County Council Motion 91-167 which amends the North Creek Plan and establishes conditions for expansion of the business park is hereby incorporated into this Plan.
4. Land located in the northeast corner, immediately north of the southeast corner, and in the south central portion of the subarea is appropriate for single family development at a density of 4 units per acre subject to compliance with critical area regulations and other development standards and mitigation requirements (**R 2-5** in the northeast, south central and southeast portions of the map).
5. Land located on either side of SR-527, south of Filbert and Maltby Roads to about 212th Street extended, comprising the Thrasher's Corner community activity center, is appropriate for office-professional and community business uses subject to critical area regulations and other development standards and mitigation requirements (**OP, CB** in the north central portion of the map). Any such development should provide a buffer adjacent to lower density residential development to the east and west. Such a buffer may consist of the existing wetlands in the east and west borders of this area.
6. Land located west of North Creek and south of Filbert Road to about 212th Street extended is appropriate for residential development at a density of 8 units per acre, subject to critical area regulations and other development standards and mitigation requirements (**R 6-10** in the northwest corner of the map).
7. Land located west of SR 527 between 212th Street extended and 217th Street extended, within the Canyon Park regional activity center, is appropriate for residential dwelling at densities controlled by site and building envelope regulations; ~~development at a density of 15 dwelling units per acre~~, office professional; and light industrial uses, subject to compliance with critical area regulations and other development standards and mitigation requirements (**R-AC R-11-15, OP, LI** below the northwest corner of the map). Such development shall incorporate internal access from property to property and shared driveways to minimize access points on SR 527.

~~8. Land between I 405 and approximately 230th Street SE (extended), east of SR 527,~~

~~and land south of 228th Street SE and west of SR 527 is appropriate for office professional and community business uses, subject to compliance with critical area regulations and other development standards and mitigation requirements (OP, CB in the southwest corner of the map). This designation reflects current uses.~~

~~8. 9. Land southwest of I-405, comprising the Canyon Park community activity center, north of 228th and between I 405 and SR 527 is appropriate for residential dwellings at densities controlled by site and building envelope regulations; multi-family development at a density of 15 dwelling units per acre, office-professional; and community business uses, subject to compliance with critical area regulations and other development standards and mitigation requirements (R-AC R-11-15, OP, CB in the southwest corner of the map). This designation reflects current uses in the area and additionally provides for residential development convenient to shopping, services and transit.~~

~~9. 10. Land south of 228th Street SE between 15th and 19th Avenues SE is appropriate for multi-family residential development at a density of 15 dwelling units per acre, subject to compliance with critical area regulations and other development standards and mitigation requirements (R 11-15 on southernmost portion of map).~~

~~10. 11. Land west of 19th Avenue SE extending south from a point approximately 380 feet south of 228th Street SE is appropriate for residential development at a density of 8 units per acre, subject to compliance with critical area regulations and other development standards and mitigation requirements (R 6-10 on southernmost portion of map). The purpose of this designation is to achieve a transition to the existing single family development to the east.~~

~~11. 12. Land to the southeast of the Village Square neighborhood is appropriate for multi-family development at 11 units per acre, subject to critical area regulations and other development standards and mitigation requirements (R 11-15 on south central portion of map).~~

~~12. 13. The portion of the Canyon Park Business Center between SR 527 and 17th Avenue SE, south of 220th Street SE and north of I-405, is designated Office-Professional and Community Business to reflect existing uses (OP, CB in southwest area of map).~~

~~13. 14. Land in the southeast corner of the subarea is appropriate for residential development at a density of 8 units per acre, subject to compliance with critical area regulations and other development standards and mitigation requirements (R 6-10 in the southeast corner of map). Residential development in this area shall be required to decrease in intensity of building mass as it extends northward, with minimal buffering on the north.~~

~~14. 15. The remainder of the subarea is appropriate for continued business park development, subject to critical area regulations and other development standards and mitigation requirements, and therefore is designated office-professional and light industrial (OP, LI on majority of map). Snohomish County Council Motion 91-167 (October 2, 1991), approving an amendment to the North Creek Area Comprehensive Plan in the I-405/228th Street SE Area and establishing conditions for expansion of the business park, is hereby incorporated into this subarea plan.~~

~~15. 16.~~ Preserve in open space the wetland system through regulation, acquisition

and/or education when and where opportunities arise.

~~16. 17.~~ The park and ride lot at the northeast quadrant of the I-405 / SR 527 interchange is designated Transit facility to recognize the existing use (T in southwest portion of map). The Snohomish County PUD substation east of SR 527 near Maltby Road is designated Utility to recognize the existing use (U in north central portion of map).

~~17. 18.~~ Consistent with adopted parks level of service guidelines, one or more parks are appropriate to serve the subarea (<P> on map). The park(s) may or may not be located within the subarea. Natural open space within the area should be preserved where possible (<OS> on map).

## Actions

1. Initiate rezoning of properties as warranted to implement the above policies.

# Natural Environment

## Policies

1. Protect and preserve the steep and heavily treed slopes of the eastern portion of the subarea in keeping with maintaining the "feathered edge" concept throughout the city. These natural areas provide valuable erosion control, wildlife habitat, and visual relief from the built environment, and contribute to the low density residential character and identity of the adjacent subarea to the east.
2. Protect and preserve the wetland system within the subarea.
3. Promote the extension of sanitary sewers to unserved portions of the subarea to better protect ground and surface water quality.

## Natural Environment Actions

(continued)

3. Provide printed materials and information workshops for owners of property

containing wetland areas regarding their stewardship of these environmentally critical areas.

4. Work with Alderwood Water and Sewer District and the unserved residents of the subarea to encourage the extension of sewers.
5. Participate to the fullest extent possible with Snohomish County in implementing the North Creek Watershed Management Plan and identifying and implementing further actions which will aid in reducing the rate and volume of flows, improving water quality and encouraging improved fish habitat.

## Housing

### Policies

1. Provide for a range of housing alternatives within the Subarea for persons of

varying incomes and lifestyles and which support the various commercial and business park employment centers. Reference is made to the Land Use policies above, which provide for densities of 4 to 15 units per acre within portions of the subarea outside the Canyon Park community and regional activity centers, and higher densities within those activity centers.

**Note** – The original 1994 Comprehensive Plan incorporated language from a 1986 Snohomish County Plan amendment which limited development potential around the SR 527 / 228<sup>th</sup> Street intersection. Increasing building heights and residential densities would almost certainly allow more development than permitted under this language. However, any development in this area would still be subject to the City's concurrency and mitigation regulations. Therefore, the language has been proposed to be deleted

## Transportation

### Policies

**Note:** Certain Transportation Policies are graphically depicted on the Arterials,

**Bicycle Route and Pedestrian Facilities maps; street cross-sections; and other figures included in the Planning Area-wide Transportation Element.**

1. The following roads within the subarea are classified as arterials:

Freeway / Limited Access Highway	I-405
Principal Arterial	Filbert / Maltby Roads (SR 524) Bothell-Everett Highway (SR 527)
Minor Arterial	228th Street SE
Collectors	220th Street SE 29th Ave. connection to 228th 15th Avenue SE 19th Avenue SE

Filbert / Maltby Roads, the Bothell-Everett Highway and 228th Street 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, a coordinated street tree program and meandering of sidewalks/walkways, if practical. In addition, the intersection of SR 527 and Filbert and Maltby Roads should be considered for special gateway treatment (see Urban Design).

A connection from the Canyon Park business park south to 228th Street SE should be pursued.

The following language is adapted from the 1986 amendments to the Snohomish County Alderwood Area Plan and is hereby incorporated in the Bothell Comprehensive Plan:

It is the City's expressed intent to require appropriate mitigation measures which will assure sufficient road system capacity at the

~~intersection of SR 527 and 228th Street SE in accordance with adopted level of service standards. Due to the limited capacity of the intersection, particular attention will have to be paid to operation of the intersection during the peak hour. Since trip generation and peak hour characteristics of non through traffic vary with types of land uses, new developments at the intersection may have to be limited to land uses which will not use up all of the projected peak hour capacity. If not controlled, these developments could restrict the ability of others to develop in the area.~~

~~To accomplish the goals and objectives of the Plan, the following requirements~~

~~should be met:~~

- ~~a. The ultimate design of the intersection of SR 527 and 228th Street SE should not exceed the design proposed in the original Snohomish County Department of Public Works Design Report for 228th Street SE (22 approach lanes) plus a short right turn lane for the west to northbound traffic.~~
- ~~b. Development in the northwest, southwest and southeast quadrants of this intersection should be limited to land uses which do not generate more than 23 trips per peak hour per acre.~~
- ~~c. This peak hour trip per acre limit does not imply any limits on off peak hour trip generation. Land uses in areas designated for business use may exceed 23 trips per hour per acre during non peak hours.~~
- ~~d. Traffic impacts shall be mitigated in accordance with adopted City policies and regulations.~~

2. The following bicycle routes are designated for the subarea:

Class I (separated path)	North Creek Filbert / Maltby Roads (SR 524) 228th Street SE Bothell-Everett Highway (SR 527)
--------------------------	---

Class III (on roadway, signed)	15th Avenue SE 19th Avenue SE
--------------------------------	----------------------------------

Class III routes should be signed as soon as possible. Class I routes should be signed to meet Class III standards until construction to Class I standards is completed. Signage of roads as Class III routes shall require prior determination of the safety of the identified road(s) for bicycle travel.

3. The following pedestrian facilities are designated to ensure safe pedestrian access to shopping, services and employment in the subarea:

Paved Recreation / Commuter	North Creek
-----------------------------	-------------

Path

Concrete sidewalk

Filbert / Maltby Roads (SR 524)  
228th Street SE  
Bothell-Everett Highway (SR 527)  
220th Street SE  
29th Avenue connection to 228th  
15th Avenue SE  
19th Avenue SE

In addition to the above, all new development will be required to install sidewalks. Sidewalks should be constructed of concrete for durability and to

**Note – These proposed Plan amendments have been revised to incorporate Council direction from February 4, 2002, to reduce the maximum allowable building height to be considered in the North Creek regional activity center from 150 to 100 feet, except for certain manufacturing processes. Only those pages of the North Creek subarea plan elements which contain amendments, plus any preceding or following pages necessary for continuity, have been printed.**

# North Creek / NE 195<sup>th</sup> Street Subarea Plan Elements

## Land Use

Please see Figure 12 for a depiction of some of the following Land Use Policies and Actions.

### Policies

1. Land containing a critical area or areas is subject to regulations which may reduce the density or intensity of development allowed to less than that indicated by the plan designation.
2. The valley floor, located generally below the 50 foot contour line, is designated for Office Professional, Light Industrial, Community Business and *residential dwellings at densities controlled by site and building envelope regulations multiple family residential development at a density of 15 dwelling units per acre (R-AC R 11-15, OP, CB, LI* throughout most of the central portion of the map). ~~If and when high capacity transit service is provided to the area, the Plan should be revisited and increased residential densities should be considered.~~ Examples of non-residential uses shall include non-polluting manufacturing (clean light industrial), business-professional offices, educational facilities, recreation facilities, non-freeway oriented public accommodations, retail uses, hospitals, clinics, medical-professional offices and multi-family residential uses. Single-family, mobile homes and open storage are not permitted in this area. This designation shall extend across the utility corridor to include the parcel known as the Bassett-Hawkes property.

## Actions

1. Continue to work with Snohomish County in implementing the North Creek

Watershed Management Plan and identifying and implementing further actions which will aid in reducing the rate and volume of flows, improving water quality and encouraging improved fish habitat.

2. Work with the Departments of Fish and Wildlife in locating fisheries resources in the North Creek / NE 195th Street Subarea.
3. Re-evaluate Shoreline Master Program designations for North Creek throughout the City as a part of the overall review of all City codes and ordinances for consistency with the Comprehensive Plan.
4. Monitor the above described areas for any environmental degradation and take remedial action where appropriate.

## Housing

### Policies

1. Provide for a range of housing alternatives within the subarea for persons of

varying incomes and lifestyles. Reference is made to Land Use Policies above, which provide for densities of 4 to 15 units per acre within portions of the subarea outside of the valley floor, and higher densities on the valley floor.

### Actions

1. Initiate rezoning of properties as warranted to implement the Land Use policies.

## Economic Development

# Urban Design

## Policies

1. Improvements to Beardslee Boulevard shall be so designed as to provide a pleasing gateway into the City and downtown Bothell.
2. If large areas of impervious surface are necessary, landscaping shall be extensively utilized to avoid negative visual impacts on the surrounding areas including adjacent upland and slope areas.
3. The negative visual impact of buildings with their rear elevations facing I-405 or

SR-522 shall be avoided by building orientation and design and/or effective screening and stringent control of the placement of trash receptacles, mechanical equipment and service and loading areas.

4. Building design and location shall be planned to act as noise buffers from the freeway.
5. Commercial signs shall not be oriented towards attracting the traveling public. Indirect lighting of signs is preferred to internal lighting. Color combinations, compatibility with the surroundings and the general aesthetic effect of signs shall be reviewed at an early stage in project design review. Sign proposals shall be accepted based on integration with the architectural standards of the valley floor.
6. Clustering, joint use of walls and parking lots, and combinations of allowed uses are encouraged within the development area allotted by impervious surface requirements. Joint use of parking lots is subject to criteria as found in Chapter 17, BMC. Strip non-residential development along major collector streets is not permitted.
7. Lighting use for safety and convenience shall be the minimum necessary and shall be screened to eliminate glare for drivers and for adjacent residences.
8. Mid-rise buildings of 7 to 10 stories, or around 100 feet, are appropriate on the valley floor, and buildings of 4 to 6 stories, or around 65 feet, are appropriate on those adjacent hillsides designated for office and multi-family uses. Additional height above 100 feet on the valley floor, up to a total height of around 150 feet, is appropriate only to accommodate manufacturing processes which require a tall structure but few employees. Providing for buildings of the heights described in this policy would ensure that sufficient employment capacity exists to accommodate extended future growth within the existing boundaries of the area, thereby utilizing infrastructure efficiently and avoiding pressure to expand into established residential areas. Such buildings would be compatible with the scale of the valley setting: around the edges of this area, however, appropriate setbacks

~~should be applied to protect surrounding lower-intensity uses. There is no building height restriction for development on the valley floor (below the 50-foot contour line). When building height exceeds 35 feet, mandatory setback requirements from the property lines shall be one foot horizontal for each one foot vertical. When adjoining properties are developed simultaneously, setback requirements, except setbacks along public rights of way, may be waived and party walls may be allowed.~~

9. 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.
10. Buildings shall be contoured to the hillside for maximum integration with the site and padding or terracing of building sites in the hillside areas is discouraged.
11. Colors of structures on the valley floor shall blend with the valley setting and other buildings.
12. Security fences shall be of colors and materials compatible with the natural surroundings.
13. Buildings designed individually are encouraged. Modular units, tilt-up construction, and other cost effective techniques are not prohibited, but the final visual effect should be one of quality and permanence.
14. The layout of developments, including the location of buildings and streets, shall

be designed to effectively preserve the natural terrain and tree cover and minimize site grading.

## Actions

1. Work with the Washington State Department of Transportation to encourage that agency to heavily landscape the area within its right-of-way.

## Annexation

No further refinement of the Annexation Element Policies or Actions is warranted.

**Note – These proposed Plan amendments have been revised to specifically provide for cultural facilities taller than 65 feet, to provide a policy basis for the proposed Performing Arts Center to exceed the normal height limit. Only those pages of the Downtown subarea plan elements which contain amendments, plus any preceding or following pages necessary for continuity, have been printed.**

# Downtown / 190<sup>th</sup> / Riverfront Subarea Plan Elements

## *Land Use*

**Note: Many of the Land Use Policies are graphically depicted in Figure 15, Land Use Designations.**

### **Policies**

1. The Downtown / 190th / Riverfront subarea should contain a mix of complementary residential, business and commercial uses developed in a manner which is vibrant and inviting and promotes access by transit, foot and bicycle. Attractive and efficient linkages should be established between these uses and the Sammamish River open space corridor. The character of established residential areas should be preserved, but can be enhanced through capital investments such as sidewalks and bicycle routes.
2. Land containing a critical area or areas is subject to regulations which may reduce the density or intensity of development allowed to less than that indicated by the plan designation.
3. In order to provide an appropriate transition in uses to the Maywood / Beckstrom Hill subarea, land at the north border of the subarea is appropriate for development in office- professional and/or multiple family residential uses at a density of 15 dwelling units per acre, subject to availability of necessary utilities and to compliance with critical area regulations and other development standards and mitigation requirements (**R 11-15, OP** along northern edge of map).
4. The Sunrise / Valley View area is an established predominantly single family neighborhood. The area is appropriately designated 4 dwelling units per acre to recognize and protect the existing character of the area (**R 2-5** in east portion of map).

5. The Lazy Wheels, Riverside and River Shores mobile home parks provide affordable housing in an attractive riverfront setting. A Mobile Home Park designation is warranted to recognize and protect these land uses (MHP in central and east portions of map). If in the future the owners of any of these mobile home parks desire to redevelop, the plan designation for the property in question should be revisited to determine the appropriate land use in the context of the overall character of the Downtown / 190th / Riverfront subarea. Any proposal to redevelop any of the mobile home parks should provide for relocation assistance to mobile home residents living in the park at the time.
6. The area along the west side of SR 522 from Wayne Curve north to 98th Avenue NE is developed primarily in auto oriented uses of moderate intensity. A General Commercial designation is appropriate to recognize these existing uses and provide for their continuation (GC along west edge of map).

In addition, properties within this area which are located south of a point approximately 300 feet south of the intersection of SR 522 and Hall Road and have frontage on SR 522 have been determined to comprise the one area within the City in which adult entertainment businesses may appropriately be located. The adverse secondary impacts of adult entertainment businesses can be minimized and mitigated by restricting their location to this area because it is separated from residential areas and other sensitive uses vertically by topography and/or horizontally by the width and amount of traffic on SR 522. No more than three adult entertainment establishments shall be allowed within this area at one time. Signage for adult entertainment businesses in this area shall not contain language, drawings, pictures or other depictions representing or suggestive of sexual acts.

In order to promote city urban design and transportation goals and policies, future development should incorporate the following features, to the degree allowed by the severe topography in the area:

- a. Driveways should be a minimum of 300 feet apart and/or shared between adjacent properties in order to minimize congestion caused by vehicles entering or exiting traffic;
  - b. Internal vehicle access should be provided from property to property in such a manner as to allow a smooth flow of traffic across consecutive adjoining properties;
  - c. Plantings and other techniques such as berming shall be utilized along the street frontage to mitigate the visual impacts of development along SR 522, provided that a clear view of the building entrances and parking lot of any adult entertainment business is preserved for law enforcement purposes.
7. The area comprising the east side of SR-522 from Wayne Curve north, the west side of SR-527, and the area including and north of Main Street should develop in a mix of retail businesses, professional offices, ~~and~~ services, and multi-family residences ~~at a density of 15 dwelling units per acre~~ in order to create a vibrant downtown activity center. South of NE 180<sup>th</sup> Street, residential development at a density of 15 units per acre is appropriate (R 11-15, OP, CB over much of the northwest portion of the map). North of NE 180<sup>th</sup> Street, within the Downtown community activity center, residential development at densities controlled by site and building envelope regulations is appropriate (R-AC, OP, CB). The City should study the feasibility and appropriateness of granting bonus densities over 15 units per acre for developments which provide structured parking, integrate

residential, retail and office space within the building, exhibit exceptional design quality, rent units below market rate, or in some other way promote City objectives.

Buildings in the portion of this area north of NE 180<sup>th</sup> Street, comprising the Downtown community activity center, should be allowed to have a maximum height of 4 to 6 stories, or around 65 feet, to promote a mutually supportive mix of retail, service, office and residential uses while maintaining a sense of connectedness between the uppermost floors and street-level activity. Additional height should be allowed for performing arts centers to accommodate their unique design requirements, provided that any portions over 65 feet comprise a very limited percentage of the building. Around the edges of this area, appropriate setbacks should be applied to protect surrounding lower-intensity uses. In addition, along Main Street the third and higher floors should be set back from the street property line to preserve the historic scale of development along the street. Development of taller buildings should incorporate structured parking to keep the area compact and walkable. Public gathering places should be included in developments to promote socializing.

The Northshore School District property is included in this designation to recognize the long-term potential for redevelopment of this area. If the school district property is redeveloped, design guidelines should be established to ensure that development occurs in a manner which enhances the community and is compatible with surrounding development.

The property between 96th and 98th Avenues NE north of Dawson Street has been identified as a suitable location for a public services campus. The area currently contains the Bothell Library, Multi Service Center, and a new regional library (under construction) to replace the existing overcrowded facility, and was the first choice in 1992 of a citizens advisory committee for a new city hall and police station site. Development of a public services campus in this area would provide an "anchor" for the west end of downtown and would afford redevelopment opportunities east of SR 527 on the properties currently occupied by the City. Such a campus should be visually linked to retail areas through landscaping and other urban design features.

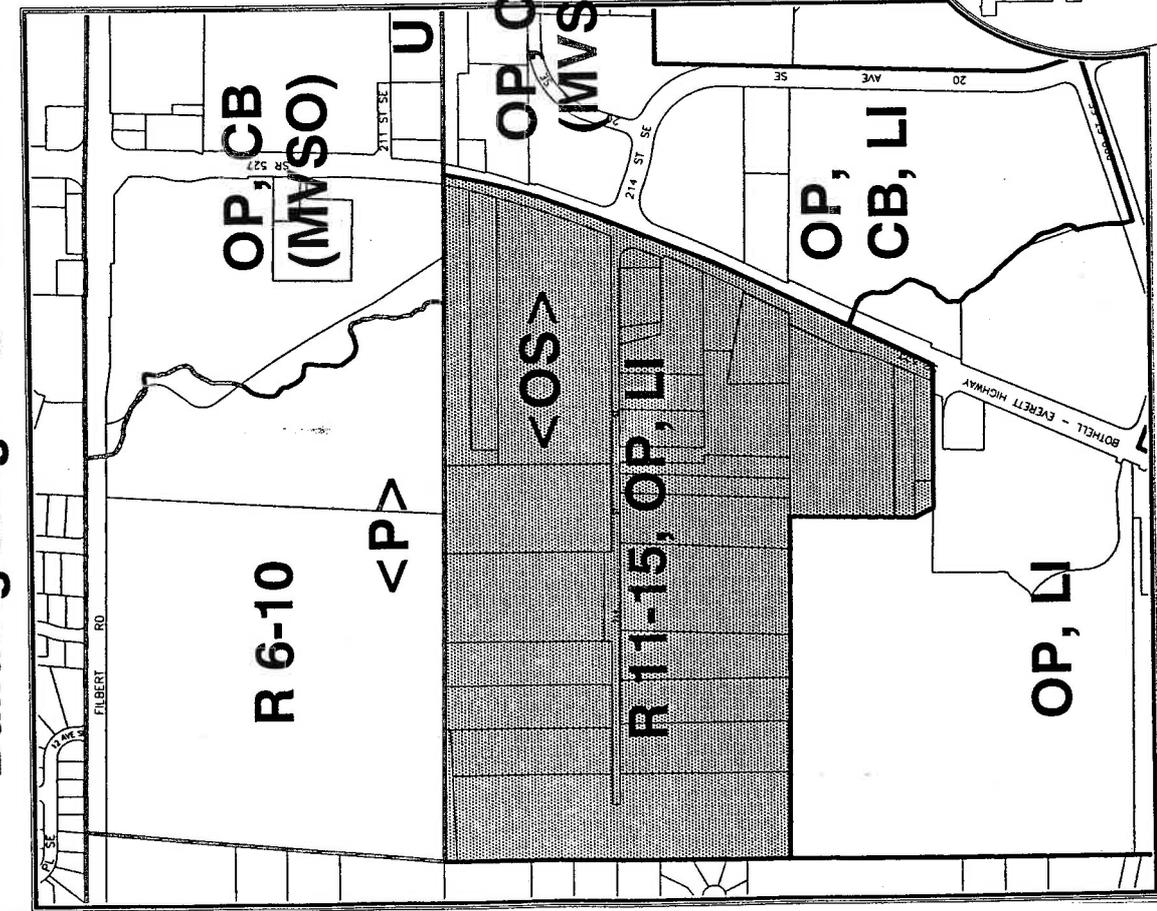
Along SR 522, certain auto-oriented uses and uses which involve outdoor display of merchandise may be appropriate provided design measures are incorporated to ensure compatibility with residential development which may locate nearby.

Linkages should be established to the Sammamish River corridor and to nearby single family residential areas on West, Maywood and Norway hills. View corridors towards and across the river should be preserved.

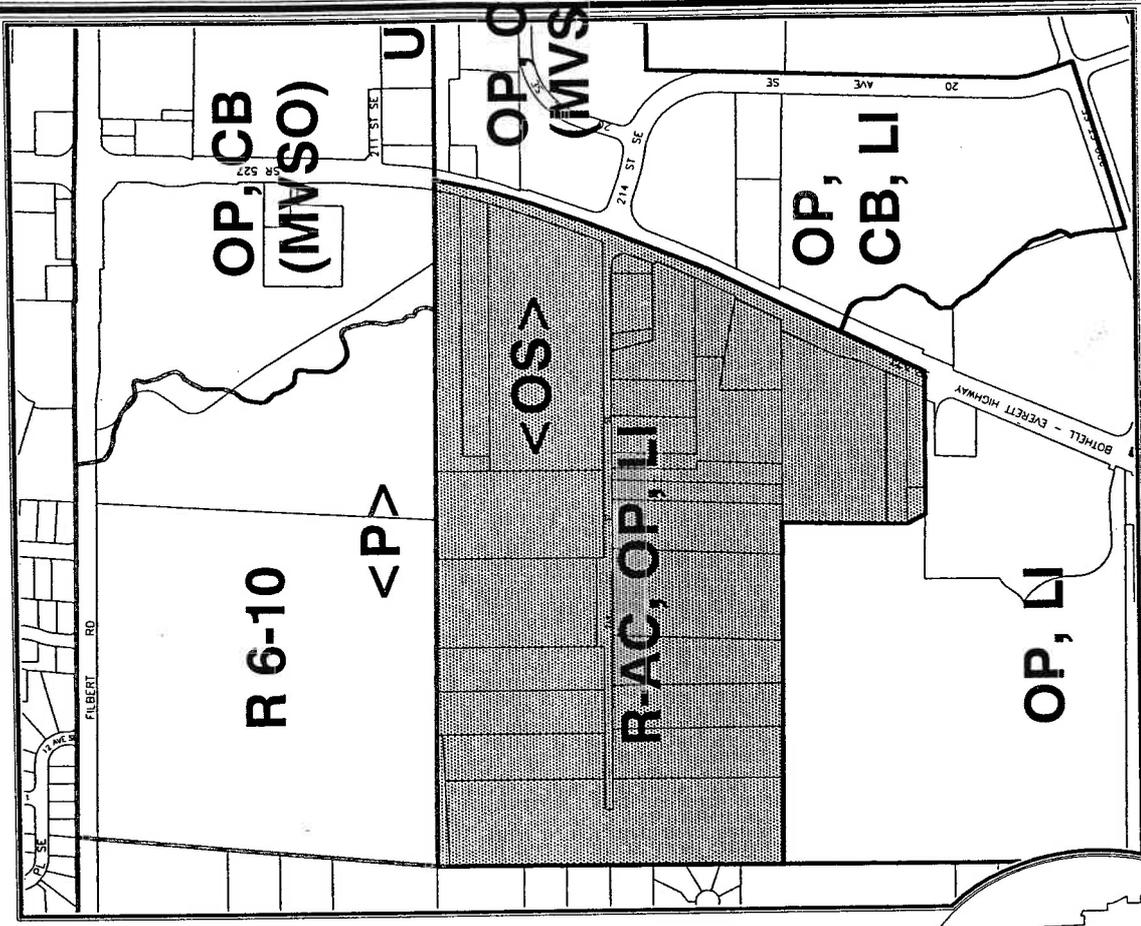
# 2001 Selected Plan and Code Amendments

## CPA - 2001 - 5

### Building Height & Residential Density in Designated Activity Centers



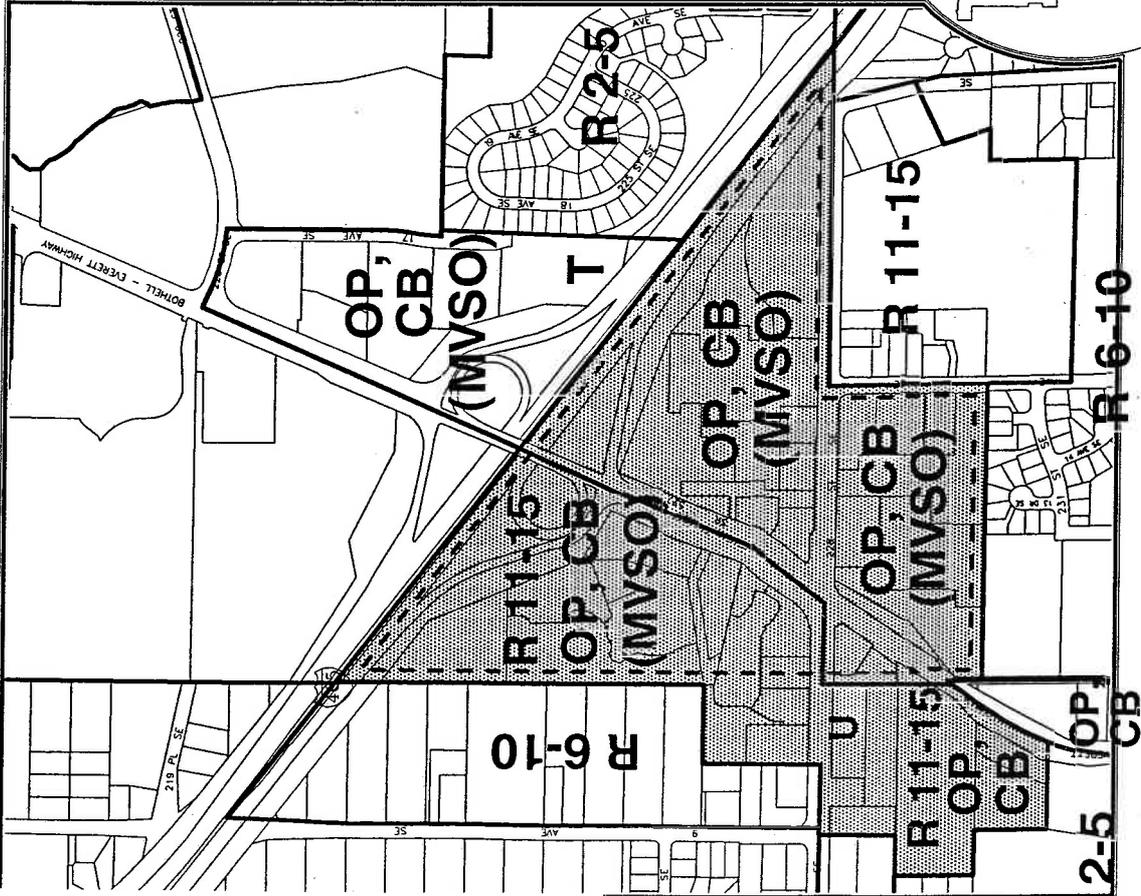
Existing Plan Designation



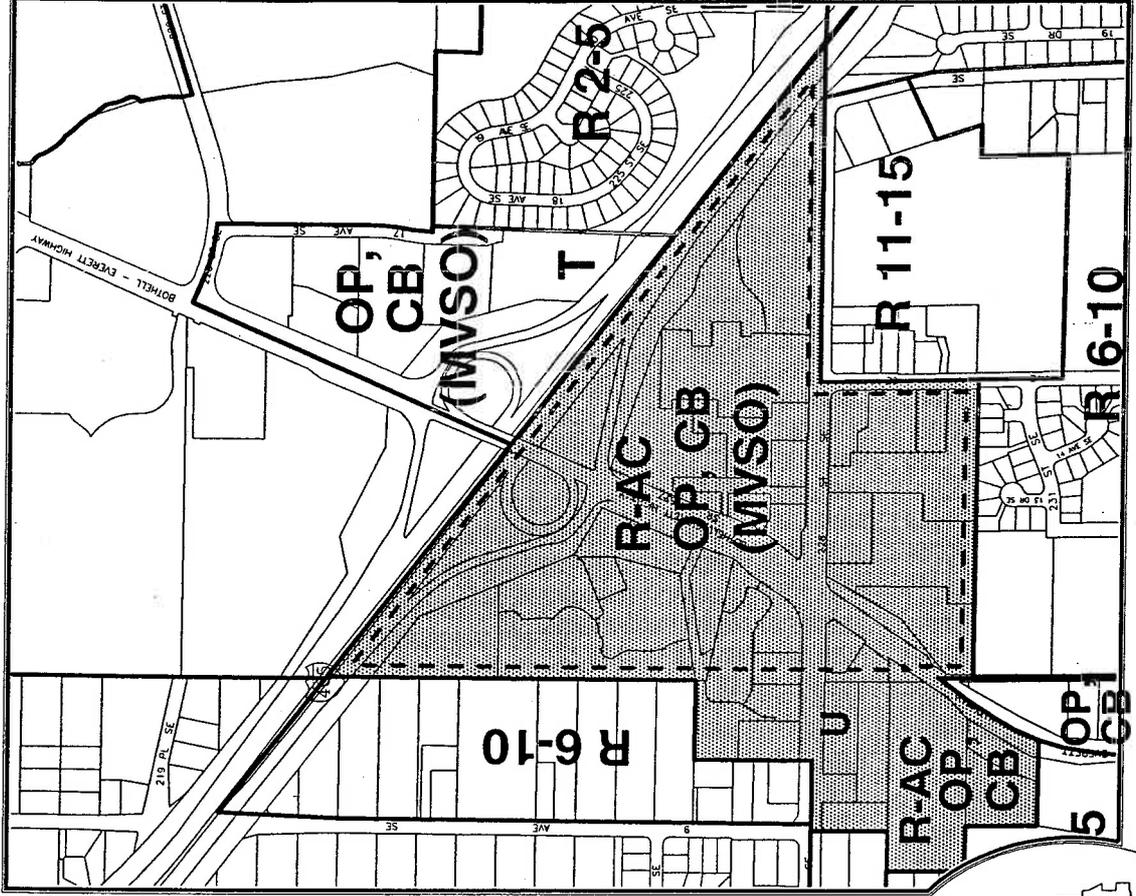
Proposed Plan Designation

CPA - 2001-5

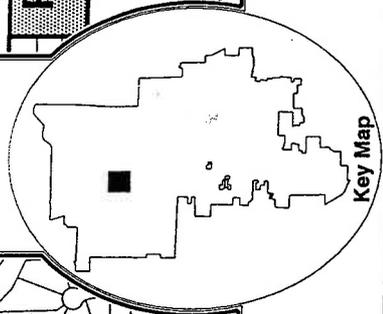
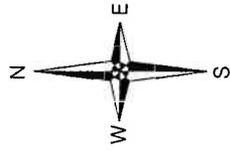
Building Height & Residential Density in Designated Activity Centers



Existing Plan Designation



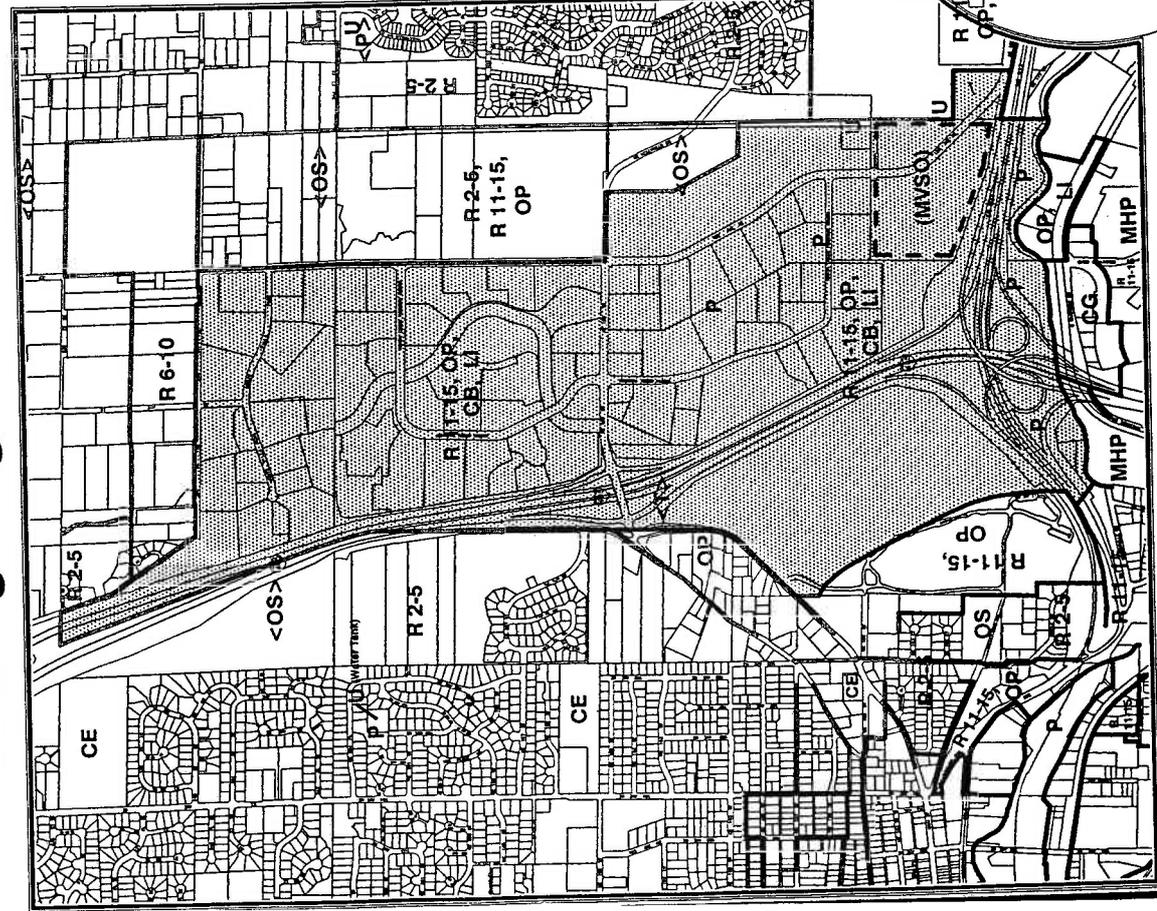
Proposed Plan Designation



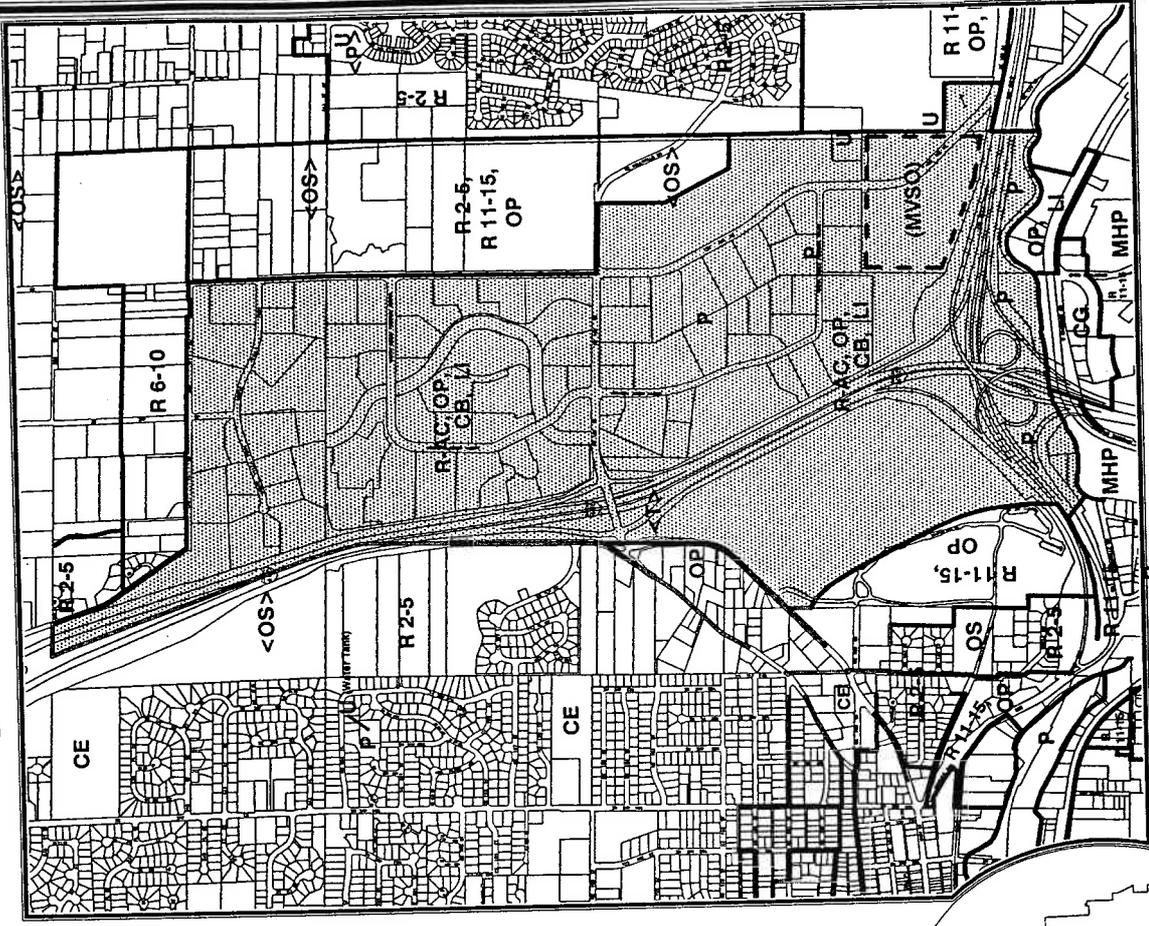
# 2001 Selected Plan and Code Amendments

## CPA - 2001-5

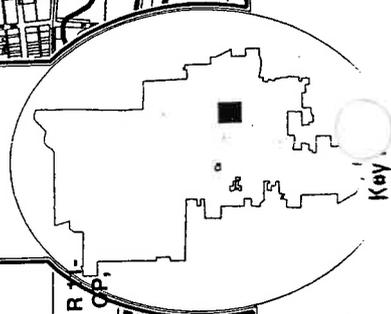
### Building Height & Residential Density in Designated Activity Centers



Existing Plan Designation



Proposed Plan Designation



Key



# 2001 Selected Plan and Code Amendments

## CPA-2001-5 Building height and residential density in designated activity centers

### Proposed Code amendments *Revised March, 2002*

Proposed new language shown in *underlined italics*

Proposed deletions shown in ~~underlined strikethrough~~

**Note** – This chapter is where the Residential – Activity Center (R-AC) zone would be established. In this zone there would be no specific density: the number of units attainable would be controlled by site and building envelope regulations.

Only the first page of this chapter, for context, and the page containing the proposed amendments have been printed.

**Chapter 12.04**  
**ZONING CLASSIFICATIONS, SUBAREAS, MAPS, AND BOUNDARIES**

Sections:

- 12.04.010 Purpose.
- 12.04.020 Zoning classifications.
- 12.04.030 Residential zoning classifications.
- 12.04.035 Specialized Senior Housing Overlay zoning classification.
- 12.04.040 Office-Professional zoning classification.
- 12.04.050 Neighborhood Business zoning classification.
- 12.04.060 Community Business zoning classification.
- 12.04.065 Motor Vehicle Sales Overlay zoning classification.
- 12.04.070 General Commercial zoning classification.
- 12.04.080 Light Industrial zoning classification.
- 12.04.090 Shoreline master program.
- 12.04.100 Mobile/Manufactured Home Park Overlay zoning classification.
- 12.04.110 Canyon Park Annexation concomitant zoning agreements.
- 12.04.120 Subareas.
- 12.04.130 Adoption of city-wide and subarea zoning maps.
- 12.04.140 Boundaries – Administrative determination.
- 12.04.150 Boundaries – Hearing body recommendation – City council determination.

**12.04.010 Purpose.**

The purpose of this chapter is to establish and describe the purpose of zoning classifications utilized in this title, and to establish maps which depict the geographic allocation of those zoning classifications throughout the city. (Ord. 1815 § 1, 2000; Ord. 1685, 1997; Ord. 1629 § 1, 1996).

**12.04.020 Zoning classifications.**

In order to regulate the use of land and structures, the city is divided into the following land use zoning classifications. The approximate number of dwelling units per net acre is provided for general identification purposes, and is not to be interpreted as a regulation controlling the density or intensity of land use. For the purposes of this title, “net acre” means gross acre minus the amount of land in critical areas and public right-of-way or other public facilities.

Name	Symbol
Residential, 40,000 square foot minimum lot size (approximately one dwelling unit per net acre)	R1

Residential, 20,000 square foot minimum lot size (approximately two dwelling units per net acre)	R2
Residential, 12,500 square foot minimum lot size (approximately three dwelling units per net acre)	R3
Residential, 9,600 square foot minimum lot size (approximately four dwelling units per net acre)	R4
Residential, 8,400 square foot minimum lot size (approximately five dwelling units per net acre)	R5
Residential, 7,200 square foot minimum lot size (approximately six dwelling units per net acre)	R6
Residential, 5,400 square foot minimum lot size Detached units only (approximately eight dwelling units per net acre)	R8d
Residential, one unit per 5,400 square feet of lot area Attached or detached units (approximately eight dwelling units per net acre)	R8a
Residential, one unit per 4,000 square feet of lot area (approximately 11 dwelling units per net acre)	R11
Residential, one unit per 2,800 square feet of lot area (approximately 15 dwelling units per net acre)	R15
<u>Residential – Activity Center (no specific density: number of units controlled by site and building envelope regulations)</u>	<u>R-AC</u>
Specialized Senior Housing Overlay	SSHO
Office-Professional	OP
Neighborhood Business	NB
Community Business	CB
Motor Vehicle Sales Overlay	MVSO
General Commercial	GC
Light Industrial	LI

Zoning classifications are applied separately (e.g., R15) where one category of land use is determined to be appropriate as designated by the Imagine Bothell... Comprehensive Plan, and in combination (e.g., R15, OP, CB) where more than one category of land use is determined to be appropriate as designated by the plan. When used in combination, the most permissive regulations of the combined zones shall apply, unless specifically provided otherwise. (Ord. 1853 § 1, 2001; Ord. 1815 § 1, 2000; Ord. 1685, 1997; Ord. 1629 § 1, 1996).

**12.04.030 Residential zoning classifications.**

The intent of residential zoning classifications (R1, R2, R3, R4, R5, R6, R8d and R8a, R11, R15, R-AC) is to provide locations for a range of densities and housing types to ensure a broad choice of attractive and affordable living accommodations to persons desiring to reside in Bothell. Residential zones may contain as outright permitted uses or conditional uses certain nonresidential uses which enhance the community including but not limited to schools, churches and parks. (Ord. 1815 § 1, 2000; Ord. 1685, 1997; Ord. 1629 § 1, 1996).

**Note** – Creating the Residential – Activity Center zone would necessitate amending every use table in the Permitted Uses chapter to add a column for the R-AC zone. For the sake of efficiency, only the residential use table is shown here. In the other tables, the uses allowed in the R-AC zone would be the same as those allowed in the R15 zone.

Sections 12.06.010, Purpose, and 12.06.020, Interpretation of land use tables, are included for context. Otherwise, all sections other than 12.06.140A, Residential uses, have been excluded, although each would be changed by the addition of a R-AC zone column.

## Chapter 12.06 PERMITTED USES

### Sections:

12.06.010	Purpose.
12.06.020	Interpretation of land use tables.
12.06.030	Agriculture.
12.06.040	Automotive, marine, and heavy equipment services.
12.06.050	Business and personal services.
12.06.060	Eating and drinking establishments.
12.06.070	Education services.
12.06.080	Essential public facilities.
12.06.090	Government services, general.
12.06.100	Health and social services.
12.06.110	Lodging.
12.06.120	Manufacturing, distribution, storage and warehousing.
12.06.130	Recreation, culture and entertainment.
12.06.140	Residential uses.
12.06.150	Retail uses.
12.06.160	Temporary uses.
12.06.170	Transportation.
12.06.180	Utilities.
12.06.190	Uses not otherwise categorized.

### **12.06.010 Purpose.**

The purpose of this chapter is to establish permitted land uses for the city of Bothell. The use of a property is defined by the activity for which the building or lot is intended, designed, arranged, occupied, or maintained. The use is considered permanently established when that use will be or has been in continuous operation for a period exceeding 60 days. A use which will operate for less than 60 days is considered a temporary use, and is subject to the requirements of BMC 12.06.160. All applicable requirements of this code, or other applicable state or federal requirements, shall govern a use located within the Bothell city limits. (Ord. 1815 § 1, 2000; Ord. 1685, 1997; Ord. 1629 § 1, 1996).

#### **12.06.020 Interpretation of land use tables.**

A. The land use tables in this chapter determine whether a specific use is allowed in a zone classification. Specific uses are divided among 17 tables, each of which represents a broad category of land use. The tables are arranged in alphabetical order by land use category, as listed at the beginning of this chapter. Within each table, zone classifications are located in vertical columns and specific uses are arranged alphabetically in horizontal rows.

B. If no symbol appears in the box at the intersection of a column and a row, the use is not allowed in that zoning classification.

C. If the letter "P", for "Permitted", appears in the box at the intersection of a column and a row, the use is allowed in that classification, subject to the development and operational requirements of this and other applicable titles. The conduct or development of a permitted use may require approvals including but not limited to land clearing, grading, plumbing, mechanical and building permits. The procedures for applying for such approvals shall be as set forth in BMC Title 11, Administration of Development Regulations.

D. If the letter "C", for "Conditional", appears in the box at the intersection of a column and a row, the use is allowed subject to conditional use permit procedures and requirements and other development and operational requirements of this and other applicable titles. The conduct or development of a conditional use shall require approval of a conditional use permit in addition to other approvals as set forth in subsection C of this section. Procedures for applying for a conditional use permit shall be as set forth in Chapter 12.28 BMC and BMC Title 11, Administration of Development Regulations.

E. If a number appears in the box describing the use, or in the box at the intersection of a column and a row, the use is subject to specific development and/or operational requirements which may be in addition to or in place of general requirements of this and other applicable titles. Such use-specific requirements typically follow the table and correspond to the number in the table, although some such requirements, such as those for specialized senior housing, are set forth in separate chapters.

F. Where multiple zoning classifications are combined (e.g., OP, LI), the most permissive regulations of the individual zoning classifications shall apply, unless specifically provided otherwise. For example, if a use is not permitted in the OP zone but is permitted in the LI zone, the use is permitted on land zoned OP, LI.

G. Any proposed use not listed in the table shall be classified by the community development director as permitted, conditional, or not permitted, based on the listed use to which the proposed use is most similar. If the community development director determines that the proposed use is not similar to any use in the table, the proposed use shall not be permitted. The determination of the community development director shall be appealable to the hearing body.

H. Permitted uses as established by this chapter may be modified by subarea regulations. (Ord. 1815 § 1, 2000; Ord. 1685, 1997; Ord. 1629 § 1, 1996).

**12.06.140 Residential uses.**

**A. Use Table.**

Residential Uses	Zoning Classification										
	R1 R2	R3 R4 R5 R6	R8a R8d	R11	R15	<u>R</u> <u>AC</u>	OP	NB	CB	GC	LI
Adult family homes (1)	P	P	P	P	P	<u>P</u>	P	P	P	P	P
Domestic animals, keeping of (2)	P	P	P	P	P	<u>P</u>					
Dormitories, fraternities and sororities (3)	C	C	C	P	P	<u>P</u>	P	P	P	P	
Dwelling units, accessory (4)	P	P	P	P	P	<u>P</u>					
Dwelling units, primary, one unit per structure, detached ("single-family") (5)	P	P	P	P	P	<u>P</u>					
Dwelling units, primary, two units per structure ("duplex") (6)			P (R8a)	P	P	<u>P</u>					
Dwelling units, primary, three or more units per structure ("multifamily") (6)			P (R8a)	P	P	<u>P</u>					
Family day care (7)	P	P	P	P	P	<u>P</u>	P	P	P	P	P
Home occupations (8)	P	P	P	P	P	<u>P</u>					
Households of more than eight unrelated persons (9)											
Mobile home parks (10)	C	C	C	C	C						
Mobile/manufactured homes, in mobile home parks (10)	P	P	P	P	P						
Nursing homes (11)				C	C	<u>C</u>	C	C	C	C	
Residential care facilities (12)	P	P	P	P	P	<u>P</u>					
Rooms for roomers or boarders (13)	P	P	P	P	P	<u>P</u>					
Rooms for the use of domestic employees of the owner, lessee, or occupant of the primary dwelling (14)	P	P	P	P	P	<u>P</u>					



**Note** – *Creation of the Residential – Activity Center (R-AC) zone would require inclusion of a reference to the new zone in this chapter.*

*Only the first page of this chapter, for context, and the page containing the proposed amendments have been included.*

## **Chapter 12.10**

### **SPECIALIZED SENIOR HOUSING AND NURSING HOMES**

#### Sections:

- 12.10.010 Purpose.
- 12.10.020 Occupancy.
- 12.10.030 Number of units or beds allowed.
- 12.10.040 Development design, generally.
- 12.10.050 Development adjacent to single-family zoning.
- 12.10.060 Reduction in parking for specialized senior housing.
- 12.10.070 Recreation space.
- 12.10.080 Transportation program.

#### **12.10.010 Purpose.**

The purpose of this chapter is to provide standards for the development of specialized senior housing and nursing homes in a manner which recognizes and accommodates the varied housing needs and desires of seniors; promotes independence and a high quality of life; and ensures that specialized senior residences and nursing homes are so located and constructed as to be compatible with surrounding land uses.

Seniors, like other segments of the community, are varied in their housing needs and lifestyle choices. Most of the community's seniors reside in nonspecialized owned or rented site-built single-family residences, mobile homes, and apartments and condominiums which typically contain no inherent design features to aid mobility (although such features may be included by the owner), and which offer no on-site services or activities. These types of housing which are not specifically age-targeted, as well as accessory senior dwelling units ("mother-in-law apartments") and adult family homes, are regulated elsewhere in this title (see permitted uses and accessory uses under each zoning classification). This chapter provides for and regulates housing intended for those seniors who want or need such specialized design features, services and/or activities to enhance their quality of life.

Where the regulations of this chapter conflict with other regulations in this title, the more restrictive regulations shall apply.

These housing types are described as follows:

- A. Specialized senior housing, comprising of coordinated developments of two or more owned or rented site-built single-family dwellings, mobile homes, apartments and condominiums which contain specialized design features and/or on-site services and activities to accommodate the mobility, nutrition, medical, social and/or other needs of persons 62 years of age or older and/or disabled

persons. Domestic partners of and/or caregivers for such persons may also reside in such developments and need not be 62 years of age or older and/or disabled. Individual residences which contain design features to aid mobility but which are not part of a coordinated development are not included in this category.

This category covers a range of service levels, from no services ("independent living") to minimal meal service and housekeeping ("semi-independent living") to a high level of assistance with daily life functions ("assisted living"), with many gradations of service levels in between.

- B. Nursing homes, comprising facilities which provide short- or long-term care for seniors and other persons who need skilled nursing care but do not require hospitalization. (Ord. 1815 § 1, 2000; Ord. 1685, 1997; Ord. 1629 § 1, 1996).

**12.10.020 Occupancy.**

Occupancy of specialized senior housing shall be limited to persons 62 years of age or over and/or disabled persons, and their domestic partners and/or live-in caregivers who need not be 62 years of age or older and/or disabled. Senior housing may not be converted to another allowed residential use, unless such use meets the density and other requirements of the city code. (Ord. 1815 § 1, 2000; Ord. 1685, 1997; Ord. 1629 § 1, 1996).

**12.10.030 Number of units or beds allowed.**

The maximum number of dwelling units in a specialized senior housing development and the maximum number of beds in a nursing home development shall be as set forth below.

A. Specialized Senior Housing.

1. On properties located within an area with a Specialized Senior Housing Overlay (SSHO) zoning classification, the particular density or intensity of the developments shall be as set forth in the subarea chapter containing the overlay, subject to compliance with all development standards set forth in the said subarea chapter.
2. On properties zoned R8a, R11, R15, R-AC or having multiple zoning classifications (e.g., R15, R-AC, OP, CB), the maximum number of specialized senior housing dwelling units shall not be restricted, subject to compliance with all dimensional, design, parking, landscaping and other development standards of the zoning classification in which the development would occur except those standards relating to density or number of units allowed for nonspecialized housing.

- B. Nursing Homes. The maximum number of beds in a nursing home shall not be restricted, subject to compliance with all dimensional, design, parking, landscaping and other development standards of the zoning classification in which the development would occur except standards relating to density or number of units allowed for nonspecialized housing. (Ord. 1815 § 1, 2000; Ord. 1685, 1997; Ord. 1629 § 1, 1996).

**Note** – *Creation of the Residential – Activity Center (R-AC) zone would require inclusion of a reference to the new zone in this chapter.*

*Only the first page of this chapter, for context, and the pages containing the proposed amendments have been included.*

**Chapter 12.11**  
**PERSONAL WIRELESS SERVICE FACILITIES**

Sections:

- 12.11.010 Policies, purpose and goals.
- 12.11.020 Definitions.
- 12.11.030 General provisions.
- 12.11.040 PWS facilities – Permitted locations.
- 12.11.050 PWS facility permit required – Type of action.
- 12.11.060 Contents of complete application.
- 12.11.070 Visibility and dimensional standards.
- 12.11.080 Collocation – Covenant of good faith.
- 12.11.090 Recovery of city costs.
- 12.11.100 Maintenance of facilities.
- 12.11.110 Modification.
- 12.11.120 Testing of PWS facilities required – Radio frequency radiation.
- 12.11.130 Testing of PWS facilities required – Noise emissions.
- 12.11.140 Security.
- 12.11.150 Abandonment of PWS facilities.
- 12.11.160 Signs.
- 12.11.170 Revocation or termination of permit.
- 12.11.180 Notice and duty to cure.
- 12.11.190 Hearing.

12.11.010 Policies, purpose and goals.

A. Provision of Opportunities for Wireless Providers. This chapter is designed to provide opportunities for PWS facilities consistent with the statutory rights of wireless communication service providers while providing for an orderly development of the city and protecting the health, safety, and general welfare of the city's residents and property owners.

B. Preservation of Character of City. A primary objective of this chapter is to preserve the existing visual and aesthetic character of the city and its neighborhoods, as well as minimizing the noise impacts generated by PWS facilities. Preserving the visual and aesthetic character of the city includes the protection of views within the city which create a special character for the community, high property values and a tax base sufficient to support the city's operations and limiting the intrusion of noise, visual, and aesthetic impacts associated with commercial and other uses into residential neighborhoods.

C. Goals. The goals of this chapter include:

1. Establishing development regulations consistent with the Imagine Bothell... Comprehensive Plan, adopted July 31, 1995;

W. "Whip antenna" means an omni-directional antenna designed to transmit and/or receive signals in a 360-degree pattern. (Ord. 1733 § 7, 1998).

**12.11.030 General provisions.**

- A. The placement or modification of any PWS facility at any location within the city is subject to the provisions of this chapter.
- B. PWS facilities shall not be permitted on any building or structure within an area of the city zoned exclusively R1 through R15, including the SSHO and MHP overlay zones, except as specified in BMC 12.11.040.
- C. PWS facilities located within a designated critical area, as defined by BMC 14.04.050, shall comply with the requirements of Chapter 14.04 BMC.
- D. Lattice and guyed towers shall not be permitted in any zoning district. Monopoles shall be permitted only as specified in BMC 12.11.040.
- E. No variances or deviations from the provisions of BMC 12.11.040 and 12.11.070 shall be permitted. (Ord. 1733 § 7, 1998).

**12.11.040 PWS facilities – Permitted locations.**

The following siting standards shall apply to all new PWS facilities:

Zone designation	Permitted Uses	Visual, Dimensional and Equipment Enclosure Standards	Noise Standards
Exclusive residential zones (R1 – R15, including MHP and SSHO overlays)	PWS facilities located within a developed street are permitted	As per BMC 12.11.070(A)	As per BMC 8.26.040 and WAC 173-60-040
	PWS facilities attached to existing monopole and lattice towers are permitted	As per BMC 12.11.070(F)	
Commercial zones (NB, CB, GC, LI, OP) and mixed use zones containing R11, R15 <i>or</i> <u>R-AC</u> as components	PWS facilities within developed streets are permitted	As per BMC 12.11.070(B)	As per BMC 8.26.040 and WAC 173-60-040
	PWS facilities attached to an existing non-residential buildings are permitted	As per BMC 12.11.070(C)	
	PWS facilities attached to existing Seattle City Light high voltage transmission towers are permitted	As per BMC 12.11.070(E)	
	Monopoles are permitted	As per BMC 12.11.070(D)	

New monopoles not to exceed 110 feet in height are permitted in the following commercial zones:

- A. Properties which have all the following zoning classifications as follows: CB, OP, LI and R15 or R-AC and no others.
- B. Commercial zones which have the exclusive combination of CB and OP as a zoning classification and which are located in areas lying within 400 feet of the Interstate 405 right-of-way and more than 100 feet east of the SR 527 right-of-way.
- C. Commercial zones which have the exclusive combination of OP and LI as a zoning classification. (Ord. 1733 § 7, 1998).

**12.11.050 PWS facility permit required – Type of action.**

A PWS facility permit shall be required prior to the construction or installation of each PWS facility other than a temporary PWS facility as defined herein. For the purposes of BMC Title 11, PWS facility permits shall be designated as Type I project permit applications. BMC Title 11 notwithstanding, all applicants for PWS facilities shall comply with the posting requirements set forth in BMC 11.19.005 and post a notice of application meeting the requirements of BMC 11.06.004(C) upon the subject property. No other public notice shall be required for such permits. (Ord. 1733 § 7, 1998).

**12.11.060 Contents of complete application.**

An application for a PWS facility permit is complete for the purposes of this section when it has been determined by the city to contain the information described below in addition to the standard application information required under BMC Title 11, Administration of Development Regulations. The permit fee shall be established by resolution of the city council. A complete application is sufficient for continued processing even though additional information may be required or modifications may subsequently be made. The city's determination of completeness shall not preclude the city from requesting additional information or studies, either at the time of the notice of completeness or subsequently if new information is required or substantial changes in the application occur. A complete application shall contain:

- A. A complete application form, permit fee, and attachments signed and dated by the owner/agent. The application shall be on a standardized form approved by the director and provided to the applicant by the department of public works and community development;
- B. The name, address, phone number and signature of the applicant or authorized representative;
- C. A complete legal description of the subject property;
- D. Locational maps, including:

**Note – These proposed Code amendments have been revised to incorporate Council direction from February 4, 2002, to reduce the maximum allowable building height to be considered in the North Creek and Canyon Park regional activity centers from 150 to 100 feet, except for certain manufacturing processes.**

*The site and building design regulations for the new Residential – Activity Center (R-AC) zone would appear in this chapter. This chapter would also provide for the proposed revised building heights in the affected community activity centers and regional activity centers.*

*Please note that the regulations which would allow a percentage of a building to be taller than the new height limits, to accommodate the proposed Northshore Performing Arts Center, are proposed only for the Downtown area, and therefore have been located in the Downtown subarea regulations, Chapter 12.64.*

*Only those pages of this chapter which contain amendments, plus any preceding or following pages necessary for continuity, have been printed.*

## **Chapter 12.14 AREA, DIMENSIONS AND DESIGN**

### Sections:

- 12.14.010 Purpose.
- 12.14.020 Interpretation of tables.
- 12.14.030 Residential area and dimensions.
- 12.14.040 Commercial and industrial dimensions.
- 12.14.050 Setbacks – General measurement method.
- 12.14.060 Setbacks – Adjoining alleys.
- 12.14.070 Setbacks – Applying to specific building or use.
- 12.14.080 Setbacks – Modifications.
- 12.14.090 Setbacks – Projections allowed.
- 12.14.100 Setbacks – Panhandle lots.
- 12.14.110 Building height – General measurement method.
- 12.14.120 Building height – Exceptions to limit.
- 12.14.130 Building limitations – Accessory buildings and structures.
- 12.14.140 Building and impervious surface coverage.
- 12.14.150 Fences and freestanding walls.
- 12.14.155 Storage space and collection points for recyclables and garbage.
- 12.14.160 Lot divided by zone boundary.
- 12.14.170 Site and exterior building design, generally.
- 12.14.180 Site design.
- 12.14.190 Exterior building design.
- 12.14.200 Exterior building design Multiple family residential.
- 12.14.210 Exterior building design -- Commercial and industrial.
- 12.14.220 Exterior building design -- Multi-family residential, commercial and industrial abutting single family residential.

12.14.230 Exterior building design of developments on or adjacent to historic register or historic inventory properties.

**12.14.010 Purpose.**

The purpose of this chapter is to establish area, dimension and design regulations which comply with and implement the goals and policies of the Imagine Bothell... Comprehensive Plan with respect to the desired intensity and appearance of development within the city's residential, commercial and industrial areas. (Ord. 1629 § 1, 1996).

**12.14.020 Interpretation of tables.**

- A. BMC 12.14.030 and 12.14.040 contain general density and dimension standards for the various zones. Methods for measuring these standards are set forth in BMC 12.14.050 through 12.14.140.
- B. The area and dimension standards are arranged in a table for each of two general land use categories:
  - 1. Residential;
  - 2. Commercial/industrial.
- C. Development standards are listed down the left side of both tables, and the zones are listed at the top. The matrix cells contain the area and dimensional requirements of each zone. All dimensions are measured in lineal feet, and all areas are measured in square feet. The parenthetical numbers in the matrix identify specific requirements or other information which is set forth following the matrix. (Ord. 1629 § 1, 1996).

**Note** – A column has been added for the proposed new Residential – Activity Center (R-AC) zone. Footnote 9 has been added to explain that the number of units attainable is a function of site and building envelope regulations.

**Note** -- The range of maximum building heights - 35 to 65 feet, or 65 to 100 feet - are shown in the R15 and R-AC columns, to alert readers that areas with these zoning classifications may be subject to special building height regulations. Footnote (6) is also included in these cells to direct readers to the text in this section which explains where the special height regulations apply.

**12.14.030 Residential area and dimensions.**

- A. Development Standards Table.

Residential Development Standards (1)	Zoning Classification									
	R1	R2	R3	R4	R5	R6	R8d R8a	R11	R15	<u>R-AC</u> <u>(al-</u> <u>ways</u> <u>in</u> <u>com-</u> <u>bina-</u> <u>tion</u> <u>with</u> <u>OP,</u> <u>CB,</u> <u>and/</u> <u>or LI)</u>
Minimum lot area per single family dwelling unit (square feet) (2)	40,000	20,000	12,500	9,600	8,400	7,200	5,400	none	none	<u>none</u>
Minimum land area per multi-family dwelling unit (square feet) (3)							5,400 (R8d)	4,000	2,800	<u>none</u> <u>(9)</u>
Minimum lot circle diameter (4)	150	100	80	80	70	60	50	none	none	<u>none</u>
Minimum front yard setback (5)	30	30	20	20	20	20	20	20	20	<u>See</u> <u>BMC</u> <u>12.14</u> <u>.040A</u>
Minimum rear yard setback (5)	35	25	15	15	15	15	15	25	25	
Minimum side yard setback (5):										
One side yard	5	5	5	5	5	5	5	5	5	
Combined side yards	15	15	15	15	15	15	15	15	15	
Maximum building height (6)	30	30	30	30	30	30	30	35	35, <u>or 65</u> <u>in</u> <u>des-</u> <u>igna-</u> <u>ted</u> <u>cen-</u> <u>ters</u> <u>(6)</u>	<u>65 or</u> <u>100</u> <u>in</u> <u>des-</u> <u>igna-</u> <u>ted</u> <u>cen-</u> <u>ters</u> <u>(6)</u>
Maximum building coverage (7)	35%	35%	35%	35%	35%	35%	35%	50%	50%	<u>See</u> <u>BMC</u>
Maximum accessory building coverage (8)	5%	5%	5%	5%	5%	5%	5%	5%	5%	<u>12.14</u> <u>.040A</u>
Maximum impervious surface coverage (7 & 8)	The area within the front yard setback shall not contain any impervious surface except for driveways, walkways, and structures allowed to project into the setback in accordance with BMC 12.14.100. If critical areas are present anywhere on the property, impervious surface coverage is further regulated by BMC Title 14, Environment.								80% If critical areas are present anywhere on the property, impervious surface coverage is further regulated by BMC Title 14, Environment.	

B. Notes.

1.
  - a. Where a district combines multiple zoning classifications (e.g., R-AC, R15, OP, CB), the most permissive standards of the individual zoning classifications shall apply.
  - b. Development standards may be modified through the planned unit development process. See Chapter 12.30 BMC.
  - c. Development standards for mobile/manufactured home parks are contained in Chapter 12.08 BMC.
2. Single family minimum and maximum lot area.
  - a. In the R1 through R8d zones, no lot shall be less than the minimum lot area per single family dwelling unit, except as may be permitted under an approved Planned Unit Development, in accordance with BMC 12.30. No more than one primary dwelling unit shall be placed on a lot.
  - b. In order to promote efficient use of land, no subdivision for which an application is received after the effective date of this ordinance shall contain any lot having more than one and one-half times the minimum lot area for the zoning classification in which the subject property is located, except as follows:
    - i. Any subdivision of four lots or fewer may contain larger lots, but the property lines of such a subdivision shall be laid out so as to allow future subdivisions which comply with BMC 12.14.030B.2.b above;
    - ii. A subdivision of five or more lots may contain larger lots to accommodate phasing of the subdivision, provided that, at completion of all phases, the subdivision complies with BMC 12.14.030B.2.b above;
    - iii. A subdivision of five or more lots may contain a larger lot to permit the pre-existing house and any related out-buildings and grounds to be retained intact on one property;
    - iv. These maximum lot size regulations do not apply to any common tracts for critical area protection, open space retention, storm water retention / detention or other purposes as may be required by the City as a condition of subdivision approval.

- c. Land in dedicated street rights of way, public parks, and common tracts including but not limited to critical areas tracts shall not be counted in the calculation of number of lots allowed, unless so stated in the conditions of an approved Planned Unit Development, in accordance with BMC 12.30.
  - d. Land in an access easement, utility easement, or other form of easement which is not set aside as a separate tract shall be counted as part of the area of a parcel for the purpose of calculating minimum lot area.
3. Multi-family minimum and maximum density.
- a. In the R8a through R15 zones, one dwelling unit shall be allowed for each whole number multiple of the stated minimum land area per multi-family dwelling unit except as otherwise may be permitted under an approved conditional use permit for specialized senior housing, in accordance with Chapter 12.10 BMC.
  - b. In order to promote efficient use of land, no multi-family development permitted after the effective date of this ordinance shall contain fewer units than would result if the total number of units were calculated at one and one-half times the minimum land area per multi-family dwelling unit for the zoning classification in which the subject property is located, except as follows:
    - i. The total number of units may be fewer than as required above if the development is proposed to be phased, provided that, at completion of all phases, the development complies with the above requirements;
    - ii. These minimum density regulations do not apply to any multi-family / commercial combination zoning classification (e.g., R15, OP, CB);
    - iii. These minimum density regulations do not apply to any common tracts for critical area protection, open space retention, storm water retention / detention or other purposes as may be required by the City as a condition of development approval.
  - c. Land in dedicated street rights of way, public parks, and common tracts including but not limited to critical areas tracts shall not be counted in the calculation of number of units allowed unless so stated in the conditions of an approved Planned Unit Development, in accordance with BMC Ch. 12.30.

- d. Land in an access easement, utility easement, or other form of easement which is not set aside as a separate tract shall be counted as part of the area of a parcel for the purpose of calculating number of units allowed.
4. Each lot must be of sufficient size to fully accommodate the diameter circle specified in the Development Standards Table under BMC 12.14.030 for the underlying zoning designation. Critical areas as defined under Chapter 14.04 of the BMC and their associated buffers shall not be included within the lot circle.
  5. Setbacks
    - a. Setback shall mean the distance from the lot line to the point where a structure may be constructed, not including those structures permitted under Section 12.14.090 to project into the setback. The area between a lot line and a setback is a yard. Setbacks shall be in accordance with Section 12.14.050 through 100.
    - b. Garages, carports, and other structures whose intent is to house or provide parking for vehicles shall be setback from streets and access tracts or easements a minimum of 20 feet.

**Note --** The following amendments would direct readers to the location of the special building height regulations. A figure has been included to illustrate the location and geographic extent of the activity centers in which the special building height regulations apply. Please note that the numbering of all other figures in 12.14 will change.

6. Building height shall be measured as set forth in BMC 12.14.110 through 12.14.130. ~~In portions of the North Creek subarea, building height may exceed that permitted in BMC 12.14.030A and 12.14.040A, in accordance with BMC 12.56.080.E.~~ Special building height regulations apply in the following activity centers identified in the Imagine Bothell... Comprehensive Plan and illustrated in BMC Fig. 12.14-1:
  - a. Canyon Park community activity center, in accordance with BMC 12.44.020 and 12.48.040.
  - b. Thrasher's Corner community activity center, in accordance with BMC 12.48.020.
  - c. Canyon Park regional activity center, in accordance with BMC 12.48.030.
  - d. North Creek regional activity center, in accordance with BMC 12.56.080

e. Downtown community activity center, in accordance with BMC  
12.64.015.

Fig. 12.14-1



7. Building and impervious surface coverage shall be measured as set forth in Section 12.14.140. For the purposes of this section, driveways within the front yard setback shall be no wider than necessary to accommodate three vehicles across, and walkways within the front yard setback shall not exceed eight feet in width.
8. Accessory building coverage shall be measured as set forth in Section 12.14.150. When combined, the primary and accessory building coverage shall not exceed the maximum building coverage as established above. Garages and carports located in R5, R6, R8a, R8d, R11 and R15 zoned properties may exceed the 5% coverage limitation provided the garage or carport is 480 square feet in area, or less.
9. Within the R-AC zoning classification no specific density is prescribed. The number of dwelling units attainable shall be controlled by site and building envelope design regulations.

**Note --** The full range of maximum building heights -- 35 feet, 65 feet, and 100 feet -- are shown in the OP, CB and LI columns, to alert readers that areas with these zoning classifications may be subject to special building height regulations. Footnote (3) is also included in these cells to direct readers to the text in this section which explains where the special height regulations apply.

**12.14.040 Commercial and industrial dimensions.**

A. Development Standards Table.

Commercial and industrial development standards (1)	Zoning Classification				
	OP	NB	CB	GC	LI
Minimum front yard setback (2)	Setbacks shall be the distance required for landscaping, in accordance with Chapter 12.18, except as otherwise provided under Section 12.14.080				
Minimum rear yard setback (2)					
Minimum side yard setback (2)					
Maximum building height (3)	35 <u>(65 or 100 in designated centers)</u> (3)	35	35 <u>(65 or 100 in designated centers)</u> (3)	35	<u>35 48 (100 in designated centers)</u> (3)
Maximum building coverage (4)	100%, except for any required landscaping, in accordance with Chapter 12.18, and required critical areas and their buffers, in accordance with Title 14, Environment				
Maximum impervious surface coverage (4)					

B. Notes.

1. a. Where a district combines multiple zoning classifications (e.g., R-AC R15, OP, CB), the most permissive standards of the individual zoning classifications shall apply.
- b. Development standards may be modified through the planned unit development process.
2. Setbacks shall be in accordance with BMC 12.14.050 through 12.14.100.

**Note -- The following amendments would direct readers to the location of the special building height regulations.**

3. Building height shall be measured as set forth in BMC 12.14.120 through 12.14.140. In portions of the North Creek subarea, building height may exceed that permitted in BMC 12.14.030A and 12.14.040A, in accordance with BMC 12.56.080.E. Special building height regulations apply in the following activity centers identified in the Imagine Bothell... Comprehensive Plan and illustrated in BMC Fig. 12.14-1:
  - a. Canyon Park community activity center, in accordance with BMC 12.44.020 and 12.48.040.
  - b. Thrasher's Corner community activity center, in accordance with BMC 12.48.020.
  - c. Canyon Park regional activity center, in accordance with BMC 12.48.030.
  - d. North Creek regional activity center, in accordance with BMC 12.56.080.
  - e. Downtown community activity center, in accordance with BMC 12.64.015.
4. Building and impervious surface coverage shall be measured as set forth in BMC 12.14.140. (Ord. 1629 § 1, 1996).

**12.14.050 Setbacks – General measurement method.**

A. Front Yard Setbacks.

1. Front yard setbacks shall be measured from the street right-of-way boundary to a line parallel to and measured perpendicularly from the street right-of-way boundary. In the case of corner lots, there shall be a front yard setback provided for each lot side abutting an existing or proposed public right-of-way. The yards opposite said front yards need only meet the side yard setback requirements.

required at the time of the framing inspection. (Ord. 1815 § 1, 2000; Ord. 1798 § 1, 2000; Ord. 1629 § 1, 1996. Formerly 12.14.120.).

**Note** – Establishment of the R-AC zone would require inclusion of a reference to the zone in the following section. Staff also proposes inclusion of references to the regulations which would allow more height for performing arts centers and certain manufacturing processes.

**12.14.120 Building height – Exceptions to limit.**

The following structures may be erected above the height limits as set forth in BMC 12.14.110:

- A. Roof structures housing or screening ventilating fans, HVAC (heating and cooling equipment), or similar equipment required for building operation and maintenance;
- B. Fire or parapet walls, flagpoles, chimneys, smokestacks, communication transmission and receiving structures, utility line towers and poles, water towers/storage tanks, and similar structures;
- C. On properties with any of the following zoning designations: R15, R-AC, OP, NB, CB, CG, or LI, architectural elements including but not limited to peaked roofs and steeples; provided, that the increase in height shall not increase occupiable space.
- D. Structures containing certain manufacturing processes within the Canyon Park regional activity center, in accordance with BMC 12.48.020, or the North Creek regional activity center, in accordance with BMC 12.56.080.
- E. Performing arts centers within the Downtown community activity center, in accordance with BMC 12.64.015.

**12.14.130 Building limitations – Accessory buildings and structures.**

Accessory buildings and structures within residential zone classifications, including but not limited to storage buildings and detached private garages, shall maintain the same residential character of the primary structure, shall cover a maximum of five percent of the lot area, and shall have an exterior height no greater than 20 feet or the height of the primary building or structure, whichever is less. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996. Formerly 12.14.140.).

**12.14.140 Building and impervious surface coverage.**

- A. Building coverage shall mean that portion of a lot that is occupied by the principal building and its accessory buildings, including all projections except eaves. Decks are exempted from the building coverage provisions. Building coverage shall be expressed as a percentage of the total lot area.

**Note – These proposed Code amendments have been revised to respond to Council concerns at earlier hearings that the original proposed reduction in recreation area from 200 to 100 square feet per unit was insufficient. Staff now proposes a requirement of 50 square feet per unit within the R-AC zone.**

*The land-intensive nature of development which would be allowed under the Residential – Activity Center zone, and the likelihood that occupants of this type of housing would be younger or older singles and couples rather than families with children, suggests that the typical outdoor recreation and open space requirements of this chapter would not be needed within this zone.*

*Residents in the R-AC zone are more likely to satisfy their local recreational needs by walking the neighborhood, visiting a favorite coffee shop, shopping or dining out. Consequently, proposed revisions have been included in this chapter to reduce the amount of recreation space required, and to allow it to be completely indoors.*

*Only the page of this chapter containing the proposed amendments is included.*

## **Chapter 12.20 RECREATION AREA**

Sections:

- 12.20.010 Purpose.
- 12.20.020 Minimum area required.
- 12.20.030 Single-purpose facilities.
- 12.20.040 Location, layout.
- 12.20.050 Enforcement.

**12.20.010 Purpose.**

This chapter is intended to provide for recreation areas for residents of multifamily dwellings, to separate such areas from automobile oriented space, and to enhance the environmental quality of multiple-family residential districts, thus promoting the public health, safety, and welfare of the community. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996).

**12.20.020 Minimum area required.**

Each apartment building or complex of buildings for which a building permit is issued shall provide a minimum area of 200 square feet of recreation area for each living unit in the complex, including those units used by the owner or building management personnel; except that in the R-AC zone, the minimum area shall be 50 square feet for each living unit. Balconies shall not be counted as recreation area. No more than 50 percent of recreation area may be indoor or covered space; except that in the R-AC zone, 100 percent of the recreation area may be indoor or covered space.

Except in specialized senior housing developments and in the R-AC zone, at least 50 percent of the recreation area shall be laid out in a manner that makes it suitable and safe

as play space for children. Recreation areas shall be accessible to disabled persons, in accordance with Chapters 19.27 and 70.92 RCW. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996).

**Note** – Establishment of the Residential – Activity Center (R-AC) zone would necessitate inclusion of references to this zone in a number of places throughout the sign regulations. Only the first page of this chapter, for context; pages containing the proposed amendments; and preceding or following pages, for continuity, are included.

## Chapter 12.22

### SIGNS

#### Sections:

12.22.010	Purpose.
12.22.020	Definitions.
12.22.030	Categories of signs.
12.22.040	Exempt signs.
12.22.050	Prohibited signs.
12.22.060	Permanent signs – On-premises – Commercial.
12.22.065	Permanent signs – On-premises – Noncommercial.
12.22.070	Permanent signs – Off-premises – Commercial.
12.22.075	Permanent signs – Off-premises – Noncommercial.
12.22.080	Temporary signs – On-premises – Commercial.
12.22.085	Temporary signs – On-premises – Noncommercial signs.
12.22.088	General regulations for temporary off-premises signs.
12.22.090	Temporary signs – Off-premises – Commercial.
12.22.095	Temporary signs – Off-premises – Noncommercial signs.
12.22.096	Real estate signs.
12.22.098	Campaign signs.
12.22.100	Master sign plan option.
12.22.110	Sign permit – Type of action.
12.22.120	Sign permit – Contents of complete application.
12.22.130	Requirements applicable to all signs.
12.22.140	Nonconforming use and discontinuance of use.
12.22.150	Sign variance criteria.

#### **12.22.010 Purpose.**

The purpose of this chapter is to establish sign regulations that are intended to:

- A. Protect the general public health, safety, welfare, and aesthetics of the community.
- B. Implement community design standards, consistent with the goals and policies of the Imagine Bothell... Comprehensive Plan.
- C. Promote the community's appearance by regulating the number, design, character, location, type, quality of materials, scale, illumination, and maintenance of signs to maximize their positive visual impact.
- D. Promote the effective identification of businesses while maintaining an attractive and inviting cityscape.

“Wall sign” is a sign attached to a wall or facade with its face parallel to the wall and projecting no more than one foot.

“Window sign” is any copy that is applied or attached to a window. (Ord. 1805 § 2, 2000).

**Note** – The sections requiring revisions to incorporate the proposed new R-AC zone describe how particular types of sign regulations (e.g., concerning permanent on-premises commercial signs) apply to residential v. commercial zones. Since the R-AC zone is not a stand-alone zone, but exists only in combination with commercial zones in designated activity centers, staff proposes to include it with the commercial zones in the sign chapter.

### 12.22.030 Categories of signs.

The following table specifies the major categories of signs addressed by this chapter, gives examples of signs within each category, and specifies the applicable chapter section for those signs regulated within each category.

Sign and Display Category (applicable code section)	Example	Residential Zones (R1, R2, R3, R4, R5, R6, R8d, R8a, R11 and R15)	Residential – Activity Center, Business and Commercial Zones (R-AC, NB, CB, GC, OP and LI)
1. Exempt Signs (BMC 12.22.040)	Traffic signs, legal and public notices, etc. Signs which because of their regulatory or public safety nature are exempt from the requirements of this chapter.	Exempt.	Exempt.
2. Permanent On-Premises Commercial Signs (BMC 12.22.060)	Freestanding, wall, window, awning, and portable signs relating to the sale of goods and services on-site and intended for display for a period of more than 60 days in any calendar year.	Allowed, subject to maximum signage limitations for residential zones and sign size, height and placement regulations. No sign permit required.	Allowed subject to sign size, height, design and placement regulations. Sign permit required.
3. Permanent On-Premises Noncommercial Signs (BMC 12.22.065).	Informational, political, and decorative freestanding, wall, and portable signs intended for display for a period of more than 60 days in any calendar year.	Allowed, subject to maximum signage limitations for residential zones and sign size, height and placement regulations. No sign permit required.	Allowed, subject to same size, height design and placement regulations for commercial signage. Sign permit required.
4. Temporary On-Premises Commercial Signs (BMC 12.22.080).	A-frames, banners, posters, etc. generally intended for short-term display and relating to goods or services on-site.	Prohibited except for real estate signs which must be removed after closing of sale or rent. No sign permit required.	Allowed, subject to sign size, height, design and placement regulations. Maximum 60-day display limitation in calendar year.
5. Temporary On-Premises Noncommercial Signs (BMC 12.22.085).	Informational, political, and decorative freestanding, wall, and portable signs intended for short term display.	Allowed subject to maximum signage limitation for residential zones and to sign size height, design and placement regulations. No sign permit required.	Allowed, subject to same regulations as temporary, on-premises commercial signs. No sign permit required. Maximum 60-day display

J. Signs which by reason of their size, location, movement, content, shape, coloring or manner of illumination obscure, imitate, or may be confused with lawfully posted governmental signs such as traffic control signs, signals, or devices;

K. Commercial bench signs;

L. Billboards. (Ord. 1805 § 2, 2000).

**12.22.060 Permanent signs – On-premises – Commercial.**

The following tables specify the permitted number, size and location of signs by zoning category:

A. R1, R2, R3, R4, R5, R6, R8d, R8a, R11 and R15 Zones – On-Premises Sign Requirements.

Use	Permitted Sign Type(s) and Number Permitted	Maximum Allowable Sign Area	Maximum Allowable Sign Height/Width
Residential uses and permitted and licensed activities <sup>1</sup> occurring in a single-family residential structure.	1 wall sign (on-premises real estate signs may also be freestanding).	2 square feet (on-premises real estate signs may be up to 6 square feet in area).	Wall – No sign shall project above the uppermost extent of wall.
Permitted and licensed activities <sup>1</sup> occurring in a multifamily residential structure <sup>3</sup> .	1 wall sign (on-premises real estate signs may also be freestanding).	2 square feet (on-premises real estate signs may be up to 6 square feet in area).	Wall – No sign shall project above the uppermost extent of wall.
Schools, churches, and other permitted and licensed activities <sup>1</sup> not occurring in a single-family or multifamily residential structure.	1 wall and 1 freestanding sign per street frontage.	Wall – 36 square feet.  Freestanding – 36 square feet.	Wall – No sign shall project above the uppermost extent of wall.  Freestanding – 6 feet in height or 10 feet in width.
Neighborhood, subdivision, multifamily complex and mobile home park identification signs <sup>2</sup> .	1 freestanding sign per entrance.	50 square feet.	Freestanding – 6 feet in height or 10 feet in width.

Footnotes to table:

<sup>1</sup> Permitted activities in these zones are specified in Chapter 12.06 BMC. Examples of some of these activities include home daycare centers and home occupation businesses.

<sup>2</sup> Includes approved short and formal plats (subdivisions), approved multifamily developments of two or more dwelling units, and approved mobile home parks.

<sup>3</sup> Potential users of such signs should note that the use of such signs may also be at the discretion of the property owner.

Other: Only indirect illumination of signs permitted.

B. R-AC, NB, CB, OP, GC, and LI Zones – On-Premises Sign Requirements for a Single Use (One Business or Tenant) on an Individual Lot.

Use	Permitted Sign Type(s) and Number Permitted	Maximum Allowable Sign Area	Maximum Allowable Sign Height/Width
Advertisement and identification of permitted uses <sup>4</sup> .	Wall/Window/Projecting/Awning: No maximum number <sup>1</sup> .	Wall/Window/Projecting/Awning: Total area of all signs shall not exceed 2 square feet of sign area per lineal foot of each building face containing a public entrance <sup>1</sup> . A minimum of 36 square feet of sign area is permitted.	Wall/Window/Projecting/Awning: Shall not project above the uppermost extent of wall.
	Freestanding: One sign per street frontage for individual uses located on a single lot.	Freestanding: Maximum of 50 square feet.	Freestanding: 6 feet in height or 10 feet in width <sup>3</sup> .
	Portable A-frame: One sign per property street frontage <sup>2</sup> .	Portable A-frame: Maximum 6 square feet.	Portable A-frame: 3 feet in height or width.

Footnotes to table:

<sup>1</sup> There is no limit to the number of wall/window/projecting/awning signs a use may have, nor is there any particular locational requirement (though they must be located on the building where the use is occurring). The total maximum sign area may be applied to one sign, or be divided among several signs.

<sup>2</sup> A-frame signs shall be subject to the following criteria:

1. Each legal business shall be permitted one A-frame sign per street frontage on which the business is located. The maximum size of an A-frame sign shall be six square feet in area and 36 inches in height or width.
2. A-frame signs shall be located on the same lot on which the business being advertised by the sign is located. For the purposes of this section, the lot shall be considered to include the sidewalk abutting the business.
3. A-frame signs shall be placed so as to not impede pedestrian or vehicular traffic.
4. A-frame signs shall not be placed in any landscaped area.

<sup>3</sup> Uses located on property containing at least 330 lineal feet of street frontage may erect a freestanding sign up to 15 feet tall. Other dimensional requirements as specified above shall still apply. No structural support poles or braces shall be visible ("pole signs" are prohibited) and the overall appearance of the sign shall be as a uniformly integrated whole.

<sup>4</sup> If a property containing a single use changes such that two or more uses occupy the property, the sign regulations in subsection C of this section shall apply.

Other: Either indirect or internal illumination of signs is permitted.

C. R-AC, NB, CB, OP, GC and LI Zones – On-Premises Sign Requirements for Two or More Uses (Businesses or Tenants) Located on an Individual Lot, or an Aggregation of Lots into One Retail or Commercial Center.

Use	Permitted Sign Type(s) and Number Permitted	Maximum Allowable Sign Area	Maximum Allowable Sign Height/Width
Advertisement and identification of permitted uses.	Wall/Window/Projecting/Awning: No limit, subject to maximum allowable sign area <sup>4</sup> .	Wall/Window/Projecting/Awning: 2 square feet of sign area per each lineal foot of the width of tenant's space within the building face <sup>2</sup> . A minimum of 36 square feet of sign area is permitted.	Wall/Window/Projecting/Awning: Shall not project above the uppermost extent of wall.
	Freestanding: One sign per each 150 lineal feet of property street frontage <sup>1</sup> .	Freestanding: Maximum of 50 square feet.	Freestanding: 6 feet in height and 10 feet in width <sup>3</sup> .
	<sup>5</sup> Portable A-frame: One sign per property street frontage.	<sup>5</sup> Portable A-frame: Maximum 6 square feet.	<sup>5</sup> Portable A-frame: 3 feet in height or width.

Footnotes to table:

- <sup>1</sup> Freestanding signs may be used both to identify a multitenant center and/or to identify individual tenants within a center, at the property owner's discretion.
- <sup>2</sup> A tenant whose business is located on more than one floor of a building shall be permitted sign area based upon the width of the tenants space within the building face of each occupied floor.
- <sup>3</sup> For uses located on property containing at least 330 lineal feet of street frontage, one of the allowed freestanding signs may be up to 15 feet in height. Other dimensional requirements as specified above shall still apply. No structural support poles or braces shall be visible.
- <sup>4</sup> The total maximum sign area may be applied to one sign, or be divided among several signs.
- <sup>5</sup> A-frame signs shall be subject to the following criteria:
  1. Each legal business shall be permitted one A-frame sign per street frontage on which the business is located. The maximum size of an A-frame sign shall be six square feet in area and 36 inches in height or width.
  2. A-frame signs shall be located on the same lot on which the business being advertised by the sign is located. For the purposes of this section, the lot shall be considered to include the sidewalk abutting the business.
  3. A-frame signs shall be placed so as to not impede pedestrian or vehicular traffic.
  4. A-frame signs shall not be placed in any landscaped area.

Other: Either indirect or internal illumination of signs is permitted.

D. Other Requirements Applicable to all Zones.

1. In multiple use zones, the number of signs permitted and the location, maximum sign area, and permitted illumination shall be based upon the zoning designation of the actual use proposed (e.g., signs for a proposed multi-family complex within the R15, OP zone shall be regulated per the R1-R15 zone restrictions).
2. In multiple building complexes, each building is permitted one additional 10-square-foot wall sign for building identification purposes.

E. Landscaping Requirements for Freestanding Signs.

1. Pole-mounted signs shall be landscaped around the base of the sign with shrubs and groundcovers, or other plant materials, such that, within a period of two years from planting, the pole support(s) of the sign shall effectively be obscured by the landscape plantings.
2. Monument signs shall be landscaped around the base of the sign with groundcovers or other plant materials sufficient to provide at least 85 percent ground coverage around the base of the sign within a period of two years from planting.

F. Setbacks. There are no specific setback requirements for on-premises signs; provided, that no sign shall intrude into the sight distance triangle and line of sight, as depicted in plan #316 of the City of Bothell Design and Construction Standards and Specifications. (Ord. 1805 § 2, 2000).

**12.22.065**

**Permanent signs – On-premises – Noncommercial.**

The requirements for these signs are the same as those contained in BMC 12.22.060. (Ord. 1805 § 2, 2000).

**12.22.070**

**Permanent signs – Off-premises – Commercial.**

Permanent, off-premises, commercial signs are prohibited throughout the city (all zones). (Ord. 1805 § 2, 2000).

**12.22.075**

**Permanent signs – Off-premises – Noncommercial.**

Permanent, off-premises, noncommercial signs are prohibited throughout the city (all zones), with the exception of governmental signs. The director of public improvements shall control the size, design, number and location of said signs. (Ord. 1805 § 2, 2000).

**12.22.080**

**Temporary signs – On-premises – Commercial.**

Temporary signage shall be registered with the city in accordance with the registration procedures contained in BMC 12.22.110 and shall not be displayed for more than 60 days in any one-year period.

A. Residential Zones (R1, R2, R3, R4, R5, R6, R8d, R8a, R11 and R15). Temporary signs located on-premises and containing commercial copy are prohibited, with the exception of real estate signs as provided in BMC 12.22.020, subject to the following criteria:

Permitted Sign Type and Number Permitted	Maximum Allowable Sign Area	Maximum Allowable Sign Height
1 wall or freestanding sign per property street frontage.	2 square feet for wall or freestanding.	Wall – shall not project above the uppermost extent of the wall.

		Freestanding - 6 feet.
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- B. Residential – Activity Center and Commercial Zones (R-AC, NB, CB, GC, OP, and LI).  
Temporary signs located on-premises are allowed, subject to the following criteria:

Permitted Sign Type and Number Permitted	Maximum Allowable Sign Area	Maximum Allowable Sign Height/Width/Other
I wall, window or banner sign per property street frontage.	Wall, window: 50 square feet.	Wall – shall not project above the uppermost extent of the wall.
I banner per building.	Banner: 50 square feet.	Banner – shall not project above the uppermost extent of the wall on which it is located. Shall be wholly located upon the building on which it is displayed.

(Ord. 1805 § 2, 2000).

**12.22.085 Temporary signs – On-premises – Noncommercial signs.**

- A. Residential Zones (R1, R2, R3, R4, R5, R6, R8d, R8a, R11 and R15). Temporary noncommercial signs located on-premises are allowed, subject to the criteria contained in BMC 12.22.080(A).
- B. Residential - Activity Center and Commercial Zones (R-AC, NB, CB, GC, OP, and LI). Temporary noncommercial signs located on-premises are allowed, subject to the criteria contained in BMC 12.22.080(B). (Ord. 1805 § 2, 2000).

**12.22.088 General regulations for temporary off-premises signs.**

- A. Temporary off-premises signs shall be prohibited, except as specifically provided in BMC 12.22.090 and 12.22.095.
- B. Except as specifically provided for real estate signs in BMC 12.22.096, and campaign signs as provided in BMC 12.22.098, all temporary off-premises signs relating to a specific meeting, event, or occurrence shall be removed immediately following the conclusion of the meeting, event, or occurrence to which they relate.
- C. Only portable freestanding signs may be used as temporary off-premises signage.
- D. The maximum number of allowed off-premises signs to be displayed simultaneously shall be four, except as provided in BMC 12.22.098 for campaign signs.
- E. Temporary, off-premises signs shall be constructed of suitable material and design to adequately withstand the reasonably expected normal or average weather conditions during the intended display period of the sign.
- F. Temporary, off-premises signs shall be regularly inspected to ensure that they have not been damaged or destroyed by natural forces or vandalism. Damaged or destroyed signs shall be immediately removed or repaired so as to avoid threats to public health and safety or the accumulation of unclaimed refuse upon the public rights-of-way.
- G. All temporary, off-premises signs shall be posted and displayed in accordance with the following

**Note** – The northeast corner of this subarea is within the Canyon Park Community Activity Center. The subarea regulations would need to be amended to reflect the proposed R-AC zoning and increased building heights.

#### Chapter 12.44

### SHELTON VIEW / MERIDIAN / 3RD AVENUE SE SUBAREA REGULATIONS

#### Sections:

- 12.44.010 Purpose.  
12.44.020 Special regulations - OP and R-AC, R15, OP, CB zoning in north end of subarea.  
12.44.030 Special regulations - Northwest Mobile Estates mobile home park overlay - R4 zoning on 228th Street.  
12.44.040 Special regulations - R8d zoning at southeast corner of Meridian Avenue and 228th Street SE.

#### 12.44.010 Purpose.

The purpose of this chapter is to establish regulations which apply specifically to land within the Shelton View/Meridian/3rd Avenue SE Subarea. Subarea zoning regulations are in addition to city-wide zoning regulations, or, where more restrictive, take the place of city-wide zoning regulations. (Ord. 1629 § 1, 1996).

#### 12.44.020 Special regulations - OP and R-AC, R15, OP, CB zoning in north end of subarea.

**Note** – The original 1994 Comprehensive Plan incorporated language from a 1986 Snohomish County Plan amendment which limited development potential around the SR 527 / 228<sup>th</sup> Street intersection. That language was carried over into the zoning regulations. Increasing building heights and residential densities would almost certainly allow more development than permitted under this language. However, any development in this area would still be subject to the City's concurrency and mitigation regulations. Therefore, the language has been proposed to be deleted

~~A. Development shall be limited to land uses which do not generate more than 23 trips per peak hour per acre. The peak hour trip per acre limit does not imply any limits on off peak hour trip generation. Land uses may exceed 23 trips per hour per acre during nonpeak hours.~~

**Note** – Following are the proposed amendments to allow taller buildings in the Canyon Park Community Activity Center, subject to greater setbacks and to inclusion of parking and retail in the building.

A. Building height in R-AC, OP, CB zoning.

1. Maximum building height shall be 35 feet, but may be increased to 65 feet if both of the following conditions are met:
  - a. At least 40 percent of the gross floor area of the average story within the building (total building gross floor area divided by number of stories) is devoted to parking either within or under the building or within a separate parking structure;
  - b. At least 10 percent of the gross floor area of the average story within the building (total building gross floor area divided by number of stories) is devoted to externally-oriented at-grade space for retail uses, eating and drinking establishments, recreation, culture and entertainment uses, personal services, and/or other similar businesses which are characterized by regular and frequent patronage during the course of the normal business day. "Externally oriented" for the purposes of this regulation shall mean having a door opening directly to the outside.
2. When buildings exceed 35 feet, in accordance with BMC 12.44.020A.1 above, the mandatory setbacks from, and mandatory landscaping buffers adjacent to, any abutting R zoning (not including combination zones) shall be increased as follows:
  - a. The mandatory setbacks from any abutting R zoning, as set forth in BMC 12.14.070D, shall be increased three feet horizontally for each foot of building height exceeding 35 feet. These increased setbacks shall apply to the entire building, rather than only to those portions of the building which may be higher than 35 feet. Where the property zoned R-AC, OP, CB abuts R zoning along a street, the increased setbacks shall be measured from the street property line of the property zoned R-AC, OP, CB.
  - b. The mandatory landscaping buffers adjacent to any abutting R zoning, as set forth in BMC 12.18.110, shall be increased .25 foot (three inches) for each foot of building height exceeding 35 feet, up to a maximum of 10 feet of additional landscaping. In such cases, the entire buffer shall consist of Type I landscaping.
3. Building height shall be measured as set forth in BMC 12.14.110 through 12.14.130.

**Note** – The following language regarding transitioning of building mass and density, and buffer landscaping next to single family, is no longer needed, as the above proposed regulations address these concerns.

~~B. — Development shall be planned in such a manner as to provide for a transition of building mass and density from the greatest mass and density near the intersection of 228th and SR-527 to the least mass and density abutting single family residential. A buffer abutting the existing single family development shall be installed utilizing fences, walls, berms, dense, fast growing landscaping, and/or other noise absorbing and sight obscuring techniques and materials.~~

B. C. The Office-Professional zoned parcels between 7th and 9th Avenues SE shall derive access from 228th at the 9th Avenue traffic signal. (Ord. 1629 § 1, 1996).

**12.44.030 Special regulations - Northwest Mobile Estates mobile home park overlay - R4 zoning on 228th Street.**

Development shall be limited to the existing mobile home park and any additional mobile homes which may be permitted by existing approvals or by new approvals obtained under Chapter 12.08 BMC. Redevelopment to uses other than a mobile home park shall require prior review and approval of an amendment to the Imagine Bothell... Comprehensive Plan. (Ord. 1629 § 1, 1996).

**12.44.040 Special regulations - R8d zoning at southeast corner of Meridian Avenue and 228th Street SE.**

Permitted primary dwelling units shall be detached single-family units. (Ord. 1629 § 1, 1996).

**Note** – The north end of this subarea is within the Canyon Park Community Activity Center. The subarea regulations would need to be amended to reflect the proposed R-AC zoning and building height regulations.

Only those pages containing the proposed amendments have been included.

## Chapter 12.46

### COUNTRY VILLAGE / LAKE PLEASANT / SR-527 CORRIDOR SUBAREA REGULATIONS

#### Sections:

12.46.010 Purpose.

12.46.020 Special regulations – ~~R-AC, R15~~, OP, CB zoning in north end of subarea.

12.46.030 Special regulations – R8a, OP zoning south of Canyon Heights.

12.46.040 Special regulations – CB zoning west of SR-527 and north of 240th street SE.

12.46.050 Special regulations – OP, GC zoning east of SR-527.

12.46.060 Special district – Red Barn Village – R11, OP, CB zoning at SR-527 and 240th Street SE.

12.46.070 Special regulations – R8d and R8a, OP zoning in southern portion of subarea.

#### **12.46.010 Purpose.**

The purpose of this chapter is to establish regulations which apply specifically to land within the Country Village/Lake Pleasant/SR-527 Corridor Subarea. Subarea zoning regulations are in addition to city-wide zoning regulations or, where more restrictive, take the place of city-wide zoning regulations. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996).

#### **12.46.020 Special regulations – R15, OP, CB zoning in north end of subarea.**

**Note** – The original 1994 Comprehensive Plan incorporated language from a 1986 Snohomish County Plan amendment which limited development potential around the SR 527 / 228<sup>th</sup> Street intersection. That language was carried over into the zoning regulations. Increasing building heights and residential densities would almost certainly allow more development than permitted under this language. However, any development in this area would still be subject to the City's concurrency and mitigation regulations. Therefore, the language has been proposed to be deleted

~~A. Development shall be limited to land uses which do not generate more than 23 trips per peak hour per acre. The peak hour trip per acre limit does not imply any limits on off peak hour trip generation. Land uses may exceed 23 trips per hour per acre during nonpeak hours.~~

**Note** – Following are the proposed amendments to allow taller buildings in the Canyon Park Community Activity Center, subject to greater setbacks and to inclusion of parking and retail in the building.

A. Building height in R-AC, OP, CB zoning.

1. Maximum building height shall be 35 feet, but may be increased to 65 feet if both of the following conditions are met:
  - a. At least 40 percent of the gross floor area of the average story within the building (total building gross floor area divided by number of stories) is devoted to parking either within or under the building or within a separate parking structure;
  - b. At least 10 percent of the gross floor area of the average story within the building (total building gross floor area divided by number of stories) is devoted to externally-oriented at-grade space for retail uses, eating and drinking establishments, recreation, culture and entertainment uses, personal services, and/or other similar businesses which are characterized by regular and frequent patronage during the course of the normal business day. "Externally oriented" for the purposes of this regulation shall mean having a door opening directly to the outside.
2. When buildings exceed 35 feet, in accordance with BMC 12.44.020A.1 above, the mandatory setbacks from, and mandatory landscaping buffers adjacent to, any abutting R zoning (not including combination zones) shall be increased as follows:
  - a. The mandatory setbacks from any abutting R zoning, as set forth in BMC 12.14.070D, shall be increased three feet horizontally for each foot of building height exceeding 35 feet. These increased setbacks shall apply to the entire building, rather than only to those portions of the building which may be higher than 35 feet. Where the property zoned R-AC, OP, CB abuts R zoning along a street, the increased setbacks shall be measured from the street property line of the property zoned R-AC, OP, CB.
  - b. The mandatory landscaping buffers adjacent to any abutting R zoning, as set forth in BMC 12.18.110, shall be increased .25 foot (three inches) for each foot of building height exceeding 35 feet, up to a maximum of 10 feet of additional landscaping. In such cases, the entire buffer shall consist of Type I landscaping.

3. Building height shall be measured as set forth in BMC 12.14.110 through 12.14.130.

**Note** – The following language regarding transitioning of building mass and density, and buffer landscaping next to single family, is no longer needed, as the above proposed regulations address these concerns.

~~B. Development shall be planned in such a manner as to provide for a transition of building mass and density from the greatest mass and density near the intersection of 228th and SR-527 to the least mass and density abutting single family residential. A buffer abutting the existing single family development shall be installed utilizing fences, walls, berms, dense, fast-growing landscaping, and/or other noise absorbing and sight-obscuring techniques and materials. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996).~~

**12.46.030 Special regulations – R8a, OP zoning south of Canyon Heights.**

Permitted primary dwelling units shall include detached single-family dwellings, duplexes and multi-family townhouse dwellings. Development shall provide a transition to the R1 zoned area to the west as follows:

- A. A 100-foot buffer of undisturbed native vegetation shall be maintained along the westernmost property line.
- B. Between the eastern edge of the buffer and the extension of 7th Avenue SE, residential development shall occur at a density not to exceed four dwelling units per acre, subject to compliance with critical areas regulations and other requirements. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996).

**12.46.040 Special regulations – CB zoning west of SR-527 and north of 240th street SE.**

Development shall provide a transition to the R1 zoned area to the west as follows:

- A. A 100-foot buffer of undisturbed native vegetation shall be maintained along the westernmost property line. Native vegetation shall be planted where none currently exists.
- B. Between the eastern edge of the buffer and the extension of 7th Avenue SE, office and/or storage uses which support principal uses east of the extension of 7th Avenue shall be allowed, but additional retail or other uses open to the general public are not allowed. Any development in this area shall be oriented toward existing development to the east and compatible in bulk and scale with the homes and accessory structures in the residential area to the west. Any development approval shall be conditioned on the removal of debris. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996).

**12.46.050 Special regulations – OP, GC zoning east of SR-527.**

Development in this area shall incorporate the following features:

- A. Driveways shall be a minimum of 300 feet apart, in order to minimize congestion caused by vehicles entering or leaving traffic;
- B. Internal vehicle access shall be provided from property to property in such a manner as to allow a smooth flow of traffic across consecutive adjoining properties;

**Note – These proposed Code amendments have been revised to incorporate Council direction from February 4, 2002, to reduce the maximum allowable building height to be considered in the Canyon Park regional activity center from 150 to 100 feet, except for certain manufacturing processes.**

The Canyon Park / Thrasher's Corner Subarea contains all of the Thrasher's Corner Community Activity Center and the Canyon Park Regional Activity Center, and most of the Canyon Park Community Activity Center. This subarea would thus be amended in a number of sections to incorporate the proposed R-AC zoning and building height regulations for the affected activity centers.

Only those pages containing proposed amendments are included.

## Chapter 12.48

### CANYON PARK / THRASHER'S CORNER SUBAREA REGULATIONS

#### Sections:

- 12.48.010 Purpose.
- 12.48.020 Special regulations – OP, CB zoning south of Filbert and Maltby roads.
- 12.48.030 Special regulations – OP, CB zoning northeast of I-405; OP, LI zoning in central portion of subarea; and R-AC, R15; OP, LI zoning in west-central portion of subarea.
- 12.48.040 Special regulations – OP, CB and R15; R-AC, OP, CB zoning in southwest corner of subarea.
- 12.48.050 Special regulations – R8a zoning in northwest corner of subarea.
- 12.48.060 Special regulations – R8d zoning in southeast corner of subarea.
- 12.48.070 Special regulations – R8d zoning south of 228th Street SE.
- 12.48.080 Special regulations – OP, CB, LI zoning in north central portion of the subarea.
- 12.48.090 Special regulations – Motor Vehicle Sales Overlay.

#### **12.48.010 Purpose.**

The purpose of this chapter is to establish regulations which apply specifically to land within the Canyon Park/Thrasher's Corner Subarea. Subarea zoning regulations are in addition to city-wide zoning regulations or, where more restrictive, take the place of city-wide zoning regulations. (Ord. 1685, 1997; Ord. 1629 § 1, 1996).

#### **12.48.020 Special regulations – OP, CB zoning south of Filbert and Maltby roads.**

A. Buffers. Development shall provide a buffer adjacent to residential development to the east and west. Such a buffer may consist of the existing wetlands in the east and west borders of this area. See also BMC 12.48.020B. (Ord. 1685, 1997; Ord. 1629 § 1, 1996).

#### B. Building height.

1. Maximum building height shall be 35 feet, but may be increased to 65 feet if both of the following conditions are met:

- a. At least 40 percent of the gross floor area of the average story within the building (total building gross floor area divided by number of stories) is devoted to parking either within or under the building or within a separate parking structure;
  - b. At least 10 percent of the gross floor area of the average story within the building (total building gross floor area divided by number of stories) is devoted to externally-oriented at-grade space for retail uses, eating and drinking establishments, recreation, culture and entertainment uses, personal services, and/or other similar businesses which are characterized by regular and frequent patronage during the course of the normal business day. "Externally oriented" for the purposes of this regulation shall mean having a door opening directly to the outside.
2. When buildings exceed 35 feet, in accordance with BMC 12.48.020B.1 above, the mandatory setbacks from, and mandatory landscaping buffers adjacent to, any abutting R zoning (not including combination zones) shall be increased as follows:
- a. The mandatory setbacks from any abutting R zoning, as set forth in BMC 12.14.070D, shall be increased three feet horizontally for each foot of building height exceeding 35 feet. These increased setbacks shall apply to the entire building, rather than only to those portions of the building which may be higher than 35 feet. Where the property zoned OP, CB abuts R zoning along a street, the increased setbacks shall be measured from the street property line of the property zoned OP, CB.
  - b. The mandatory landscaping buffers adjacent to any abutting R zoning, as set forth in BMC 12.18.110, shall be increased .25 foot (three inches) for each foot of building height exceeding 35 feet, up to a maximum of 10 feet of additional landscaping. In such cases, the entire buffer shall consist of Type I landscaping.
3. Building height shall be measured as set forth in BMC 12.14.110 through 12.14.130.

**12.48.030 Special regulations – OP, CB zoning northeast of I-405; OP, LI zoning in central portion of subarea; and R-AC, R15, OP, LI zoning in west-central portion of subarea.**

- A. Access. Development having frontage on SR 527 shall incorporate internal access from property to property and shared driveways to minimize access points on SR-527.(Ord. 1685, 1997; Ord. 1629 § 1, 1996).

B. Building height. Maximum height shall be 100 feet, except that buildings may be up to 150 feet to accommodate manufacturing processes which require structures taller than 100 feet. In such cases, the applicant shall demonstrate why the process cannot be conducted in a building of 100 feet or less. Only that portion of the structure containing the manufacturing process may exceed 100 feet: offices and other areas of intensive employee activity are prohibited above this height.

When buildings exceed 35 feet, the mandatory setbacks from, and the mandatory landscaping buffers adjacent to, any abutting R zoning (not including combination zones) shall be increased as follows:

1. The mandatory setbacks from any abutting R zoning, as set forth in BMC 12.14.070D, shall be increased three feet horizontally for each foot of building height exceeding 35 feet. These increased setbacks shall apply to the entire building, rather than only to those portions of the building which may be higher than 35 feet. Where the property zoned OP, CB; OP, LI; or R-AC, OP, LI abuts R zoning along a street, the increased setbacks shall be measured from the street property line of the property zoned OP, CB; OP, LI; or R-AC, OP, LI. Building height shall be measured as set forth in BMC 12.14.110 through 12.14.130.
2. The mandatory landscaping buffers adjacent to any abutting R zoning, as set forth in BMC 12.18.110, shall be increased .25 foot (three inches) for each foot of building height exceeding 35 feet, up to a maximum of 10 feet of additional landscaping. In such cases, the entire buffer shall consist of Type I landscaping.

**12.48.040 Special regulations – ~~OP, CB and R15,~~ R-AC, OP, CB zoning in southwest corner of subarea**

**Note** – The original 1994 Comprehensive Plan incorporated language from a 1986 Snohomish County Plan amendment which limited development potential around the SR 527 / 228<sup>th</sup> Street intersection. That language was carried over into the zoning regulations. Increasing building heights and residential densities would almost certainly allow more development than permitted under this language. However, any development in this area would still be subject to the City's concurrency and mitigation regulations. Therefore, the language has been proposed to be deleted

Development shall be limited to land uses which do not generate more than 23 trips per peak hour per acre. The peak hour trip per acre limit does not imply any limits on off peak hour trip generation. Land uses in areas designated for business use may exceed 23 trips per hour per acre during nonpeak hours. (Ord. 1685, 1997; Ord. 1629 § 1, 1996).

A. Building height.

1. Maximum building height shall be 35 feet, but may be increased to 65 feet if both of the following conditions are met:
  - a. At least 40 percent of the gross floor area of the average story within the building (total building gross floor area divided by number of stories) is devoted to parking either within or under the building or within a separate parking structure;
  - b. At least 10 percent of the gross floor area of the average story within the building (total building gross floor area divided by number of stories) is devoted to externally-oriented at-grade space for retail uses, eating and drinking establishments, recreation, culture and entertainment uses, personal services, and/or other similar businesses which are characterized by regular and frequent patronage during the course of the normal business day. "Externally oriented" for the purposes of this regulation shall mean having a door opening directly to the outside.
2. When buildings exceed 35 feet, in accordance with BMC 12.48.040A.1 above, the mandatory setbacks from, and mandatory landscaping buffers adjacent to, any abutting R zoning (not including combination zones) shall be increased as follows:
  - a. The mandatory setbacks from any abutting R zoning, as set forth in BMC 12.14.070D, shall be increased three feet horizontally for each foot of building height exceeding 35 feet. These increased setbacks shall apply to the entire building, rather than only to those portions of the building which may be higher than 35 feet. Where the property zoned R-AC, OP, CB abuts R zoning along a street, the increased setbacks shall be measured from the street property line of the property zoned R-AC, OP, CB.
  - b. The mandatory landscaping buffers adjacent to any abutting R zoning, as set forth in BMC 12.18.110, shall be increased .25 foot (three inches) for each foot of building height exceeding 35 feet, up to a maximum of 10 feet of additional landscaping. In such cases, the entire buffer shall consist of Type I landscaping.

**12.48.050 Special regulations – R8a zoning in northwest corner of subarea.**

Permitted primary dwelling units shall include detached single-family dwellings, duplexes and multi-family dwellings. Development shall decrease in intensity of building mass as it extends westward and shall incorporate a buffer utilizing Type III landscaping adjacent to the R4 zoning to the west. Vehicular access shall be limited to Filbert Road. (Ord. 1685, 1997; Ord. 1629 § 1, 1996).

**12.48.060 Special regulations – R8d zoning in southeast corner of subarea.**

Permitted primary dwelling units shall be detached single-family dwellings. Development shall decrease in intensity of building mass as it extends northward and shall incorporate a buffer utilizing Type III landscaping adjacent to the R4 zoning to the north. (Ord. 1685, 1997; Ord. 1629 § 1, 1996).

**12.48.070 Special regulations – R8d zoning south of 228th Street SE.**

Permitted primary dwelling units shall be detached single-family dwellings. (Ord. 1685, 1997; Ord. 1629 § 1, 1996).

**12.48.080 Special regulations – OP, CB, LI zoning in north central portion of the subarea.**

A. Within this designation, any development proposing to implement any of the uses permitted under the Community Business zone are subject to the following special regulations:

- ~~1. A.~~ All applications proposing to implement the uses permitted under the Community Business zoning designation shall be subject to this code including critical areas, site and building design and landscaping regulations. The provisions of the Bothell Municipal Code Appendix or any special provisions as may be contained in a concomitant zoning agreement shall not be applicable for any use permitted under the Community Business zone.
- ~~2. B.~~ Properties located within the OP, CB, LI zoning designation shall provide for site-to-site vehicle access ways to allow vehicles and pedestrians a smooth flow of traffic across consecutive adjoining properties without the need to use a street. Said access may comprise the aisle between rows of parking stalls.
- ~~3. C.~~ All properties hosting the uses allowed under the Community Business (CB) zone shall be prohibited from creating any connection to the public rights-of-way of 23rd Avenue and 211th Street South East. (Ord. 1853 § 1, 2001).

B. Building height. Maximum height shall be 100 feet, except that buildings may be up to 150 feet to accommodate manufacturing processes which require structures taller than 100 feet. In such cases, the applicant shall demonstrate why the process cannot be conducted in a building of 100 feet or less. Only that portion of the structure containing the manufacturing process may exceed 100 feet: offices and other areas of intensive employee activity are prohibited above this height.

When buildings exceed 35 feet, the mandatory setbacks from, and the mandatory landscaping buffers adjacent to, any abutting R zoning (not including combination zones) shall be increased as follows:

1. The mandatory setbacks from any abutting R zoning, as set forth in BMC 12.14.070D, shall be increased three feet horizontally for each foot of building height exceeding 35 feet. These increased setbacks shall apply to the entire building, rather than only to those portions of the building which may be higher than 35 feet. Where the property zoned OP, CB, LI abuts R zoning along a street, the increased setbacks shall be measured from the street property line of the property zoned OP, CB, LI. Building height shall be measured as set forth in BMC 12.14.110 through 12.14.130.

2. The mandatory landscaping buffers adjacent to any abutting R zoning, as set forth in BMC 12.18.110, shall be increased .25 foot (three inches) for each foot of building height exceeding 35 feet, up to a maximum of 10 feet of additional landscaping. In such cases, the entire buffer shall consist of Type I landscaping.

**12.48.090 Special regulations – Motor Vehicle Sales Overlay.**

Exterior motor vehicle sales are permitted on properties containing Community Business (CB) zoning and a Motor Vehicle Sales Overlay (MVSO) designation subject to the following special regulations:

- A. All applications proposing to implement the uses permitted under the Motor Vehicle Sales Overlay (MVSO) shall be subject to this code including critical areas, site and building design and landscaping regulations and the provisions of this chapter. The Bothell Municipal Code Appendix or any special provisions as may be contained in a concomitant zoning agreement shall not be applicable for any use permitted under the MVSO. Application of the most permissive regulations of the individual zoning classification in accordance with BMC 12.06.020(F) and 12.14.040(B)(1)(a) are not available to any development application proposing to implement the uses permitted under the Motor Vehicle Sales Overlay.
- B. Illumination for motor vehicle sale properties shall be consistent with the following:

**Note – These proposed Code amendments have been revised to incorporate Council directives from February 4, 2002, to reduce the maximum allowable building height to be considered in the North Creek regional activity center from 150 to 100 feet, except for certain manufacturing processes.**

*Within the North Creek regional activity center there are three areas – the valley floor, the eastern slope, and the southwestern slope – where building height amendments have been proposed. Maximum building height on the valley floor would decrease from unlimited to 100 feet; on the eastern slope would increase from 35 to 65 feet; and on the southwestern slope would decrease from unlimited to 65 feet. In addition, on the valley floor, the current 15 unit per acre limit on density would be removed and the proposed new R-AC zone established.*

*Only those pages containing proposed amendments have been included.*

## Chapter 12.56

### NORTH CREEK/NE 195TH STREET SUBAREA REGULATIONS

#### Sections:

- 12.56.010 Purpose.
- 12.56.020 Special district – North Creek Valley – Coterminous with North Creek Valley/NE 195th Street subarea.
- 12.56.030 Subdistricts.
- 12.56.040 PUD required – Subdistrict B.
- 12.56.050 Impervious surface planning allotment.
- 12.56.060 Pedestrian and bicycle access.
- 12.56.070 Standards relating to freeways.
- 12.56.080 Architectural standards.
- 12.56.090 Setbacks.
- 12.56.100 Landscaping standards.
- 12.56.110 Parking standards.
- 12.56.120 Special regulations – Motor Vehicle Sales Overlay.

#### **12.56.010 Purpose.**

The purpose of this chapter is to establish regulations which apply specifically to land within the North Creek/NE 195th Street Subarea. Subarea zoning regulations are in addition to city-wide zoning regulations or, where more restrictive, take the place of city-wide zoning regulations. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996).

#### **12.56.020 Special district – North Creek Valley – Coterminous with North Creek Valley/NE 195th Street subarea.**

The North Creek Valley special district shall be coterminous with the North Creek Valley/NE 195th Street Subarea. This special district is established as an overlay zoning classification pursuant to the Bothell comprehensive land use plan for the purpose of implementing the goals, policies and actions of that plan. Subarea zoning regulations are in addition to city-wide zoning regulations, or, where more restrictive, take the place of city-wide zoning regulations. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996).

#### **12.56.030 Subdistricts.**

The North Creek Valley special district shall be divided into two subdistricts as follows:

- A. Subdistrict A shall comprise all land zoned ~~R-AC, R15~~, OP, CB, LI; R15, OP; and R15, OP, NB;
- B. Subdistrict B shall comprise all land zoned R4; R4, OP; and R4, R15, OP. Within subdistrict B, the following special use regulations shall apply:
  - 1. Area zoned R4, OP.
    - a. Between Ross Road and a line approximately 300 feet north and west of Beardslee Boulevard, uses allowed in the R4 zone are permitted. Between said line and Beardslee Boulevard, uses allowed in the OP zone are permitted. The actual boundary between the two zoning classifications shall be established in conjunction with PUD approval, taking into consideration property lines, topography, existing single-family development, proposed site design and other relevant factors.
    - b. Restaurants providing on-site dining (indoor only) are allowed in this area only when developed in conjunction with a hotel or motel. Such joint developments shall have a common street access and share architectural features so as to present a unified appearance. Drive-through order restaurants are prohibited within the North Creek Valley special district.
  - 2. Area zoned R4, R15, OP. Uses allowed in the R15 and OP zones are permitted on slopes of 15 percent or less. Uses allowed in the R4 zone are permitted on slopes greater than 15 percent. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996).

**12.56.040**

**PUD required – Subdistrict B.**

All land development within the North Creek Valley special district Subdistrict B shall be accomplished through the PUD process, Chapter 12.30 BMC. For land development within Subdistrict A, the PUD process is optional. Within Subdistrict B the following land use actions are exempted from the mandatory PUD process.

- A. Single-family residential development on individual lots in existence as of the effective date of this chapter;
- B. Single-family residential development on lots created through the short subdivision process, whether in existence or created subsequent to the effective date of this chapter. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996).

**12.56.050**

**Impervious surface planning allotment.**

- A. Portions of properties within Subdistrict A having slopes of zero to 15 percent shall have an impervious surface coverage allotment of 60 percent, subject to environmental review;
- B. Portions of properties within Subdistrict A having slopes greater than 15 percent, and all properties within Subdistrict B, shall have an impervious surface allotment of 60 percent, subject to environmental review and shall comply with impervious surface requirements as set forth in BMC Title 14, Environment. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996. Formerly 12.56.090.).

**12.56.060**

**Pedestrian and bicycle access.**

All development within the North Creek special district shall include provisions for pedestrian and

bicycle access in accordance with the adopted pedestrian and bicycle facilities plan within the Imagine Bothell... Comprehensive Plan. Special consideration shall be given to developing a complete non-motor vehicle traffic network, including connections to a trail system along North Creek and access to such system. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996. Formerly 12.56.150.).

**12.56.070 Standards relating to freeways.**

- A. The negative visual impact resulting from buildings with their rear elevation facing I-405 or SR-522 shall be avoided or substantially minimized through building orientation and design and/or effective screening.
- B. Commercial development in the North Creek Valley special district shall not include businesses which are dependent upon attracting freeway motorists for a substantial portion of their business. Retail and service businesses located within the North Creek Valley special district are prohibited from orienting signs toward I-405 and SR-522. Signage shall be oriented to the street serving the business.
- C. All development constructed in the vicinity of I-405 or SR-522 shall be designed and/or positioned so as to buffer freeway noise. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996. Formerly 12.56.170.).

**12.56.080 Architectural standards.**

In order to further the purposes of this chapter as set forth in BMC 12.56.010, protect property values, minimize discordant and unsightly surroundings and visual blight, avoid inappropriate and poor quality design and to promote aesthetic quality for the community as a whole, in addition to the design standards contained in Chapter 12.14 BMC, the following architectural standards shall be complied with:

- A. Glare.
  - 1. Mirror glass is permitted only when it can be demonstrated to produce no detrimental visual effect upon adjacent areas.
  - 2. Lighting shall be directed toward the interior of the project and away from residential areas.
- B. The major portions of the exterior building and fence materials shall be of natural and earth tones. Accent colors will be permitted on the minor portions of such materials.
- C. Buildings should be designed to encourage overall compatibility. Modular units, tilt-up construction, and other cost effective techniques are allowed and the final visual effect should be one of quality and permanence.
- D. All vents, air conditioning units, mechanical, electrical and other equipment located on the roof of any structure shall be screened as needed to avoid unsightly appearance as viewed from surrounding property, including hillside locations. The building roof design and covering/screening materials shall be described in detail, and it shall be demonstrated how these items will mitigate the visual impact of the equipment. These items shall be incorporated as an integral part of the overall building design. Projections of the view to the proposed site development, of roofs, and of rooftop equipment screening from adjacent hillsides, elevated roadways and residential areas shall be submitted.

E. Building height.

1. The following special height regulations apply:
  - a. Within the portion of Subdistrict A zoned R-AC, OP, CB, LI, the maximum allowable height is 100 feet, except that buildings may be up to 150 feet to accommodate manufacturing processes which require structures taller than 100 feet. In such cases, the applicant shall demonstrate why the process cannot be conducted in a building of 100 feet or less. Only that portion of the structure containing the manufacturing process may exceed 100 feet: offices and other areas of intensive employee activity are prohibited above this height.
  - b. Within the portion of Subdistrict A zoned R15, OP the maximum allowable height is 65 feet.
  - c. Within the portion of Subdistrict B east of 120<sup>th</sup> Avenue NE and 39<sup>th</sup> Avenue SE zoned R4, R15, OP and having slopes of 15 percent or less, in which portion uses allowed in the R15 and OP zones are permitted, the maximum allowable height is 65 feet.
  - d. Building heights within the remainder of Subdistricts A and B shall be regulated in accordance with BMC 12.14.
  - e. In all cases, building height shall be measured as set forth in BMC 12.14.110 through 12.14.130.
2. When buildings exceed 35 feet, in accordance with BMC 12.56.080E.1 above, the mandatory setbacks from, and mandatory landscaping buffers adjacent to, any abutting R zoning (not including combination zones) shall be increased as follows:
  - a. The mandatory setbacks from any abutting R zoning, as set forth in BMC 12.14.070D, shall be increased three feet horizontally for each foot of building height exceeding 35 feet. These increased setbacks shall apply to the entire building, rather than only to those portions of the building which may be higher than 35 feet. Where a property within either area described in BMC 12.56.080E.1.a or .b abuts R zoning along a street, the increased setbacks shall be measured from the street property line of such property.
  - b. The mandatory landscaping buffers adjacent to any abutting R zoning, as set forth in BMC 12.18.110, shall be increased .25 foot (three inches) for each foot of building height exceeding 35 feet, up to a maximum of 10 feet of additional landscaping. In such cases, the entire buffer shall consist of Type I landscaping.

E. There is no building height restriction for developments within Subdistrict A. When buildings in Subdistrict A exceed 35 feet, the mandatory setbacks from property lines shall be increased one foot horizontal for each foot of building height exceeding 35 feet. Building height for developments within Subdistrict B shall be governed by Chapter 12.14 BMC. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996. Formerly 12.56.180.)

#### **12.56.090 Setbacks.**

- A. In Subdistrict A, building setback requirements along public rights-of-way shall be 25 feet, *except as otherwise provided in BMC 12.56.080E*. Such setbacks shall be landscaped in accordance with the landscaping standards of BMC 12.56.100.
- B. The setback requirements ~~from for~~ all other property lines in Subdistrict A *which do not abut R zoning (not including combination zones)* shall be 10 feet. *The setback requirements from property lines which abut R zoning shall be as set forth in BMC 12.14.070D, except as otherwise provided in BMC 12.56.080E for buildings higher than 35 feet.*
- C. In Subdistrict B, the setback requirements shall be governed by the standards of the zoning classification in which the development is located, as set forth in Chapter 12.14 BMC, *except as otherwise provided in BMC 12.56.080E for buildings higher than 35 feet.*
- D. In Subdistrict A, when adjoining properties are developed simultaneously, setback requirements, except setbacks on public rights-of-way, may be waived. (Ord. 1629 § 1, 1996).

#### **12.56.100 Landscaping standards.**

- A. Planting of shade trees native to the area shall be required along public access routes to the North Creek shoreline.
- B. Service, loading, storage and other areas which tend to be unsightly shall be oriented away from dedicated streets and private roadways and screened from view with landscaping or fencing of an attractive material.
- C. The perimeter of parking areas shall be landscaped with solid screen evergreen plant material four feet high or fencing in combination with planting. Landscaped earth berms at least three feet high may substitute for the solid screen planting.
- D. Mechanical equipment shall be screened with landscaping or attractive architectural features integrated into the structure itself.
- E. To lessen the visual impact of outdoor parking lots, not less than seven percent of the interior of a parking lot with at least 15 parking stalls shall be landscaped. Landscaped strips between parking bays with appropriate ground cover and the planting of deciduous trees to achieve a canopy-like screening shall be required. Berms are also encouraged in the interior planted areas. Planting which is required for screening along the perimeter of any parking lot shall not be considered as fulfillment of the interior landscaping requirement. Planted areas within a parking lot shall be considered as part of the open space requirement.

**Note** – The Downtown / NE 190<sup>th</sup> Street / Riverfront Subarea contains the Downtown Community Activity Center. Amendments to these subarea regulations have been crafted to incorporate the proposed new R-AC zone and the building height revisions which would apply to this center. Special regulations unique to this activity center have been developed to accommodate the proposed Northshore Performing Arts Center and to protect the historic character of downtown Bothell.

Only those pages containing proposed amendments have been included.

## Chapter 12.64

### DOWNTOWN/NE 190TH STREET/RIVERFRONT SUBAREA REGULATIONS

Sections:

12.64.010 Purpose.

12.64.015 Special regulations – Building height – R-AC, OP, CB zoning north of NE 180th Street west of 101st Avenue NE and north of SR 522 east of 101st Avenue NE

12.64.020 Special district – Central Business special district (CBSD) – Purpose and boundary.

12.64.030 Special district – CBSD – Nonconforming status and compliance.

12.64.040 Special district – CBSD – Traffic, circulation and parking.

12.64.050 Special district – CBSD – Architectural standards.

12.64.060 Special district – CBSD – Landscaping.

12.64.070 Special district – Riverfront – Purposes.

12.64.080 Special district – Riverfront – Development standards.

12.64.090 Special district – Riverfront – Development incentives.

12.64.100 Special regulations – Lazy Wheels mobile home park overlay – R15 zoning.

12.64.110 Special regulations – Riverside and Rivershores mobile home park overlay – R11 zoning.

12.64.120 Special regulations – Specialized Senior Housing Overlay in the vicinity of the Northshore Senior Services Center – R4, SSHO zoning.

12.64.130 Special regulations – Adult entertainment facilities – GC zoning.

12.64.140 Special regulations – Motor Vehicle Sales Overlay.

#### **12.64.010 Purpose.**

The purpose of this chapter is to establish regulations which apply specifically to land within the Downtown/NE 190th Street/Riverfront Subarea. Subarea zoning regulations are in addition to city-wide zoning regulations or, where more restrictive, take the place of city-wide zoning regulations. (Ord. 1815 § 1, 2000; Ord. 1697 § 3, 1997; Ord. 1685, 1997; Ord. 1629 § 1, 1996).

12.64.015 Special regulations – Building height -- R15, OP, CB zoning north of NE 180th Street west of 101st Avenue NE and north of SR 522 east of 101st Avenue NE.

Within the above-described area, which includes the Central Business Special District (CBSD) and other R-AC, OP, CB-zoned properties to the east and west of the CBSD, building height shall be regulated as follows:

A. Maximum building height shall be 35 feet, but may be increased to 65 feet if both of the following conditions are met:

I. At least 40 percent of the gross floor area of the average story within the building (building gross floor area divided by number of stories) is devoted to parking either within or under the building or within a separate parking structure;

2. At least 10 percent of the gross floor area of the average story within the building (total building gross floor area divided by number of stories) is devoted to externally-oriented at-grade space for retail uses, eating and drinking establishments, recreation, culture and entertainment uses, personal services, and/or other similar businesses which are characterized by regular and frequent patronage during the course of the normal business day. "Externally oriented" for the purpose of this regulation shall mean having a door opening directly to the outside.

B. Due to their unique design requirements, performing arts facilities may extend above 65 feet, provided that the footprint of the portion of the facility over 65 feet comprises no more than 10 percent of the total roof area, and that said portion of the facility is set back from the outermost walls of the building or is otherwise designed to minimize its visual impact.

C. When buildings exceed 35 feet, in accordance with BMC 12.64.015A and B above, the mandatory setbacks from, and mandatory landscaping buffers adjacent to, any abutting R zoning (not including combination zones) shall be increased as follows:

1. The mandatory setbacks from any abutting R zoning, as set forth in BMC 12.14.070D, shall be increased three feet horizontally for each foot of building height exceeding 35 feet. These increased setbacks shall apply to the entire building, rather than only to those portions of the building which may be higher than 35 feet. Where the property zoned R-AC, OP, CB abuts R zoning along a street, the increased setbacks shall be measured from the street property line of the property zoned R-AC, OP, CB.

2. The mandatory landscaping buffers adjacent to any abutting R zoning, as set forth in BMC 12.18.110, shall be increased .25 foot (three inches) for each foot of building height exceeding 35 feet, up to a maximum of 10 feet of additional landscaping. In such cases, the entire buffer shall consist of Type I landscaping.

C. Additional height regulations applicable to the Main Street Action Area. In order to preserve the historic scale of the Main Street Action Area, as defined in BMC 12.64.020C, the first and second stories of any building fronting on Main Street, 101<sup>st</sup> Avenue NE or 102<sup>nd</sup> Avenue NE within this area may be placed at the street lot line, but the third and higher stories shall be set back a minimum of 20 feet from the street lot line.

D. Building height shall be measured as set forth in BMC 12.14.110 through 12.14.130.

#### **12.64.020 Special district – Central Business special district (CBSD) – Purpose and boundary.**

A. Purpose. The special district is intended to encourage and facilitate a healthy and rejuvenated downtown area; define a positive, quality retail environment sensitive to history, heritage and the entire Bothell community; exploit local historic values, lifestyle and the area's proximity to the Sammamish River and the park at Bothell Landing; create a less urban, more pedestrian-oriented environment; place an emphasis on marketing and business promotion and ensure that potential adverse effects upon adjacent properties are mitigated. The regulations set forth in this chapter shall be interpreted in such a manner as to be consistent with and to promote this purpose. Regardless of which underlying zoning classification has been or may in the future be assigned to the property, the requirements of this chapter shall be met.

Preservation and restoration of the existing buildings to their original state shall be encouraged, and new structures shall reflect the character of the area with unity of architecture, street and store signs, colors, building materials, light standards, landscaping, and street furniture while avoiding uniformity. Furthermore, activities which encourage the participation of the public, such as art shows and performances, shall be encouraged.

B. **Boundary.** The map titled Central Business Special District shows the boundary of the CBSD and the Main Street action area.

1. Main Street is described as extending from the intersection of SR-522/SR-527 on the west to the intersection of 104th Ave. NE/Kaysner Way on the east.

2. The CBSD is described as follows: the area bounded by Bothell Way NE (SR-527) on the west; 104th Ave. NE on the east; NE 185th St. on the north; and Woodinville Dr. (SR-522) on the south and including Bothell Landing as a part of the CBSD which is bounded by SR-522 on the north, the west property line of Bothell Landing on the west, and NE 180th St. on the south and east.

C. **Main Street Action Area.** Main Street action area is described as extending from the intersection of SR-522/SR-527 on the west to the intersection of 104th Ave. NE Kaysner Way on the east and includes the cross streets of 101st Ave. NE and 102nd Ave. NE from SR-522 (Woodinville Drive) on the south to NE 183rd St. on the north. Festival Street is the area on 101st Ave. NE from Main St. to 183rd Ave. NE. This area will be the focus of special activities planned in the CBSD for art shows, performances, etc. (Ord. 1815 § 1, 2000; Ord. 1697 § 3, 1997; Ord. 1685, 1997; Ord. 1629 § 1, 1996; Ord. 1231 § 1, 1986).

#### 12.64.030

##### **Special district – CBSD – Nonconforming status and compliance.**

Existing uses are exempt from these requirements until there is a change of use. All development within the CBSD shall comply with the provisions of this chapter which are supplementary to all building and land use regulations set forth in other parts of the BMC. Except as otherwise provided herein, to the extent the provisions of this chapter are inconsistent with other provisions of the BMC, the provisions of this chapter shall control. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996).

#### 12.64.040

##### **Special district – CBSD – Traffic, circulation and parking.**

The emphasis in the CBSD shall be on pedestrian and bicycle orientation. In order to promote this goal the CBSD shall be integrated with the Bothell Landing retail area and the park at Bothell Landing.

A. Existing structures in the Central Business special district built prior to 1982 shall be exempted from all parking requirements; provided, that no action may occur which results in a reduction of the number of parking stalls available on any lot as of January 1, 1982. Remodeling of existing structures which increases gross floor area will require a proportionate increase in parking in accordance with the standards set forth in Chapter 12.16 BMC.

B. In addition to the parking exemptions set forward in subsection A of this section for the CBSD, additional square footage of new or expansion of existing businesses fronting on Main Street, 101st Avenue and 102nd Avenue in the CBSD shall be exempted from the parking provisions; provided the new or expanded businesses do not remove any existing parking spaces. All other areas shall comply with Chapter 12.16 BMC.

C. Shared parking is allowed in accordance with BMC 12.16.040.

D. Existing municipal and private parking lots shall be upgraded in accordance with Chapter 12.16 BMC to recognize current landscaping requirements, handicapped parking, compact cars and bicycle stands upon issuance of a building permit for any new building and any increase in square footage of existing buildings. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996; Ord. 1231 § 1, 1986. Formerly 12.64.050).

#### **12.64.050 Special district – CBSD – Architectural standards.**

In order to further the purposes of this chapter as set forth in BMC 12.64.010, protect the property values, minimize discordant and unsightly surroundings and visual blight, avoid inappropriate and poor quality design, generally enhance the compatibility and prosperity of the surrounding community by preserving its natural beauty and to promote the aesthetic quality for the community as a whole, the following standards shall be complied with:

- A. The Urban Land Institute Study (1984) recognized that the beautification of the gateways to the CBSD is crucial to implement the goals and objectives of the city to revitalize the CBSD. The gateways include the area at SR-522/527 and Main Street and at 104th NE, Kaysner Way and Beardslee Boulevard. To implement these goals and project a positive image of the CBSD and the city, additional standards in the area of architectural design, landscaping and signage may be imposed for development in or near the gateways;
- B. Wherever practical the existing buildings shall be restored to their original facades;
- ~~C. D.~~ Wherever practical the original structures shall be retained while allowing adaptation for new uses.

**Note** – Additional language has been proposed to promote architecture within the CBSD which doesn't duplicate, but is complementary of and compatible with, existing development. The Landmark Board has been given an advisory review function for new development within the CBSD. Finally, a sub-section has been added which would prohibit any redevelopment which would result in tearing down an existing building located at the street property line and replacing it with an open parking lot. The continuity of storefronts on Main Street is one of its defining characteristics, and should be maintained.

~~D. E.~~ Any new construction whenever practical shall reflect the character of the area. This does not mean that the design of new buildings must slavishly copy the architecture of the oldest buildings in the CBSD. Bothell's history spans numerous architectural eras and styles, and no one era or style is more or less intrinsically valuable than another. New site and building design shall respect, rather than ignore, its context, incorporating proportions, window and door arrangements, cornice lines, detailing, materials, colors and other aspects of design prevalent in the area.

~~E.~~ In order to preserve the continuity of storefronts and their consequent contribution to the character of the area, redevelopment within the Main Street Action Area shall in no case replace an existing building at the street property line with an open uncovered parking lot.

F. In order to promote compliance with the regulations in this sub-section, any development proposal within the CBSD which would exceed the threshold for categorical exemptions under the State Environmental Policy Act (SEPA) shall be submitted to the Bothell Landmark Preservation Board for review and comment in a public meeting prior to any grading or building permits being issued.

**12.64.060 Special district – CBSD – Landscaping.**

The landscaping standards set forth in Chapter 12.18 BMC shall be met. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996; Ord. 1231 § 1, 1986. Formerly 12.64.080.).

**12.64.070 Special district – Riverfront – Purposes.**

The purposes of the Riverfront special district are as follows:

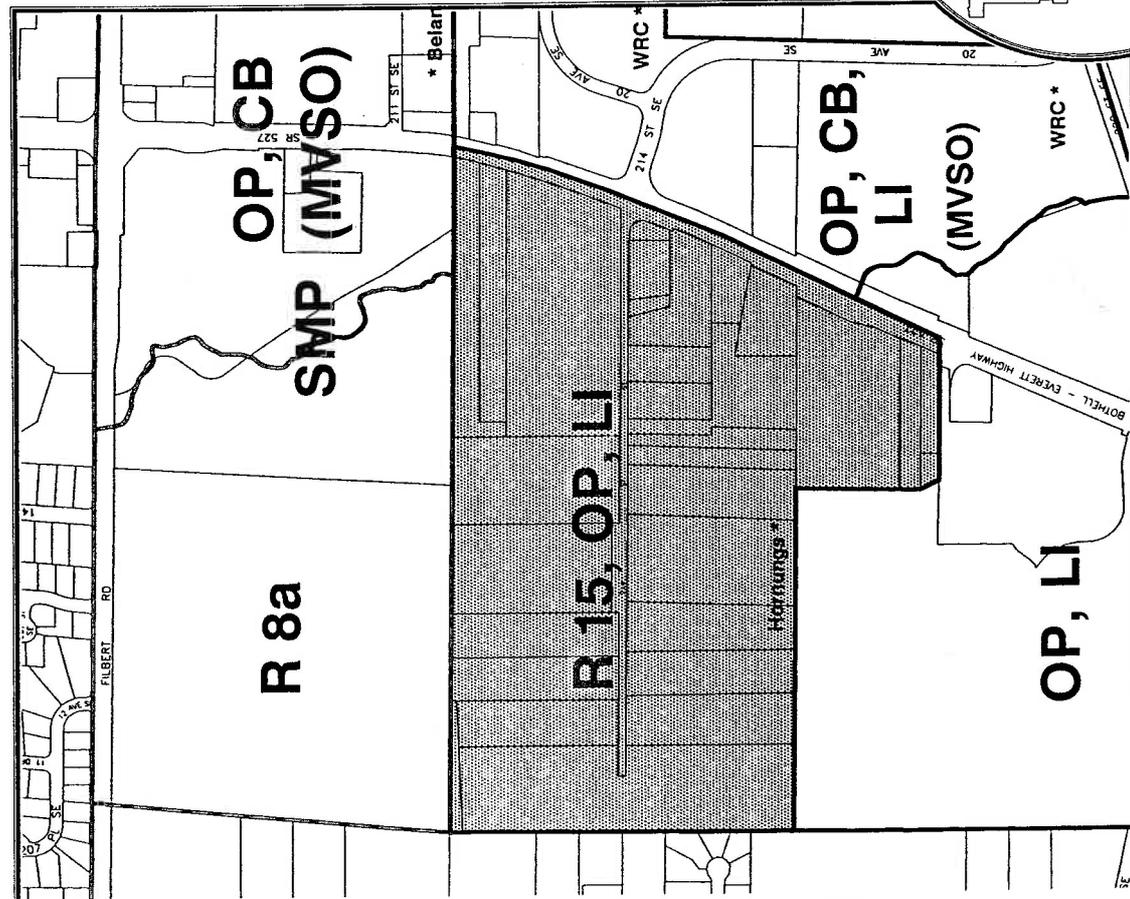
- A. To provide for and encourage a diversity of uses which derive particular benefit from proximity to the Sammamish River and in turn allow maximum public enjoyment of the river by providing shopping, recreation and housing opportunities;
- B. To assure that development enhances its setting by establishing regulations to preserve views to and from the river and encourage distinctive building design and use of materials and colors in harmony with the natural features and history of the river valley;
- C. To allow certain uses oriented toward and dependent upon exposure to SR-522 by conditional use permit, in order to assure adherence to the intent of this zone and compatibility with adjacent developments;
- D. To create a visually unified and attractive west entrance to the city through coordinated landscaping and access control;
- E. To provide for coordinated vehicular circulation among properties in order to disperse traffic and thereby mitigate congestion, pollution and other impacts of traffic generated by developments within the zone;
- F. To provide for coordinated bicycle and pedestrian circulation separated from motor vehicle traffic along the Sammamish River and among properties to assure safe access among buildings and properties and to mitigate the demand for recreational facilities generated by the anticipated increased population in the zone. (Ord. 1815 § 1, 2000; Ord. 1629 § 1, 1996; Ord. 1307 § 2, 1988. Formerly 12.64.090.).

**12.64.080 Special district – Riverfront – Development standards.**

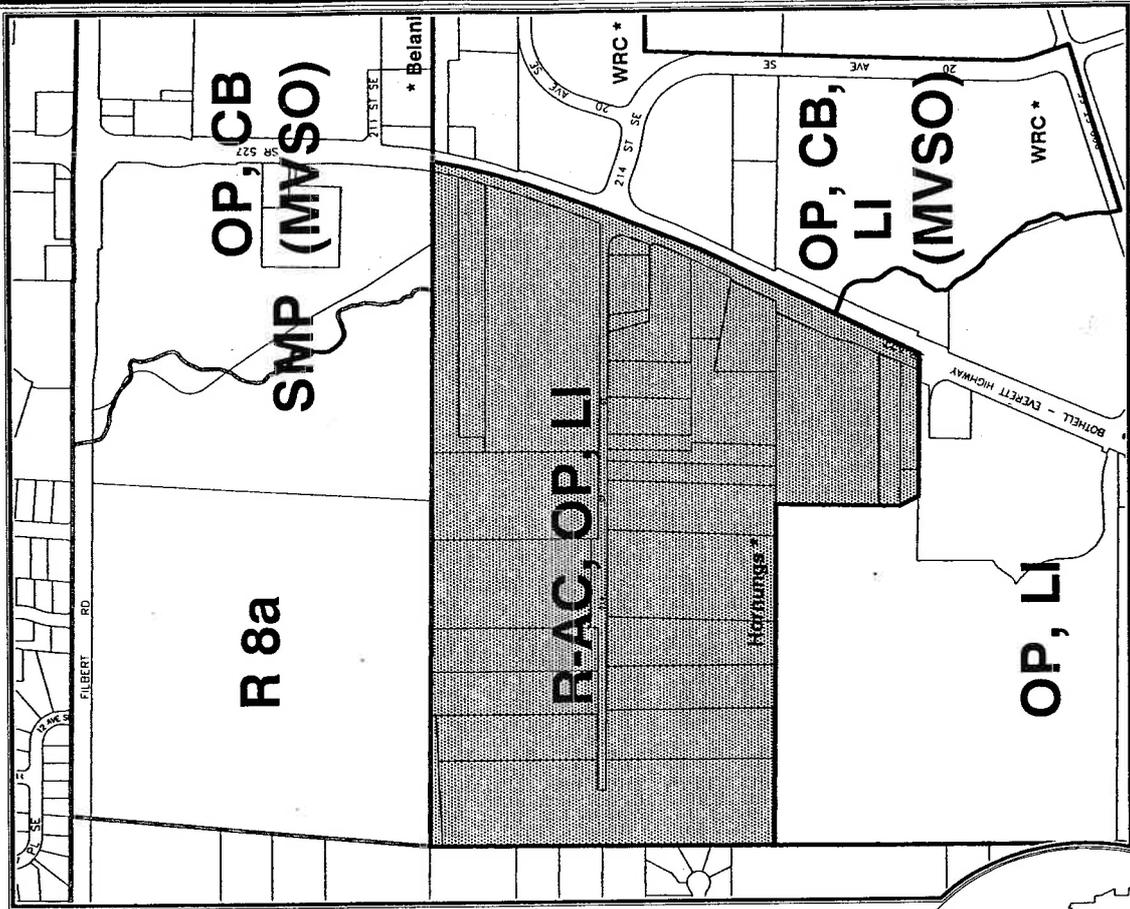
- A. Vehicle and Pedestrian Access Coordination. To minimize traffic congestion on public streets, to assure public access to the Sammamish River shoreline, and to contribute to the unified overall development of the zone, the following access coordination measures are required:
  1. Driveways from public streets to private property shall be spaced a minimum of 300 feet apart, except that where a property or combined properties have less than 300 feet of street frontage, driveways shall be located at opposite ends of the available street frontage where the side property lines intersect the right-of-way, so that each drive may serve the adjacent properties. Where these regulations do not clearly establish driveway location, or where topography or other site limitations otherwise make application of these regulations impractical, the city traffic engineer shall determine driveway location consistent with the

CPA - 2001-5

Building Height & Residential Density in Designated Activity Centers



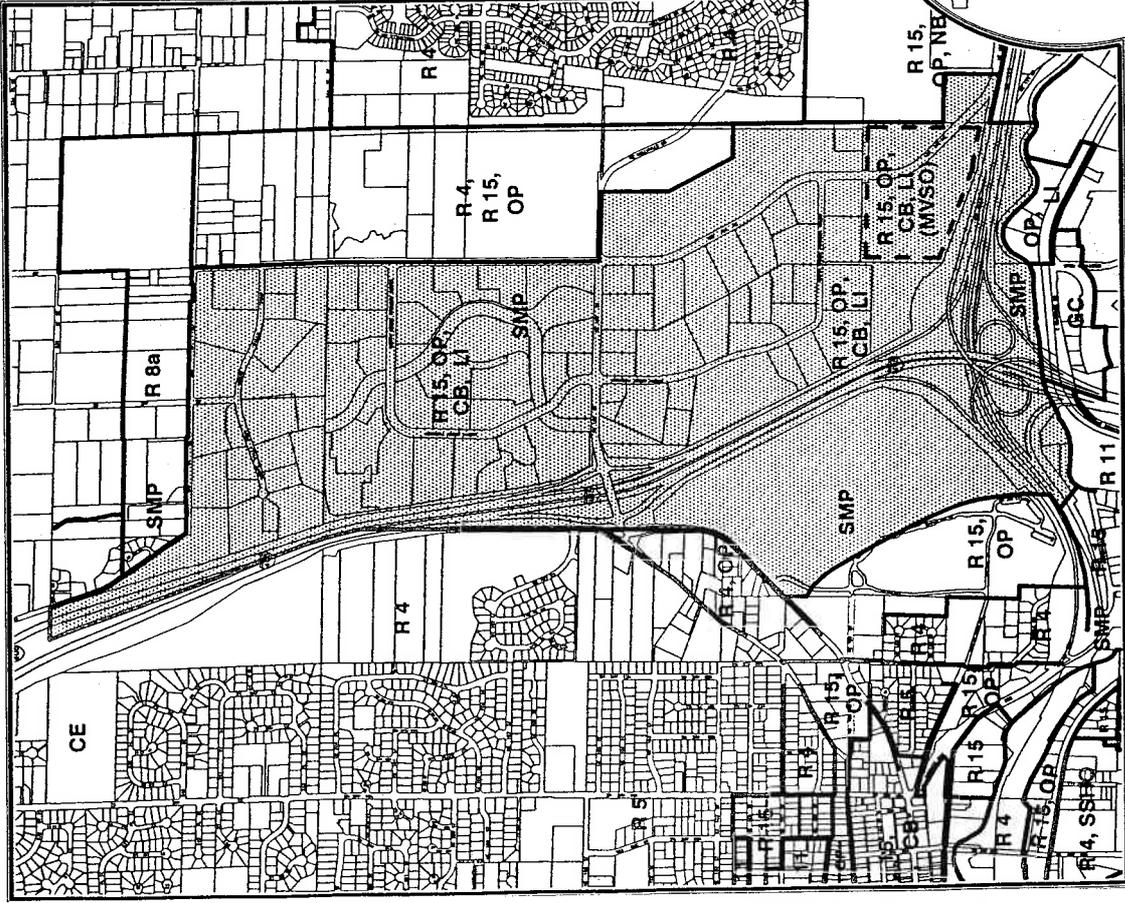
Existing Zoning



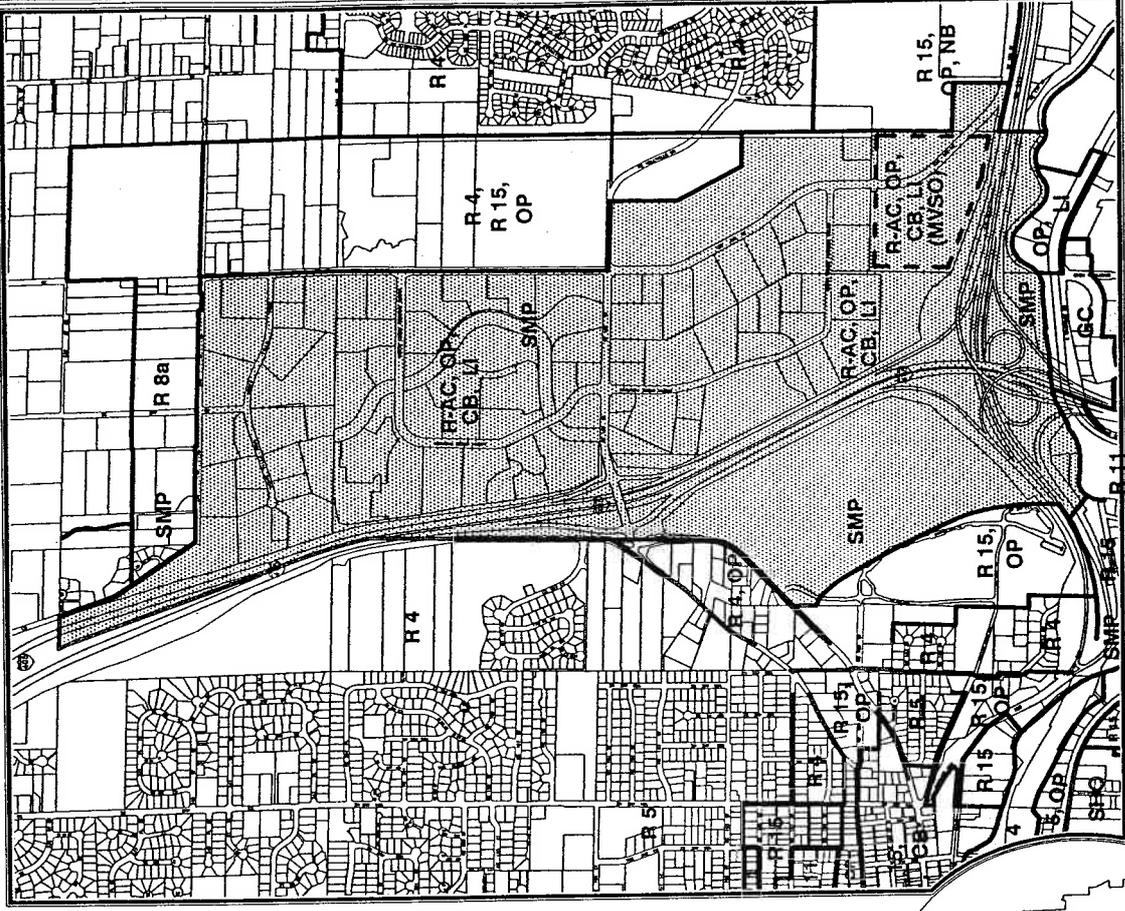
Proposed Zoning



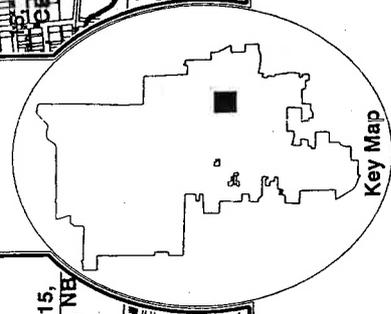
# Building Height & Residential Density in Designated Activity Centers



Existing Zoning



Proposed Zoning



Key Map



## CITY OF BOTHELL MEMORANDUM Community Development

DATE: January 9, 2002

TO: City Council  
Planning Commission  
Jim Thompson, City Manager  
Manny Ocampo, Assistant City Manager

FROM: <sup>WRW</sup> William R. Wiselogle, Community Development Director

SUBJECT: Actual growth v. growth targets in Bothell

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At the December 17 meeting, Councilmember - now Mayor - Bob Bandarra mentioned that he had attended a Suburban Cities meeting at which Bothell was recognized and praised for having achieved 72 percent of its population growth target. This memo provides an explanation of the source of the above number, and contains a table to place this growth in a city-wide context. Also included is a table that addresses employment growth city-wide.

### Population

The 72 percent figure comes from the 2001 King County Benchmark Report, an annual report which assesses the performance of King County jurisdictions on a variety of growth criteria.

One of the benchmarks is net new housing units permitted in King County. Attached is the table from the report comparing how each of the County's jurisdictions have performed with regard to this benchmark.

Bothell is shown as having achieved 72 percent of its 20-year allocation of new housing units within King County over the eight years from 1993-2000 (40 percent of the 20-year planning period). Other jurisdictions within a range of +/- 10 percent of Bothell include Bellevue, Maple Valley, Newcastle, Sammamish and unincorporated King County. Neighboring cities performed as follows: Woodinville, 41 percent; Kirkland, 50 percent; Kenmore, 53 percent; Redmond, 24 percent; and Shoreline, 30 percent.

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1

## LAND USE INDICATORS

**INDICATOR 30:**  
(continued from previous page)

Fig. 30.6

Net New Housing Units Permitted in King County, 1993 - 2000											
	1993	1994	1995	1996	1997	1998	1999	2000	1993 - 2000	Revised 20 Yr. Household Target	Percent of 2012 Target Achieved over 8 years (40% of 20 Yr. Period)
Algona	19	22	10	18	13	9	17	21	129	404	32%
Auburn	138	133	200	334	406	777	175	76	2,239	8,089	28%
Beaux Arts	0	0	0	3	1	0	1	0	5	0	100%
Bellevue	366	521	157	507	1,406	1,078	1,100	445	5,580	8,733	64%
Black Diamond	80	148	46	41	97	43	26	na	481	1,624	30%
Bothell	54	288	145	449	30	123	179	143	1,411	1,955	72%
Burien	16	20	24	33	67	86	56	36	338	1,867	18%
Carnation	27	19	13	20	27	16	16	3	141	404	35%
Clyde Hill	0	1	3	2	6	2	14	3	31	12	258%
Covington	0	0	0	43	100	26	20	36	225	1,493	15%
DesMoines	65	32	34	245	50	33	107	43	609	2,192	28%
Duvall	29	87	54	51	126	116	89	118	670	1,661	40%
Enumclaw	139	169	53	114	28	19	52	21	595	2,425	25%
Federal Way	229	192	214	232	507	199	341	72	1,986	15,284	13%
Hunts Point	0	-2	0	1	2	2	0	3	6	4	150%
Issaquah	270	176	187	151	386	689	316	692	2,867	3,391	85%
Kenmore	0	0		124	90	73	78	206	571	1,082	53%
Kent	142	224	365	981	512	446	1,146	641	4,457	9,075	49%
Kirkland	141	396	323	534	615	434	336	140	2,919	5,837	50%
Lake Forest Park	0	4	17	15	1	29	18	6	90	469	19%
Maple Valley	0	0	0	408	51	238	114	137	948	1,539	62%
Medina	-10	11	0	9	11	12	17	na	50	17	294%
Mercer Island	20	95	44	69	68	50	31	na	377	1,122	34%
Milton	5	0	24	51	3	2	0	na	85	40	213%
Newcastle	0	13	47	68	45	50	40	265	528	836	63%
Normandy Park	5	14	114	7	7	11	7	na	165	135	122%
North Bend	83	62	69	105	114	252	145	6	836	1,527	55%
Pacific	28	21	38	0	4	6	4	5	106	1,212	9%
Redmond	177	318	433	581	457	454	179	169	2,768	11,617	24%
Renton	156	304	151	319	913	944	468	795	4,050	9,020	45%
Sammamish	0	0	0	341	559	1,038	1,179	701	3,818	5,466	70%
SeaTac	33	28	25	73	35	40	-109	-19	106	5,525	2%
Seattle	1,500	1,018	1,094	1,091	2,394	3,933	4,586	6,898	22,514	53,877	42%
Shoreline	0	0	113	54	156	156	86	199	764	2,559	30%
Skykomish	0	1	2	2	0	2	0	0	7	27	26%
Snoqualmie	2	0	16	10	71	142	465	310	1,016	2,784	37%
Tukwila	12	17	12	49	48	32	41	48	259	5,388	5%
Woodinville	0	14	35	192	140	267	55	29	732	1,797	41%
Yarrow Point	3	6	2	4	1	1	0	1	18	18	100%
All Cities	3,729	4,352	4,064	7,331	9,547	11,830	11,395	12,249	64,497	170,498	38%
Urban Unincorp KC	3,080	2,420	1,680	1,404	1,471	1,554	1,575	904	14,088	19,686	72%
Rural KC	808	900	800	899	841	867	735	520	6,370	7,000	91%
All Unincorp KC	3,888	3,320	2,480	2,303	2,312	2,421	2,310	1,424	20,458	26,686	77%
Total	7,617	7,672	6,544	9,634	11,859	14,251	13,705	13,673	84,955	197,184	43%

**Note:**

The number of units reported here differ from those reported in the Annual Growth Report for two reasons: 1) the AGR reports the gross number of permits issued without subtracting for demolitions, and 2) there are significant discrepancies (other than demolitions) between the number of permits reported by the permitting agencies in some cities, and the net new units reported by city planning departments. In addition, credit for units annexed or incorporated into cities has not been completed for the 1993 - 1994 period. Because of these discrepancies this chart should only be taken as a broad estimate of target achievement, not as a final count. Total number of units permitted by Unincorporated King County are high for 1993 - 1994 because units that were annexed or incorporated subsequently have not yet been subtracted from the County, and added to the city's total. Thus, the final total for UKC is higher than it should be and the total for the cities is lower than it should be. The overall total should be approximately correct.

Staff performed its own analysis in the table below, updating the numbers for 2001, and found Bothell currently to be at about 74 percent of its 20-year King County population allocation (at 45 percent of the planning period).

Portion of City	1992 baseline	20-year growth allocation	2001 estimate	Actual growth, 1993-2001	Percent of growth allocation achieved by end of 2001 (9/20, or 45%, of the planning period )
King County	12,858	+3,750 to +6,250 (range)	16,310	+3,452	92% of low allocation 55% of high allocation (average of 74%)
Snohomish County	11,295	+8,435	14,160	+2,865	34%
Total	24,153	+12,185 to +14,685 (range)	30,470	+6,317	52% of low allocation 43% of high allocation (average of 48%)

Please note that King County provides its jurisdictions with a range of low and high dwelling unit allocations. Since Bothell began its GMA planning in 1991, staff has converted the King County allocations to population, since Snohomish County provides its allocations only in those terms, so that “apples to apples” analyses can be prepared. In the attached table from the Benchmark report, the “Revised 20 Yr. Household Target” represents the average of the low and high allocations: in the above table, staff has provided the population equivalents of both low and high allocations, as well as the average.

Please note also that in the Snohomish County portion of Bothell, the situation differs significantly from that in the King County portion. In the northern part of the City, only 34 percent of the growth allocation has been achieved as of the end of 2001.

Considered as a whole – King and Snohomish County portions together - Bothell had achieved 48 percent of its allocated population growth by the end of 2001. This is very close to the 45 percent representing the portion of the planning period completed.

However, staff urges that the percentages of growth allocation achieved in either county or at the end of any particular year be considered in the context of a 20-year process. The economy is cyclical – as the last year has made abundantly clear – and residential and commercial construction waxes and wanes. A heavy building year, or two or three such years, may be followed by a drought of equal length.

Residential construction in the King County portion of Bothell may continue to outpace that in the Snohomish County portion, or the trend may reverse. At this point in time, almost mid-way through the first GMA planning period, staff is pleased to see that, overall, the City appears to be on track in meeting its residential growth obligations.

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## Employment

Bothell's accommodation of employment is a radically different picture than that for population, as the following table shows. Not yet halfway through the planning period, the City has already added one and one-half times as many jobs as had been allocated by King and Snohomish Counties for the entire 20 years.

Portion of City	1992 baseline	20-year growth allocation	2001 estimate	Actual growth, 1992-2001	Percent of growth allocation achieved by end of 2001 (9/20, or 45%, of the planning period )
King County	5,140	+2,150 to +3,600 (range)	9,200	+4,060	189% of low allocation 113% of high allocation (average of 151%)
Snohomish County	5,795	+2,547	9,700	+3,905	153%
Total	10,935	+4,697 to +6,147	18,900	+7,965	170% of low allocation 130% of high allocation (average of 150%)

Staff believes that this growth is more a function of under-allocation by the counties at the outset of the planning period than of unexpectedly high job creation in Bothell. When the employment allocations first came out in 1992, staff felt that neither King nor Snohomish Counties fully recognized the potential of the business parks at the south end of what was then known as the Technology Corridor. The employment allocations were far below the combined capacities of the business parks, and did not recognize the influx of businesses happening at that time, much less provide for realistic future job growth.

However, as stated under Population above, growth is cyclical, and with the Eastside office vacancy rate currently around 25 percent, it is likely that the pace of growth over the next few years will slow dramatically, or possibly stop completely for a while. Even so, it is evident that by the end of the planning period, the number of jobs in Bothell will have exceeded the allocations by a factor of two, or possibly more.

# Building height and residential density Plan and Code amendments - Analysis of population and employment capacities and projected growth

The purpose of this analysis is to estimate population and employment capacities and likely growth in the affected activity centers under existing regulations and the proposed amendments. The results of this analysis have been provided to the City's consultants to analyze the impacts of the differences between the two.

This analysis consists of five parts:

1. Estimates of existing (2001) population and employment within affected activity centers
2. Population and employment capacities within affected activity centers under existing policies and regulations and under proposed amendments
3. PSRC population and employment forecasts for areas containing affected activity centers
4. Projected population and employment growth for affected activity centers under existing policies and regulations
5. Projected population and employment growth for affected activity centers under proposed amendments
6. Conclusions

## Part 1 –

### Estimates of existing population and employment within affected activity centers

The following table estimates existing population and employment in the activity centers which would be affected by the proposed amendments. These estimates provide a baseline against which to measure the impacts of population and employment growth with and without the amendments. Estimated population is based on a windshield survey of dwelling units times the average population per dwelling unit from the 2000 census, plus special populations (e.g., Woodway Inn, Franciscan Center). Estimated employment is based on a tally of the number of employees reported to the city for business licensing purposes by businesses in the affected activity centers, plus actual employment numbers or estimates for those organizations which are not required to have business licenses (e.g., City of Bothell, Northshore School District, UWB/CCC).

Activity Center	Estimated 2001 population	Estimated 2001 employment
Thrasher's Corner Community Activity Center	0	307
Canyon Park Community Activity Center	15	984
Downtown Community Activity Center	208	1,981
Canyon Park Regional Activity Center	553	7,210
North Creek Regional Activity Center – valley floor	0	7,320
North Creek Regional Activity Center – part of east hillside	528	170
North Creek Regional Activity Center – southwest hillside	338	3,599 (includes UWB/CCC students, since they create infrastructure and operational impacts similar to those generated by employees)
<b>Totals for above activity centers</b>	<b>1,642</b>	<b>21,571</b>

## Part 2 – Population and employment capacities under existing policies and regulations and proposed amendments

Part 1 of this analysis identified a baseline of existing population and employment within the affected activity centers. This section estimates the total population and employment which could result under the current policies and regulations and under the proposed amendments if the affected activity centers were fully developed (subject to certain assumptions detailed below).

### Notes

1. This analysis assumes all land in the affected areas could eventually redevelop at currently allowed or amended heights, except the UWB/CCC, which is treated as a special case. Since it is known that the buildout plans for the campus call for accommodation of 10,000 FTE students plus approximately 1,500 faculty and staff, these numbers were utilized rather than generating numbers through a formula based on allowable building height. This capacity analysis utilizes the same methodology as has been applied to the entire Planning Area in the Major Plan Update, including changes requested by the Planning Commission to the sequencing of deductions since the first version of this analysis was prepared. These changes required re-calculating all of the population and employment capacities. Deductions are as follows: right of way (ROW), 18%; critical areas (CAs), 20%; public facilities (pub. facil.), 2%. Once these are deducted, a 15% market factor is deducted from the result. The market factor deduction reflects the tendency of some property owners to hold their properties out from development or re-development.
2. Building areas per employee are from the 1985 Snohomish County Building and Industrial Land Survey. No more recent studies were found.
3. Building area per resident assumes an average two-person occupancy of a 1,000 square foot apartment or condominium.
4. In the Thrasher's Corner Community Activity Center, dwelling units are not currently allowed, and are not proposed to be allowed.
5. In the Canyon Park Community Activity Center, under current policies and regulations, residential development is allowed at a density of 15 dwellings per acre, but it is assumed that existing single family housing in the area would eventually be demolished for more profitable office and/or retail development, and that no new housing would be built, due to the greater financial return on commercial development than on residential development at 15 du/ac.
6. In the Downtown Community Activity Center, under current policies and regulations, it is assumed that the existing multi-family housing would remain and virtually no new housing would be built, due to the greater financial return on commercial development than on residential development at the currently allowed density of 15 units per acre.
7. Two scenarios were modeled – a maximum possible intensity scenario, and a realistic probable intensity scenario. The realistic probable intensity scenario is a percentage of the maximum possible intensity scenario, and reflects the fact that even in established large city downtowns, all properties are never developed to the maximum height and bulk allowed. The percentage applied is a “best guess” attempt at a realistic buildout pattern: the taller the buildings allowed, the lower the percentage, reflecting the lower likelihood that many buildings would be constructed at the maximum height allowed. Estimated building area, population and employment resulting from the maximum possible intensity scenario are in **bold**, while estimates resulting from the realistic probable intensity scenario are in *bold italics*.
- 8.

Capacities without amendments (i.e., applying existing building heights and residential densities)

Area affected by proposed amendments	Zoning (allowed building height)	Assumptions	Total land area, in acres	Minus deductions for ROW, CAs, pub. facil.; minus mkt. factor; = net land area, in acres	Total estimated building area, in sq. ft.	Estimated building area in office + 350 s.f. per employee = no. of office employees	Estimated building area in retail + 800 s.f. per employee = no. of retail employees	Estimated building area in light industrial + 650 s.f. per employee = no. of ind. emp.	Estimated building area in residential + 500 s.f. per resident = no. of residents	Total employment capacity	Total estimated population capacity
Thrasher's Corner Community Activity Ctr.	OP, CB (35 ft.)	2 stories 1 <sup>st</sup> flr. retail 2 <sup>nd</sup> flr. ofc. 33% lot covg. Sfc. prkg.	48	24.5	Max. poss.: 704,365  Realistic prob. (75% of max.): 528,273	352,182 + 350 = 1,006	352,182 + 800 = 440			1,446	
Canyon Park Community Activity Ctr.	OP, CB; R15, OP, CB (35 ft.)	2 stories 1 <sup>st</sup> flr. retail 2 <sup>nd</sup> flr. ofc. 33% lot covg. No res. Sfc. prkg.	98	50	Max. poss.: 1,437,480  Realistic prob. (75% of max.): 1,078,110	718,740 + 350 = 2,053	718,740 + 800 = 898			2,951	
Downtown Community Activity Ctr.	R15, OP, CB (35 ft.)	2 stories 1 <sup>st</sup> flr retail 2 <sup>nd</sup> flr ofc. 33% lot covg. No new res. Sfc. prkg.	111	56.6	Max. poss.: 1,627,227  Realistic prob. (75% of max.): 1,220,420	813,614 + 350 = 2,325	813,614 + 800 = 1,017		No new residential: the existing estimated population may remain the same or decline	3,342	208
Canyon Park Regional Activity Ctr.	R15, OP, CB; OP, CB; OP, CB, LI (48 ft.)	3 stories 42% ofc. 6% retail 42% lt. ind. 10% res. 25% lot covg. Sfc. prkg.	637	324.9	Max. poss.: 10,614,483  Realistic prob. (67% of max.): 7,111,704	4,458,083 + 350 = 12,737	4,458,083 + 800 = 796	4,458,083 + 650 = 6,858	1,061,448 + 500 = 2,123	20,391	2,123
						8,534	533	4,595	1,422	13,662	1,422

Area affected by proposed amendments	Zoning (allowed building height)	Assumptions	Total land area, in acres	Minus deductions for ROW, CAs, pub. facil.; minus mkt. factor; = net land area, in acres	Total estimated building area, in sq. ft.	Estimated building area in office + 350 s.f. per employee = no. of office employees	Estimated building area in retail + 800 s.f. per employee = no. of retail employees	Estimated building area in light industrial + 650 s.f. per employee = no. of ind. emp.	Estimated building area in residential + 500 s.f. per resident = no. of residents	Total estimated employment capacity	Total estimated population capacity
North Creek Regional Activity Ctr. -- valley floor	R15, OP, CB, LI (no limit, but 1:1 setbacks applied to existing lot depths limit max. possible height)	13 stories 50% ofc. 10% retail 30% lt. ind. 10% res. 19% main bldg. covg. 100% of pkg. structured at 35 ft. in height	681	347.3	Max. poss.: 37,367,118  Realistic prob. (50% of max.): 18,683,559	18,683,559 + 350 = 53,381	3,736,712 ÷ 800 = 4,670	11,210,135 ÷ 650 = 17,246	3,736,712 ÷ 500 = 7,473	75,297	7,473
North Creek Regional Activity Ctr. -- part of east hillside	R4, R15, OP (35 ft.)	2 stories ofc. 3 stories res. 40% ofc. 60% res. (no SF) 33% lot covg. Sfc. pkg.	140	71.4	Max. poss.: 2,565,902  Realistic prob. (75% of max.): 1,924,426	1,026,360 ÷ 350 = 2,932			1,539,541 ÷ 500 = 3,079	2,932	3,079
North Creek Regional Activity Ctr. -- southwest hillside	R15, OP (no limit, but setbacks)	4 stories ofc. 3 stories res. 80% ofc. 20% res. 33% lot covg. Sfc. and structured pkg.	56.9	29	Max. poss.: 1,459,042  Realistic prob. (75% of max.): 1,094,282	11,600 (includes UWB/CCC students, faculty and staff; number based on planned max. enrollment)			291,808 ÷ 500 = 583	11,600	583
						2,199		8,623	3,737	2,199	2,309
											437

Capacities with amendments

Area affected by proposed amendments	Zoning (proposed building height)	Assumptions	Total Land Area, in acres	Minus deductions for ROW, CAS, pub. facil; minus market factor; = net land area, in acres	Total estimated building area, in sq. ft.	Estimated building area in office + 350 s.f. per employee = no. of office employees	Estimated building area in retail + 800 s.f. per employee = no. of retail employees	Estimated building area in light industrial + 650 s.f. per employee = no. of lt. ind. emp.	Estimated building area in residential + 500 s.f. per resident = no. of residents	Total estimated employment capacity	Total estimated population capacity
Thrasher's Corner Community Activity Ctr.	OP, CB (65 ft. with conditions)	5 stories 80% office 20% retail 23% main bldg. covg. 50% of prkg. structured	48	24.5	Max. poss.: 1,227,303  Realistic prob. (67% of max.): 822,293	981,842 + 350 = 2,805	245,461 ÷ 800 = 307			3,112	
Canyon Park Community Activity Ctr.	OP, CB; R15, OP, CB (65 ft. with conditions)	5 stories 40% office 20% retail 40% res. 23% main bldg. covg. 50% of prkg. structured	98	50	Max. poss.: 2,504,700  Realistic prob. (67% of max.): 1,678,149	1,001,880 + 350 = 2,862	500,940 + 800 = 626		1,001,880 ÷ 500 = 2,004	3,488	2,004
Downtown Community Activity Ctr.	R15, OP, CB (65 ft. with conditions)	5 stories 40% office 20% retail 40% res. 23% main bldg. covg. 50% of prkg. structured	111	56.6	Max. poss.: 2,835,320  Realistic prob. (67% of max.): 1,899,665	1,134,128 + 350 = 3,240	567,064 + 800 = 709		1,134,128 ÷ 500 = 2,268	3,949	2,268
							475		1,520	2,646	1,520

Area affected by proposed amendments	Zoning (proposed building height)	Assump-tions	Total Land Area, in acres	Minus deductions for ROW, CAS, pub. facil; minus market factor; = net land area, in acres	Total estimated building area, in sq. ft.	Estimated building area in office + 350 s.f. per employee = no. of office employees	Estimated building area in retail + 800 s.f. per employee = no. of retail employees	Estimated building area in light industrial + 650 s.f. per employee = no. of ind. emp.	Estimated building area in residential + 500 s.f. per resident = no. of residents	Total estimated employment capacity	Total estimated population capacity
Canyon Park Regional Activity Ctr.	R15, OP, CB; OP, CB; OP, CB, LI (150 ft. with conditions)	10 stories 50% office 10% retail 30% lt. ind. 10% res. 23% main bldg. covg. 100% of prkg. structured at 35 ft. in height	637	324.9	Max. poss.: <b>32,551,081</b>  Realistic prob. (50% of max.): <b>16,275,540</b>	16,275,540 + 350 = <b>46,501</b>	3,255,108 + 800 = <b>4,069</b>	9,765,324 + 650 = <b>15,023</b>	3,255,108 + 500 = <b>6,510</b>	<b>65,593</b>	<b>6,510</b>
North Creek Regional Activity Ctr. - valley floor	R15, OP, CB, LI (150 ft. with conditions)	10 stories 50% office 10% retail 30% lt. ind. 10% res. 23% main bldg. covg. 100% of prkg. structured at 35 ft. in height	681	347.3	Max. poss.: <b>34,795,292</b>  Realistic prob. (50% of max.): <b>17,397,646</b>	17,397,646 + 350 = <b>49,708</b>	3,479,529 + 800 = <b>4,349</b>	10,438,588 + 650 = <b>16,059</b>	3,479,529 + 500 = <b>6,959</b>	<b>70,116</b>	<b>6,959</b>
North Creek Regional Activity Ctr. - part of east hillside	R4, R15, OP (65 ft. with conditions)	5 stories 50% office 50% res. 23% main bldg. covg. 50% of prkg. structured	140	71.4	Max. poss.: <b>3,576,712</b>  Realistic prob. (67% of max.): <b>2,396,396</b>	1,788,356 + 350 = <b>5,110</b>		8,029	1,788,356 + 500 = <b>3,576</b>	<b>5,110</b>	<b>3,576</b>
						<b>24,853</b>	<b>2,174</b>	<b>8,029</b>	<b>3,479</b>	<b>35,058</b>	<b>3,479</b>
											<b>3,423</b>
											<b>2,396</b>

Area affected by proposed amendments	Zoning (proposed building height)	Assumptions	Total Land Area, in acres	Minus deductions for ROW, CAs, pub. facil; minus market factor; = net land area, in acres	Total estimated building area, in sq. ft.	Estimated building area in office + 350 s.f. per employee = no. of office employees	Estimated building area in retail + 800 s.f. per employee = no. of retail employees	Estimated building area in light industrial + 650 s.f. per employee = no. of ind. emp.	Estimated building area in residential + 500 s.f. per resident = no. of residents	Total estimated employment capacity	Total estimated population capacity
North Creek Regional Activity Ctr. - southwest hillside	R15, OP (65 ft. with conditions)	4 stories ofc. 3 stories res. 80% ofc. 20% res. 33% lot covg. Sfc. and structured parking	56.9	29	Max poss.: 1,459,042  Realistic prob. (75% of max.): 1,094,282	11,600 (includes UWB/CCC students, faculty and staff)  11,600			291,808 ÷ 500 = 583	11,600	583
									437	11,600	437

Population and employment capacity comparison, using realistic probable intensity scenario

Activity Center	Existing (2001) population	Population capacity		Existing (2001) employment	Employment capacity	
		Under existing policies and regulations	Under proposed amendments		Under existing policies and regulations	Under proposed amendments
Thrasher's Corner Community Activity Center	0	0	0	307	1,085	2,084
Canyon Park Community Activity Center	15	0	1,342	984	2,214	2,337
Downtown Community Activity Center	208	208	1,520	1,981	2,507	2,646
Canyon Park Regional Activity Center	553	1,422	3,255	7,210	13,662	32,796
North Creek Regional Activity Center - Valley floor	0	3,737	3,479	7,320	37,649	35,058
North Creek Regional Activity Center - Part of east hillside	528	2,309	2,396	170	2,199	3,423
North Creek Regional Activity Center - Southwest hillside	338	437	437	3,599	11,600	11,600
<b>Totals</b>	<b>1,642</b>	<b>8,113</b>	<b>12,429</b>	<b>21,571</b>	<b>70,916</b>	<b>89,944</b>

## Part 3 -

# PSRC population and employment forecasts for areas containing affected activity centers

The capacity analysis presented in Part 2 estimated how much development might occur under a buildout scenario. However, the capacity analysis is “time-blind”, in that it does not account for the rate at which development or redevelopment might be expected to occur. Developing a realistic estimate of how much development might occur at selected points in time under the existing policies and regulations and under the proposed amendments is necessary so that the relative impacts can be accurately assessed in the context of a reasonable likely future. Accordingly, this section examines Puget Sound Regional Council population and employment forecasts for areas containing the affected activity centers; Part 4 re-sorts and adjusts the PSRC forecasts by activity centers to estimate population and employment growth based on existing policies and zoning; and Part 5 estimates what population and employment growth might occur under the amendments.

The following table 1) provides PSRC population and employment forecasts for those Forecast Analysis Zones (FAZs) containing community and regional activity centers which would be affected by the proposed Building Height and Residential Density Plan and Code Amendments; and 2) calculates the numerical and percentage changes in population and employment between forecast points in time. Maps depicting the subject FAZs are included. For comparison purposes, the table also provides population and employment forecasts for all of King and Snohomish Counties.

Please note that FAZs are composed of one or more census tracts and consequently contain geographic areas much larger than any of the affected activity centers. Indeed, some FAZs contain a substantial amount of land outside Bothell in unincorporated King or Snohomish Counties. Moreover, in three cases multiple activity centers are in one FAZ, and in two cases an activity center is split into two FAZs.

Please note that the PSRC figures contain a few somewhat counter-intuitive projections:

- The projected 1998-2030 employment growth for FAZs 7320 and 7415 is +62.77% and +44.27%, respectively, a significant difference considering that land uses are very similar on either side of the two FAZs’ common boundary, SR 527. This may be explained by the fact that FAZ 7320 extends north to 164<sup>th</sup> Street, where there is still considerable capacity for employment growth.
- The projected 1998-2030 employment growth for the FAZ containing the North Creek business parks is only 12.85%, while the projected employment growth for the FAZs containing the Canyon Park business park are +62.77% (west of SR 527) and +44.27% (east of SR 527). This may reflect the fact that almost all the parcels in North Creek are developed, while some developable land in Canyon Park remains. However, this would not reflect the redevelopment potential provided by the current no-height-limit regulations in the North Creek Valley.
- In the FAZ for the area containing the parts of the Canyon Park RAC and the Thrasher’s Corner CAC, the forecast for the period from 2020 to 2030 shows a decrease in employment of 314 jobs, while other FAZs show increases for the same period.

The PSRC forecasts are produced by a sophisticated computer model driven by hundreds of assumptions. While some of the figures may be surprising – and perhaps subject to question – staff has no other source of forecast data, and thus elected to utilize the numbers as provided by PSRC.

FAZ	Population / Employment	1998	Change, 1998-2010 (12 years)	2010	Change, 2010-2020 (10 years)	2020	Change, 2020-2030 (10 years)	2030	Change, 1998 - 2030 (32 years)
5600 (contains all of North Creek RAC and Downtown CAC)	Population	12,235	Number, total: +1,841 Number, annualized: +153 Percent, total: +15%	14,076	Number, total: +1,236 Number, annualized: +124 Percent, total: +8.8%	15,312	Number, total: +882 Number, annualized: +88 Percent, total: +5.76%	16,194	Number, total: +3,959 Number, annualized: +124 Percent, total: +32.36%
	Employment	10,812	Number, total: +455 Number, annualized: +38 Percent, total: +4.21%	11,267	Number, total: +703 Number, annualized: +70 Percent, total: +6.24%	11,970	Number, total: +231 Number, annualized: +23 Percent, total: +1.93%	12,201	Number, total: +1,389 Number, annualized: +43 Percent, total: +12.85%
7316 (contains all of Canyon Park CAC)	Population	17,475	Number, total: +6,319 Number, annualized: +527 Percent, total: +36.16%	23,794	Number, total: +1,175 Number, annualized: +118 Percent, total: +4.94%	24,969	Number, total: +1,234 Number, annualized: +123 Percent, total: +4.94%	26,203	Number, total: +8,728 Number, annualized: +273 Percent, total: +50%
	Employment	2,002	Number, total: +808 Number, annualized: +67 Percent, total: +40.36%	2,810	Number, total: +457 Number, annualized: +46 Percent, total: +16.26%	3,267	Number, total: +341 Number, annualized: +34 Percent, total: +10.44%	3,608	Number, total: +1,606 Number, annualized: +50 Percent, total: +80.22%

	Population / Employment	1998	Change, 1998-2010 (12 years)	2010	Change, 2010-2020 (10 years)	2020	Change, 2020-2030 (10 years)	2030	Change, 1998 - 2030 (32 years)
FAZ 7320 (contains parts of Canyon Park RAC and Thrasher's Corner CAC west of SR 527)	Population	18,281	Number, total: +10,964 Number, annualized: +914 Percent, total: +60%	29,245	Number, total: +15,196 Number, annualized: +1,520 Percent, total: +17.8%	34,441	Number, total: +4,246 Number, annualized: +425 Percent, total: +12.33%	38,687	Number, total: +20,406 Number, annualized: +638 Percent, total: +111.62%
	Employment	5,092	Number, total: +1,111 Number, annualized: +93 Percent, total: +21.82%	6,203	Number, total: +1,023 Number, annualized: +102 Percent, total: +16.49%	7,226	Number, total: +1,062 Number, annualized: +106 Percent, total: +14.7%	8,288	Number, total: +3,196 Number, annualized: +100 Percent, total: +62.77%
7415 (contains parts of Canyon Park RAC and Thrasher's Corner CAC east of SR 527)	Population	6,593	Number, total: +4,635 Number, annualized: +386 Percent, total: +70.3%	11,228	Number, total: +2,513 Number, annualized: +251 Percent, total: +22.38%	13,741	Number, total: +1,595 Number, annualized: +160 Percent, total: +11.6%	15,336	Number, total: +8,743 Number, annualized: +273 Percent, total: +132.6%
	Employment	4,301	Number, total: +1,816 Number, annualized: +151 Percent, total: +42.2%	6,117	Number, total: +402 Number, annualized: +40 Percent, total: +6.57%	6,519	Number, total: -314 Number, annualized: -31 Percent, total: -4.8%	6,205	Number, total: +1,904 Number, annualized: +60 Percent, total: +44.27%

FAZ King County	Population / Employment	1998	Change, 1998-2010 (12 years)	2010	Change, 2010-2020 (10 years)	2020	Change, 2020-2030 (10 years)	2030	Change, 1998 - 2030 (32 years)
Snohomish County	Population	1,665,602		1,949,816		2,151,281		2,368,159	
	Employment	1,150,170		1,401,625		1,504,746		1,608,554	
Snohomish County	Population	567,227		757,337		878,579		982,317	
	Employment	219,353		264,108		294,653		324,345	

**Comparison of forecasted population and employment growth rates by FAZ and counties**

	FAZ	Percentage change, 1998-2010 (12 years)	Percentage change, 2010-2020 (10 years)	Percentage change, 2020-2030 (10 years)
Population	5600 (Downtown CAC North Creek RAC)	+15%	+8.8%	+5.76%
	7316 (Canyon Park CAC)	+36.16%	+4.94%	+4.94%
	7320 (Thrasher's Corner CAC Canyon Park RAC)	+60%	+17.8%	+12.33%
	7415 (Thrasher's Corner CAC Canyon Park RAC)	+70.3%	+22.38%	+11.6%
	King County	+17.1%	+10.3%	+10.1%
	Snohomish County	+33.5%	+16%	+11.8%

	FAZ	Percentage change, 1998-2010 (12 years)	Percentage change, 2010-2020 (10 years)	Percentage change, 2020-2030 (10 years)
Employment	5600 (Downtown CAC North Creek RAC)	+4.21%	+6.24%	+1.93%
	7316 (Canyon Park CAC)	+40.36%	+16.26%	+10.44%
	7320 (Thrasher's Corner CAC Canyon Park RAC)	+21.82%	+16.49%	+14.7%
	7415 (Thrasher's Corner CAC Canyon Park RAC)	+42.2%	+6.57%	-4.8%
	King County	+21.9%	+7.4%	+6.9%
	Snohomish County	+20.4%	+11.6%	+10.1%

## Part 4 - Projected population and employment growth for affected activity centers under existing policies and regulations

In this section the PSRC forecasts from Part 3 are reorganized and adjusted to relate to the affected activity centers rather than to FAZs. The base year has been set at 2001 to utilize population and employment estimates from Part 1 of this analysis. Activity center population and employment projections from this baseline into the future were derived by applying to each activity center baseline the PSRC growth rates for the FAZ containing that center, for the appropriate time period (with certain exceptions described under the Notes below). To interpolate for the 2001 baseline and the impact analysis years of 2007 and 2022 – that is, for years between PSRC forecast years – the applicable proportion of the total percentage change over the 12- or 10-year period was calculated. For example, if the 10-year growth between 2020 and 2030 was forecast to be 8 percent, the 2022 growth was calculated at two-tenths of 8 percent, or 1.6 percent, over the 2020 number. In applying these growth rates, two issues surfaced:

1. FAZ 5600 contains both the North Creek Regional Activity Center and the Downtown Community Activity Center: should the same growth rate apply to both? Lacking other indications to the contrary, staff elected to utilize the FAZ 5600 growth rates for both activity centers.
2. FAZs 7320 and 7415 each contain a part of the Canyon Park Regional Activity Center and the Thrasher's Corner Community Activity Center, but the growth rates are different between the two FAZs: what growth rates should be applied? Staff elected to use the FAZ 7320 growth rates for the Canyon Park Regional Activity Center population, since there is no residential zoning in the part of the Canyon Park RAC east of 527; and to average the FAZ 7320 and 7415 growth rates and use for both the Canyon Park Regional Activity Center and the Thrasher's Corner Community Activity Center employment. Residential development is currently not allowed at Thrasher's Corner, and thus is not projected.

The results are divided into two tables, one each for population and employment.

### Notes

1. The Thrasher's Corner Community Activity Center is zoned OP, CB; thus, residential uses are not allowed.
2. Under current allowed building heights, it is not likely that residences will be developed in the Canyon Park Community Activity Center for the foreseeable future. Moreover, the existing homes in the area are likely to be demolished to make way for commercial development.
3. No new residential development is expected in the Downtown Community Activity Center, as commercial development would be more profitable than residential construction at the current permitted densities and building heights. While existing multi-family development may remain, existing single family homes are likely to be replaced with office and/or retail development.
4. Although the zoning of the North Creek Valley floor (R15, OP, CB, LJ) allows residential uses, it is not anticipated that any residential development will result until substantially increased property values stimulate redevelopment in significantly taller buildings, as are currently allowed.
5. The southwest hillside of the North Creek Regional Activity Center was treated as a special case for projection of employment, since it is dominated in terms of geographic area by the presence of the UWB/CCC, and since buildout plans for the campus call for accommodation of 10,000 FTE students plus about 1,500 faculty and staff. For the purposes of this analysis, it is assumed that buildout enrollment is reached in 2030: employment (including enrollment) for the intermediary years was derived by interpolation, assuming a linear relationship. The additional 100 employees above 11,500 represent employment at the Franciscan Health Center and Beardslee Cove apartments, or future replacement uses.

**Projected population under existing policies and regulations**

Activity Center	2001 (existing)	2007 (traffic impact analysis year)	2010	2020	2022 (traffic impact analysis year)	2030	Estimated capacity (realistic probable intensity)
Thrasher's Corner Community Activity Center	0	0	0	0	0	0	0
Canyon Park Community Activity Center	15	0	0	0	0	0	0
Downtown Community Activity Center	208	208	208	208	208	208	208
Canyon Park Regional Activity Center	553	719	827	974	998	1,096	1,422
North Creek Regional Activity Center – valley floor	0	0	0	50	60	100	3,737
North Creek Regional Activity Center – part of east hillside	528	568	589	641	648	678	2,309
North Creek Regional Activity Center – southwest hillside	338	363	377	410	415	434	437
<b>Totals</b>	<b>1,642</b>	<b>1,858</b>	<b>2,001</b>	<b>2,283</b>	<b>2,329</b>	<b>2,516</b>	<b>8,113</b>

**Projected employment under existing policies and regulations**

Activity Center	2001 (existing)	2007 (traffic impact analysis year)	2010	2020	2022 (traffic impact analysis year)	2030	Estimated capacity (realistic probable intensity)
Thrasher's Corner Community Activity Center	307	356	384	428	432	449	1,085
Canyon Park Community Activity Center	984	1,182	1,301	1,513	1,544	1,672	2,214
Downtown Community Activity Center	1,981	2,023	2,044	2,172	2,180	2,213	2,507
Canyon Park Regional Activity Center	7,210	8,361	9,028	10,070	10,170	10,577	13,662
North Creek Regional Activity Center – valley floor	7,320	7,474	7,552	8,023	8,053	8,175	37,649
North Creek Regional Activity Center – part of east hillside	170	174	176	187	188	191	2,199
North Creek Regional Activity Center – southwest hillside (includes UWB/CCC students)	3,599	5,254	6,082	8,841	9,393	11,600	11,600
<b>Totals</b>	<b>21,571</b>	<b>24,824</b>	<b>26,567</b>	<b>31,234</b>	<b>31,960</b>	<b>34,877</b>	<b>70,916</b>

## Part 5 - Projected population and employment growth for affected activity centers under proposed amendments

This section begins with the following key question:

- Would increasing allowable building heights and removing the current residential density cap within the subject community and regional activity centers be likely to result in more population and employment growth in those centers than has been forecasted by PSRC?

One argument is that it would, since allowing more intensive residential and commercial uses would sufficiently increase the potential development profit on properties within the affected centers to entice property owners, developers and their lenders to develop or redevelop under the proposed amendments. This might be labeled the “zone it and they will come” argument.

However, a counter argument, based on regional demand, is that the proposed amendments would not significantly increase population or employment growth beyond that forecasted by the PSRC. This argument holds that since there are only so many people and jobs that can be supported by the regional economy at any one time, Bothell would continue to receive its proportional share of these regardless of any changes the City might make to its policies and regulations. Zoning changes by themselves do not ensure that development of a certain type or scale will occur right away: after all, there has been no height limit on the North Creek Valley floor since 1979, and there are no buildings taller than four stories at present. Moreover, other jurisdictions have pursued, are pursuing or are likely to pursue the same kinds of amendments as Bothell is considering, for the same reasons, thus negating any long-term competitive advantage Bothell might have in attracting residential and commercial development with the promise of greater densities or intensities.

Taking both arguments into consideration, for the purposes of this analysis staff has assumed that the building height and residential density Plan and Code amendments would result in somewhat higher population and employment growth rates than those forecasted by the PSRC. If one accepts the premise that there is a limit to the amount of added housing and commercial space that the regional economy can support every year, it is still logical to assume that there are opportunities afforded by the Plan and Code amendments would attract to Bothell some developers, and subsequently residents and businesses to occupy those developments, who might otherwise have located elsewhere within the region. At any rate, for an analysis such as this it is always better to overstate the impacts than to understate them.

This raises other questions:

- How much more population and employment growth would occur under the proposed amendments, and when would it occur?

Due to the extremely conjectural nature of this question, staff tested different techniques in an attempt to develop reasonable growth projections which weighed the increased opportunities created by the amendments against the recognition that Bothell is part of the regional economy and cannot grow in a grossly disproportionate manner to that economy. Staff also attempted to account for the fact that most of the area within the activity centers has already been developed – most of it within the last 10-15 years – and that significant future growth would thus need to come from redevelopment.

The approach which appeared to have the least drawbacks was to apply a percentage range of growth on top of the projections from Part 4 (those based on existing policies and regulations). Staff postulated growth scenarios under the proposed amendments of 10 and 20 percent over the PSRC-derived population and employment projections. The advantage of this approach is that it covers a spread of realistic possible futures within the confines of the regional economy. The

disadvantage, from a methodological approach, is that it “front-loads” the growth – that is to say, it forces a disproportionate amount of growth into the 2001-2007 increment.

Please note that alternative approaches had to be developed to project population in three particular areas, and to project employment in one particular area.

In the Canyon Park and Downtown Community Activity Centers, and in the North Creek Regional Activity Center – valley floor, residential uses are currently allowed but the existing permitted densities and, in the cases of Canyon Park and Downtown, existing building height regulations have rendered residential development much less profitable than commercial development. As a consequence, virtually no residential development has occurred in the past several years. Under these circumstances, applying a 10 or 20 percent multiplier to the small number of existing units would grossly underestimate the number of residential units likely to be constructed under amendments which would allow substantially taller buildings and permit as many units as could be built within the building envelope prescribed by the zoning code.

In these three areas, therefore, staff has attempted to conceptualize realistic development scenarios likely to occur under the proposed amendments. These scenarios were based in part on recent patterns of development in similar mixed use areas on Mercer Island and in Seattle, Kirkland and Redmond, and take into account differences in development or redevelopment potential among the three activity centers.

The other alternative approach was necessary to project employment in the North Creek Valley – southwest hillside. This area is dominated in terms of geographic area by the presence of the UW/CCC, where buildout plans for the campus call for accommodation of 10,000 FTE students plus about 1,500 faculty and staff. For the purposes of this analysis, it is assumed that buildout enrollment is reached in 2030: employment (including enrollment) for the intermediary years was derived by interpolation, assuming a linear relationship. The additional 100 employees above 11,500 represent employment at the Franciscan Health Center and Beardslee Cove apartments, or future replacement uses.

Following are tables containing the results of the above-described analysis.

**Projected population under proposed Plan and Code amendments**

Activity Center	2001 (existing)	2007 (traffic impact analysis year)	2010	2020	2022 (traffic impact analysis year)	2030	Estimated capacity (realistic probable intensity)
Thrasher's Corner Community Activity Center	0	0	0	0	0	0	0
Canyon Park Community Activity Center	15	0	0	200	240	400	1,342
Downtown Community Activity Center	208	328	388	588	628	788	1,520
Canyon Park Regional Activity Center	553	791 - 863	910 - 992	1,071 - 1,169	1,098 - 1,198	1,206 - 1,315	3,255
North Creek Regional Activity Center - valley floor	0	0	0	50	60	100	3,479
North Creek Regional Activity Center - part of east hillside	528	625 - 682	648 - 707	705 - 769	713 - 778	746 - 814	2,396
North Creek Regional Activity Center - southwest hillside	338	399 - 436	415 - 437 (capacity)	437	437	437	437
<b>Totals</b>	<b>1,642</b>	<b>2,143 - 2,309</b>	<b>2,361 - 2,524</b>	<b>3,051 - 3,213</b>	<b>3,176 - 3,341</b>	<b>3,677 - 3,854</b>	<b>12,429</b>

**Projected employment under proposed Plan and Code amendments**

Activity Center	2001 (existing)	2007 (traffic impact analysis year)	2010	2020	2022 (traffic impact analysis year)	2030	Estimated capacity (realistic probable intensity)
Thrasher's Corner Community Activity Center	307	392 - 427	422 - 461	471 - 514	475 - 518	494 - 539	2,084
Canyon Park Community Activity Center	984	1,300 - 1,418	1,431 - 1,561	1,664 - 1,816	1,698 - 1,853	1,839 - 2,006	2,337
Downtown Community Activity Center	1,981	2,225 - 2,428	2,248 - 2,453	2,389 - 2,606	2,398 - 2,616	2,434 - 2,646 (capacity)	2,646
Canyon Park Regional Activity Center	7,210	9,197 - 10,033	9,931 - 10,834	11,077 - 12,084	11,187 - 12,204	11,635 - 12,692	32,796
North Creek Regional Activity Center - valley floor	7,320	8,221 - 8,969	8,307 - 9,062	8,825 - 9,628	8,858 - 9,664	8,993 - 9,810	35,058
North Creek Regional Activity Center - Part of east hillside	170	187 - 209	194 - 211	206 - 224	207 - 226	210 - 229	3,423
North Creek Regional Activity Center - southwest hillside	3,599	5,254	6,082	8,841	9,393	11,600 (capacity)	11,600
<b>Totals</b>	<b>21,571</b>	<b>26,776 - 28,738</b>	<b>28,615 - 30,664</b>	<b>33,473 - 35,713</b>	<b>34,216 - 36,474</b>	<b>37,205 - 39,522</b>	<b>87,298</b>

**Comparison of projected total population in affected activity centers - existing policies and regulations v. proposed amendments**

Population	2001 (existing)	2007 (traffic impact analysis year)	2010	2020	2022 (traffic impact analysis year)	2030	Estimated capacity (realistic probable intensity)
Existing policies and regulations	1,642	1,858	2,001	2,283	2,329	2,516	8,113
Proposed amendments	1,642	2,143 - 2,309	2,361 - 2,524	3,051 - 3,213	3,176 - 3,341	3,677 - 3,854	12,429

**Comparison of projected total employment in affected activity centers - existing policies and regulations v. proposed amendments**

Employment	2001 (existing)	2007 (traffic impact analysis year)	2010	2020	2022 (traffic impact analysis year)	2030	Estimated capacity (realistic probable intensity)
Existing policies and regulations	21,571	24,824	26,567	31,234	31,960	34,877	70,916
Proposed amendments	21,571	26,776 - 28,738	28,615 - 30,664	33,473 - 35,713	34,216 - 36,474	37,205 - 39,522	87,298

In a second approach to projecting employment (and as a check on the plausibility of the 10- and 20-percent approach), staff performed a "constant-share" analysis. Under this methodology, the City's share of regional growth from a selected historical period (in this case, 1970-1998, using PSRC numbers) is applied to a future period - creating a scenario in which the City would maintain a constant share of regional growth into the future. The advantage of this approach is that it is a way of reflecting added capacity for development, as the proposed amendments would provide. The disadvantage is that the projected share of regional growth may be unrealistically high if the selected historical period is a time when an area grew from essentially nothing to almost fully developed, as has occurred in Bothell over the time period utilized. In such a case, the extent of fairly recent construction limits development and redevelopment potential to far less than existed when all the land in the area was vacant.

Please note that the constant share analysis was performed using PSRC FAZ numbers, since the historical data was only available by FAZs. The important results from this analysis are not the total number of employees, but the percentage changes between 1998 and 2020 for the two different sources of growth rates (PSRC forecasts and the 1970-98 constant share). These percentages can then be applied to the total population of the affected activity centers to compare against the results of the 10-20 percent growth approach above.

**Comparison of projected total employment growth – PSRC forecasts v. 1970-98 constant share**

Source of growth rates	1998 employment	2020 projected employment	22-year growth (number of jobs)	22-year growth (percentage change)
PSRC forecasts	22,207	28,982	6,775	30.5%
Four FAZs' share of King and Snohomish County growth from 1970 – 1998 (constant share projected into future)	22,207	32,723	10,516	47.4%

The above analysis found that 1998-2020 PSRC forecasted employment growth in the four FAZs combined totaled 30.5 percent over the 22 years. When the four FAZs' share of 1970-98 growth was projected into the future, the 1998-2020 growth totaled 47.4 percent. When these numbers were interpolated to the 19-year timespan from 2001 to 2020, they amounted to about 26 percent and about 41 percent, respectively.

The 2001 – 2020 employment growth projected for the affected activity centers under existing policies and regulations, not counting the North Creek Valley southwest hillside since it is a special case, totals 24.6 percent. The projected 2001 – 2020 employment growth in these areas under the proposed amendments (with the above exemption again), assuming 20 percent more employment than in the PSRC projections, totals 49.5 percent

The constant share analysis supports the findings of the 10-20 percent growth range analysis. In fact, the high end of the 10-20 percent range projects more employment growth under the proposed amendments than does the constant-share methodology. For the impact analysis, therefore, the higher growth number will be used.

## **Part 6 -- Conclusions**

Regardless of whether or not the proposed amendments are approved, substantial population and employment growth is projected to occur in each of the affected activity centers over the next 30 years. The analysis indicates that this growth can be accommodated under existing policies and regulations, although some areas are at or nearing capacity by 2030. Approval of the amendments would slightly decrease population and employment capacity on the North Creek Valley floor but would increase capacity in all other areas of the activity centers. The amendments would very likely result in an increase in actual population and employment beyond current growth projections, but the amount of growth in the affected activity centers would be constrained by the limitations on growth within the regional economy.

The results of this analysis will be forwarded to consultants hired by the City to analyze likely impacts of the proposed amendments.

# Comparison of employment and population capacities in Canyon Park and North Creek regional activity centers, and all centers combined, under current allowed heights, 150 feet and 100 feet

Effect of 100 foot height limit, as compared to existing height limits and 150-foot height limit proposal, within the Canyon Park and North Creek (valley floor) regional activity centers

Regional Activity Center	Total estimated building area, in sq. ft. (realistic probable scenario)				Total estimated employment capacity, in number of employees			Total estimated population capacity, in number of residents		
	At 48 ft. max. ht. (existing CP regs)	At 150 ft. max ht. (original proposal)	At 100 ft. max ht. (revised per Council)	At 48 ft. max. ht. (existing CP regs)	At unlimited ht. (existing NC regs)	At 150 ft. max ht. (original proposal)	At 100 ft. max ht. (revised per Council)	At unlimited ht. (existing NC regs)	At 150 ft. max ht. (original proposal)	At 100 ft. max ht. (revised per Council)
	At unlimited ht. (existing NC regs)	At 150 ft. max ht. (original proposal)	At 100 ft. max ht. (revised per Council)	At 48 ft. max. ht. (existing CP regs)	At unlimited ht. (existing NC regs)	At 150 ft. max ht. (original proposal)	At 100 ft. max ht. (revised per Council)	At unlimited ht. (existing NC regs)	At 150 ft. max ht. (original proposal)	At 100 ft. max ht. (revised per Council)
Canyon Park	7,111,704	16,275,540	10,904,612	13,662	NA	32,796	21,973	NA	3,255	2,181
North Creek (valley floor only)	NA	17,397,646	11,656,423	NA	37,649	35,058	23,489	NA	3,479	2,331
<b>Total</b>	<b>25,795,263</b>	<b>33,673,186</b>	<b>22,561,035</b>	<b>51,311</b>	<b>51,311</b>	<b>67,854</b>	<b>45,462</b>	<b>5,159</b>	<b>6,734</b>	<b>4,512</b>

Within the Canyon Park and North Creek (valley floor) regional activity centers, establishing a 100-foot height limit would result in;

- 33 percent less employment and population capacity than under a 150 foot height limit;
- 11.4 percent less employment capacity than under the existing regulations; and
- 12.5 percent less population capacity than under the existing regulations

Overall effect of 100 foot height limit, as compared to existing height limits and 150-foot height limit proposal, on all activity centers combined

All activity centers	Total estimated employment capacity, in number of employees			Total estimated population capacity, in number of residents	
	Under existing regulations	At 150 ft. max. ht. in CP and NC RACs (original proposal)	At 100 ft. max. ht. in CP and NC RACs (revised per Council)	At 150 ft. max. ht. in CP and NC RACs (original proposal)	At 100 ft. max. ht. in CP and NC RACs (revised per Council)
	70,916	87,298	64,906	8,113	10,207
				12,429	

For all the activity centers combined, establishing a height limit of 100 feet in the Canyon Park and North Creek regional activity centers would result in;

- 25.6 percent less employment capacity than under a 150-foot height limit in the RACs;
- 17.9 percent less population capacity than under a 150-foot height limit in the RACs;
- 8.5 percent less employment capacity than under the existing regulations; and
- 25.8 percent more population capacity than under the existing regulations.

Exh #: 020402-1

## COMMENTS CONCERNING:

### 2001 Selected Amendments to the *Imagine Bothell...* Comprehensive Plan and Bothell Municipal Code

An integrated SEPA/GMA document  
Publication Date November 8, 2001

Prepared By:  
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9917 NE 190<sup>th</sup> Street  
Bothell, WA 98011  
425-867-4271 (Wk)  
425-402-3043 (Hm)

December 6, 2001

**Exhibit 6**

9917 NE 190<sup>th</sup> Street  
Bothell, WA 98011  
December 6, 2001

Britt La Zelle  
Associate Planner  
Bothell Community Planning Division  
9654 NE 182<sup>nd</sup> Street  
Bothell, WA 98011

Britt,

Enclosed are my written comments in response to the issuance of the DEIS document. In essence, these comments are identical to my City Council testimony of 3 December 2001 (as represented in the submitted written testimony) with the following exceptions:

- I have removed the cover letter that was addressed to the City Council since my more caustic remarks contained therein were directed toward City Council and NOT toward the City Staff.
- I have made a couple of editorial changes

The comments that follow are my personal views as a citizen although it should be noted that I am also a member of Bothell's Landmark Preservation Board. As a general observation, I have limited my comments to CPA-2001-5 and (in reality) almost exclusively to the affects of CPA-2001-5 as it affects the Downtown subarea and surrounding community.

In general, I applaud the work that has been done by City Staff given the short timeline that was available. Many of my comments center around my impression that there was too short of a timeline allocated to this complicated issue. In the rush to meet deadlines, it appears that the quality of the product has suffered.

As a final note, there was some confusion on my part regarding what sections of this document should and should not be covered by the legally required SEPA comment period. Throughout the SEPA Environmental Analysis, continued reference is made to the GMA Policy Analysis as well as Proposed Plan and Code amendments. As such, I believe that the various sections have become "co-mingled" and any comment/ review process legally required for the SEPA Environmental Analysis must also be required for the other sections of this combined study & report.

Lastly, feel free to call me [425-867-4271 (wk) or 425-402-3043 (hm) ] if you have any questions. I can also make this package available to you in electronic form if it would be more convenient.

Sincerely,



Eric T. Hoierman

## **GMA Policy Analysis (Section III / CPA-2001-5)**

**Proposed Finding 1 (CONCERN)** – The City Council has repeatedly taken action to incrementally increase the scope of CPA-2001-5. At exactly the same time, a fast-track review timeline has been adopted that has prevented pertinent review/input of this expanded scope from other key participants such as the Planning Commission and Landmark Preservation Board. (See Proposed Finding 26).

**Proposed Finding 4 (comment)** – Approve of granting a greater role for the Landmark Board in formal review/comment of development proposals within CBSD.

**Proposed Finding 4 (CONCERN)** – During Landmark Board and City Council public hearings, there was animated discussion concerning special rules/exemptions/variances that could allow flexibility in accommodating the Performing Arts Center without having to create a “blanket” building height across the entire subarea/zone. Much of the public comment concerning building height in the Downtown area was focused on wanting an increase in building height so as to allow the Performing Arts Center to be situated downtown. Now, the draft amendments for the Downtown area WOULD create a specific exception/ expansion for the Performing Arts Center – exactly what Staff had indicated was not possible. I’m not sure that public comment would have been as favorable for an increase in Downtown building heights had they known that the Performing Arts Center could have it’s own height regulations anyway.

**Proposed Finding 15 (CONCERN)** – Per the SEPA Analysis (Archaeology and History) there are 40 structures within the Downtown Community Activity Center (CAC) that are listed in the Historic Inventory, with 13 being located within the narrow confines of Main Street. I agree that important steps are being taken to help preserve the history, integrity, and character of the Downtown area. Unfortunately, the greatest protections are only afforded to a relatively small number of structures (33%).

**Proposed Finding 22 (CONCERN)** – As noted previously, the Council EXPANDED the scope of CPA-2001-5 to include the Downtown CAC and repeal of residential density limits. The Planning Commission did not have an opportunity to deliberate on these amendments.

**Proposed Finding 26 (CONCERN)** – As noted previously, the Council EXPANDED the scope of CPA-2001-5 after review & public comments were already gathered. Specific instances are the inclusion of the Downtown CAC (not reviewed by Planning Commission) and the repeal of residential density limits (not reviewed by either Planning Commission or Landmark Board). This represents an erosion of the nominal checks and balances inherent in a broad-based review process.

**Staff Recommendation (comment)** – I believe that the proposed building height/density amendments for the Downtown area are too immature and should NOT be considered at this time. Any approach to building height/density changes should be done on an

**INCREMENTAL** basis in order to properly gauge the cost to infrastructure and net benefit.

### **Proposed Plan Amendments (Section III / CPA-2001-5 / Exhibit 1)**

**Downtown/190<sup>th</sup>/Riverfront Subarea – Land Use Policy 3 (CONCERN)** – The stated desire embodied by this policy has been to provide a transition from the higher density/higher traffic/commercialized Main Street and Downtown area in to the single-family, low-density multi-family environment of Maywood/Beckstrom Hill. With the proposed Downtown CAC boundary, this transition has been effectively eliminated and **THERE WOULD BE NO** transition from a high-density, 65-foot, non-setback downtown to a low-density, 1-2 story residential neighborhood.

**Downtown/190<sup>th</sup>/Riverfront Subarea – Land Use Policy 7 (CONCERN)** – The wholesale removal of the paragraph describing siting of a public services campus is neither a housekeeping action nor a direct result of building heights/density. Rather, it is in direct contradiction to the stated choice of the 1992 citizens advisory committee. A simple stroke of the pen eliminates the work of this Citizen's Panel and no one will need to try and explain or reconcile the contradictions. If the City wishes to over-ride the original citizens committee decision (which with recent actions appears to be the case), it should do so as a part of a thoroughly reviewed Comp Plan update (i.e. through the Planning Commission, etc.).

## **Proposed Code Amendments (Section III / CPA-2001-5 / Exhibit 2)**

**Downtown/NE190<sup>th</sup>/Riverfront Subarea Regulations – 12.64.015A (comment) –**  
Approve of language the ties increases in building height to in-building parking and at-grade retail.

**Downtown/NE190<sup>th</sup>/Riverfront Subarea Regulations – 12.64.015B (comment) –**  
Approve of language that grants special exceptions to Performing Arts Center...however, this was originally presented by Staff as not feasible and throws in to question the various public hearings that were previously held (See similar concern in GMA Policy Analysis, Proposed Finding 4).

**Downtown/NE190<sup>th</sup>/Riverfront Subarea Regulations – 12.64.015C (CONCERN) –**  
Unlike many of the other Regional/Community Activity Centers being considered, the proposed Downtown CAC boundary is virtually surrounded by mixed-use RESIDENTIAL/OP/CB properties – exactly the kind of mixed use that the Council is advocating (albeit at a lower density). Yet it is exactly these areas that are denied transitional setbacks and landscape buffering since they are exempted from the proposed language. It seems that the operating assumption is that any mixed-use properties will build-out to be 35 foot, commercial or professional office buildings although this is NOT the intent of mixed-use zoning.

**Downtown/NE190<sup>th</sup>/Riverfront Subarea Regulations – 12.64.015D (CONCERN) –**  
There is no attempt to preserve the historic scale of the main entryways to our downtown area. Unfortunately, setbacks within the Main Street Action Area will look out-of-scale unless structures along 522 and 527 have similar setbacks/buffering. The result may well be a “canyon” along the length of 527.

**Downtown/NE190<sup>th</sup>/Riverfront Subarea Regulations – 12.64.020 (CONCERN) –** The designation of the CBSD was specifically designed to “encourage and facilitate a healthy and rejuvenated downtown area”...exactly the stated purpose of the proposed Downtown Community Activity Center. Yet these two entities have different boundaries and overlapping/non-consistent regulations. This apparent duplicative/conflicting language should be reconciled BEFORE proceeding further.

### **Employment and Population Capacities (Section III / CPA-2001-5 / Exhibit 3)**

**Downtown CAC Estimated Population Capacity (CONCERN)** – It was interesting to note that the baseline estimated population for the Downtown CAC was assumed to be 0. While this may simplify the study, it seems questionable to use such a number. The current Downtown Subarea contains numerous R-15/OP properties within the boundaries of the proposed Downtown CAC. My personal knowledge of the families and live-in business owners that live in the affected areas appears to indicate that this population has been MARGINALIZED (read...counted for nothing). Since the entire intent of the Downtown CAC is to increase the inter-mixing of residence and business, it is of great concern to me that those who are already doing just this have been declared non-existent for the purposes of this study.

## **SEPA Environmental Analysis (Section IV)**

**Environmental Summary (comment)** – Throughout the SEPA Environmental Analysis, continued reference is made to GMA Policy Analysis as well as Proposed Plan and Code amendments. As such, I believe that the various sections have become “co-mingled” and any comment/review process legally required for the SEPA Environmental Analysis must also be required for the other sections of this combined study & report.

**Cumulative environmental impacts (CONCERN)** – As stated, a Comprehensive Plan Amendment is a “non-project proposal” and is thus exempt from the detailed analysis requirements that would be required of a site-specific development. I am a bit surprised, however, that the more detailed Code amendments that are affecting SPECIFIC sub-areas in a SPECIFIC manner are equally exempt. Conversely, a wholesale removal of the proposed code amendments would (I believe) leave many of the mitigation strategies unaddressed.

**Cumulative environmental impacts (CONCERN)** – The analysis continues to invoke the “Last One In Is A Rotten Egg” approach to SEPA mitigation... where impacts are specifically accounted for on a project-by-project basis and later development proposals may have to mitigate the cumulative impacts of what has proceeded. The City should recognize that the proposed changes will have a sweeping impact and time should be taken to fully assess the impact (not the 4-8 weeks that were taken).

## **SEPA Environmental Analysis of CPA-2001-5 (Section IV / CPA-2001-5)**

**Elements of the Natural Environment (CONCERN)** – The study correctly assumes that improvements to public facilities may be necessitated in order to support the increased level of development. Throughout this entire study there appears to be no analysis of whether the increase in tax revenue through increased retail & densities would be totally offset by the increased spending required to increase infrastructure.

**Elements of the Human Environment – Land Use (CONCERN)** – A repeated theme promoting increases in building height/density increases for the Downtown subarea is that the City needs to have a greater reliance on continuous revenue production such as sales tax versus one-time revenue production associated with residential & commercial development. The Employment Capacity table shown indicates that all of the proposed increases in building height/density only result in a net increase of 6% in the Downtown CAC. This seems to imply only a modest increase in retail in the Downtown area, and I would anticipate a corresponding increase in sales tax revenue. No study has been done to validate the economics although this is one of the cornerstones of the proposed changes.

**Elements of the Human Environment – Population and Housing (CONCERN)** – As I have already discussed (see Downtown CAC Estimated Population Capacity), the study makes a gross generalization about current & yr 2020 population (No Action) that implies that population in the proposed Downtown area (as well as others) is 0. The current Downtown Subarea contains numerous R-15/OP properties within the boundaries of the proposed Downtown CAC. This study seems to say that “people living in mixed R-x/OP/CB zoning are not worth counting. Since the entire intent of the Downtown CAC is to increase the inter-mixing of residence and business, it is of great concern to me that those who are already doing just this have been declared non-existent for the purposes of this study. On the surface, it appears that the City is not mature enough to account for residential/commercial mixed use scenarios so I would question that idea that the City is mature enough to make this wide-sweeping of a decision based upon this limited study.

**Elements of the Human Environment – Transportation (CONCERN)** – The study, in essence, states that one way to reduce “adverse traffic impacts” is to change the rules by which impacts are measured. The study should clearly state that this does NOT reduce adverse traffic impacts; it simply reduces the way to MEASURE adverse traffic impacts.

**Elements of the Human Environment – Archaeology and History (CONCERN)** – As previously stated (see GMA Policy Analysis Proposed Finding 15), the proposed Plan and Code changes will provide the greatest protections to only a limited number of structures presently on the Historic Resources Inventory.

**IV.**  
**SEPA Environmental**  
**Analysis**

*Revised*

## **IV. SEPA Environmental Analysis (revised)**

### **Environmental Summary (SEPA requirement for integrated GMA documents, WAC 197-11-235)**

#### **Threshold Determination**

In accordance with SEPA Rules, environmental review was performed on all five of the potential amendments.

In its environmental review, for which a threshold determination was issued effective October 11, 2001, the City concluded the following:

1. The impacts of the potential amendments were significant and warranted preparation of an Environmental Impact Statement (EIS), the draft of which is incorporated in this document.

Under SEPA Rules, a comprehensive plan or code amendment is a “non-project proposal”, as opposed to a project proposal such as a site-specific development. As provided in the Rules, agencies have more flexibility in preparing EISs on non-project proposals because there is normally less detailed information available on their environmental impacts.

The Rules further require that an EIS for a proposed comprehensive plan or development regulations shall be limited to a general discussion of the impacts of alternative proposals for policies, map designations and implementing measures. The City is not required to examine all conceivable policies, designations or implementation measures, according to the Rules, “but should cover a range of such topics.” This Draft EIS (DEIS) complies with the above-referenced Rules.

#### **Alternatives Considered**

For each of the five potential amendments a wide range of possible actions exists. The Council may adopt no amendment to the Plan, the amendment as originally requested, or an amendment of lesser intensity than requested. In order to ensure that the environmental impact analysis addresses the full range of realistic possibilities, while maintaining a reasonable document size in accordance with SEPA Rules, this DEIS describes two alternatives for each of CPA-2001-2, -3, -4, -5 and -6:

1. *Proposed Amendment Alternative.* This alternative represents the Plan and/or Code amendment as requested. The analyses of CPA-2001-5 and CPA-2001-6 have been revised to reflect the changes in those proposed amendments since issuance of the original integrated document.

2. *No Action Alternative*, meaning no change in the current Plan or Code language or map designation.

### **Cumulative environmental impacts**

Cumulative environmental impacts may be created if more than one of the potential amendments is adopted. This is a non-project proposal and cumulative impacts on each element of the natural and human environment are described using data available at this time.

Grading plans, precise building areas, architectural features and locations are not known at this time. Impervious surface areas, slopes requiring stabilization, the area of each parcel that can be developed and other features that would permit a detailed analysis of impacts would be available when a project has been designed. Impact analysis will be completed for each project as a part of the development process and specific mitigation requirements, if required, will be described at that time.

This document also considers cumulative impacts within the transportation analysis contained in Appendix A, and water and sewer analysis contained in Appendix B.

Known cumulative environmental impacts are discussed below.

- Earth. Several of the amendments being considered may cause a significant amount of the area topography to be altered and specific projects may impact the earth related resources of the City. For example, proposed building height and residential density amendments within the Regional Activity Centers and Community Activity Centers would likely result in more retail, office and residential development over time than would occur under existing regulations (except within the North Creek valley floor, where the allowable building height would be decreased). In those activity centers where allowable height would be increased, it is anticipated that a redevelopment incentive would be created which in time would result in some existing one-story retail shopping centers being razed and redeveloped as multi-story complexes. Increased building size would require more parking than is presently provided within these Activity Centers and proposed code amendments would require taller buildings to provide structured parking to keep the area compact and walkable.

Improvement of the transportation system will be necessary to accommodate future development under the existing regulations or the proposed amendments. Insofar as the amendments would increase population and employment capacities in all affected areas except the North Creek valley floor, needed transportation improvements in these areas would likely be more extensive under the proposed

amendments than under existing regulations, although this would be dependent on the rate at which properties redevelop to take advantage of the greater development potential. Based on the assumption that the amendments would stimulate moderately faster growth than would occur under the existing regulations, a transportation analysis indicated that the amendments by 2007 would require improvements to three more intersections than would need to be improved under existing regulations.

Under both existing regulations and the proposed amendments, improvements to transportation facilities may encounter significant constraints near critical areas, which would be studied and mitigated in accordance with critical areas regulations at the time of specific development project application. Such transportation improvement-related impacts to critical areas may be slightly greater under the proposed amendments than under existing regulations.

Allowing office and multi-family development on certain properties within the North Creek Valley Subarea with slopes in excess of 15 percent might or might not result in greater areas of land with slopes being altered than would occur were the area to develop with single family residences (R 2-5). If primarily surface parking were to be constructed for such office and multi-family development, this would likely be the case. However, if parking were provided primarily under the buildings or in separate structures, the amount of land disturbed for such developments could be comparable to or less than that disturbed for single family development.

Development of surface water management systems would likely be required to avoid destabilizing the soils with runoff seepage. Depending on the intensity of development in the steep slope and landslide hazard areas, extensive engineering could be required to stabilize the lands. Critical areas regulations would provide the primary protection of any hazardous slopes or critical areas.

Within the Canyon Park Subarea, the potential designation of one acre of undeveloped land containing a possible Class II stream and heavy tree growth from R 6-10 (single-family) to R 11-15 (multi-family) could result in a greater amount of area being altered to allow for multi-family development than would be allowed under the R 6-10 designation.

Wetland area may or may not be reduced in the City depending on the degree to which enhancement is utilized in lieu of creation or restoration to mitigate impacts to Category 2 or 3 wetlands. No net loss of acreage would be allowed in Category 1 wetlands. In any case, the overall function and values of wetlands and their systems are expected to improve since the amendments would update the Code to

incorporate the latest Department of Ecology replacement ratios and would clarify the meaning of several wetland mitigation regulations.

- Population. The proposed building height and residential density amendments may over time significantly increase the number of people residing in the Canyon Park Community and Regional Activity Centers, and in the Downtown Community Activity Center, beyond what might occur under existing regulations. Population within the valley floor of the North Creek Regional Activity Center would be less under the proposed amendments than under existing regulations, as the allowable building height would decrease from unlimited to 100 feet. Overall, the amendments would increase population capacity within the combined activity centers by 25.8 percent over that attainable under existing regulations (10,207 v. 8,113).

Any localized increases in residential population – under existing regulations or the proposed amendments – would likely result in increased demand for public services such as emergency medical aid and law enforcement.

- Transportation. The proposed amendments would result in an 8.5 percent decrease in employment capacity (70,916 down to 64,906) and a 25.8 percent increase in population capacity (8,113 up to 10,207), as compared to existing regulations. In the short term, however, the increase in development potential created in all but one of the activity centers under the proposed amendments is assumed to generate moderately faster population and employment growth than under existing regulations, and thus moderately more traffic.

Under either the existing regulations or the proposed amendments, improvements to the transportation system would be necessary. A traffic analysis indicated that under the existing regulations, five intersections would require improvements by 2007 to maintain the City's adopted level of service (LOS): under the proposed regulations, these five intersections and an additional three intersections would require improvements by that time to maintain LOS.

Mitigating improvements would need to be incorporated in the City's Six Year Transportation Improvement Plan.

- Employment. The amendments would increase employment capacity in some areas and reduce it in others. Overall, the amendments would reduce the total employment capacity within all affected activity centers combined approximately 8.5 percent below that attainable under current regulations (64,906 v. 70,916). However, the capacity under the amendments would still be sufficient to accommodate several decades of employment growth, at historic growth rates.

Any localized increases in employment population – under existing regulations or the proposed amendments – would result in increased demand for public services such as emergency medical aid and law enforcement.

- Fire and Emergency Services. The proposed building height and residential density amendments may significantly increase the number of people residing in the Canyon Park Community and Regional Activity Centers, and in the Downtown Community Activity Center. As a result, demand for public safety services in these areas is likely to increase. The balance of the proposals are not expected to significantly affect the demand for fire and emergency services beyond the facilities that would be required under the No Action Alternative.
- Parks, Recreation and Schools. At buildout capacity, the proposed amendments could result in an increase of approximately 2,100 people residing in Bothell over the No Action Alternative, with the new population concentrated primarily within the Canyon Park Regional Activity Center, Canyon Park Community Activity Center, Downtown Community Activity Center and the East hillside portion of the North Creek Regional Activity Center. As a result, the demand for recreation and school facilities serving those areas may increase, although the types of housing which would be constructed within the activity centers are not likely to attract many families with children. The balance of the proposals is not expected to significantly affect the demand for recreation facilities, school facilities and educational services.
- Light and Glare. Under either the existing regulations or the proposed amendments, additional light and glare will result from future development, in the form of vehicle headlights, reflected sunlight off buildings, and building lighting at night. Light and glare impacts are likely to be greater under the proposed amendments than under existing regulations in and around those areas where the allowable building height would be increased. Extending the Motor Vehicle Sales Overlay to include an approximate one-acre property in the southern portion of the North Creek Valley Subarea could result in increased light and glare generated from auto dealerships if dealers utilize high-intensity external lighting to attract customers and to illuminate vehicles in the evening. It should be noted, however, that the Motor Vehicle Sales Overlay regulations have been structured to minimize light and glare impacts from vehicle sales lots. The balance of the proposals are not expected to significantly affect light and glare as compared to currently allowed development in the affected areas.
- Stormwater Drainage. The amount of overall runoff is not expected to significantly increase in the Activity Centers as a result of the proposed amendments. While development activity is expected to increase within the Canyon Park and North Creek Regional Activity Centers, both may experience a

decrease in impervious surface area because development and redevelopment could occur in more compact patterns with fewer, taller buildings replacing the present large, low-rise (up to four story) office buildings and associated surface parking lots.

The proposed allowance of multi-family and office development on sloped properties within the East Hillside area of the North Creek Regional Activity Center may or may not increase the amount of surface water runoff over the area than if it were to develop with single-family residences at an allowed density of R 2-5 as presently designated. If parking is provided under buildings or in separate parking structures rather than at-grade, surface runoff could be comparable to that generated by a single family subdivision.

Under either the existing regulations or the proposed amendments, runoff from additional impervious surfaces is required to be treated, but most of this runoff will eventually be drained to the existing watersheds, creating impacts and requiring mitigation measures along the way. The balance of the proposals are not expected to significantly affect the amount of runoff as compared to currently allowed land uses.

Water impacts created by specific projects would be analyzed at the time of development and adverse impacts may have to be mitigated. Adverse impacts would be mitigated in accordance with the requirements of Bothell critical areas regulations, Design and Construction Standards and Specifications, and the Bothell Comprehensive Stormwater Master Plan, which adopts the King County Surface Water Design Manual requirements and standards for the design of surface and storm water management systems and addresses water quantity and quality issues.

The DEIS includes a general discussion of environmental impacts that are anticipated to occur if the affected areas develop as the potential amendments allow. Proponents of specific development projects that might occur as a result of adoption of the proposed amendments will be required to identify and analyze any project-related environmental impacts when applying for permits and other project approvals.

## **B. Environmental Analysis of Individual Potential Amendments**

The analysis of alternatives was conducted for each proposal as a non-project action in accordance with the requirements of the Washington State Environmental Policy Act (SEPA) of 1971, as amended. This analysis identifies aspects of the natural and human environment that may be impacted by the land use revisions being considered for the 2000-2001 potential amendments of the *Imagine Bothell... Comprehensive Plan*. Only the analyses of proposed amendments CPA-2001-5 and CPA-2001-6 are included in this revision and re-issuance of the integrated SEPA/GMA document.

Quantifiable impact analyses were conducted for transportation impacts and for impacts to water and wastewater utilities in the City as a result of the proposed Plan and Code amendments. Environmental threshold determinations will be made and implementing agencies and developers will conduct analyses of expected environmental impacts during the project review and permitting process for each individual project.

### **Alternatives Considered**

Two alternatives were analyzed for each proposal: the No Action Alternative and the Proposed Amendment Alternative.

- No Action Alternative

The Washington Administrative Code requires that a no action alternative be considered within the environmental review process. Under the no action alternative the Comprehensive Plan and Development Code would not be amended as described in each proposal and analyses would not change from those described in the Comprehensive Plan FEIS for the original Comprehensive Plan, the FSEIS for the 1996 Comprehensive Plan update and the FSEIS for the 1999-2000 Comprehensive Plan Amendments. Under this alternative the existing Comprehensive Plan designations and zoning would be maintained. The No Action alternative is a viable option. The existing Comprehensive Plan and development regulations, and population and employment projections are generally consistent and compliant with the Growth Management Act (GMA) and both King and Snohomish County countywide planning policies. Development proposals not exempt under SEPA would continue to be reviewed for environmental impacts on a case-by-case basis.

- Proposed Amendment Alternative

The Proposed Amendment alternative comprises the proposed Plan and Code amendments, including the revisions to CP-2001-5 (building height) requested by the City Council and the revisions to CP-2001-6 (wetland mitigation) prompted by review of

a new study of wetland mitigation projects. The likely environmental impacts of these amendments are analyzed in this document. This alternative would increase development potential in some areas and reduce it in others. Overall, it would likely result in more intensive development across the City, and consequently more environmental impacts, than would occur under the No Action alternative.

### Summary Matrix – Individual environmental impacts

The following table is a summary of the anticipated impacts of the Proposed Amendment Alternative.

Proposed Amendment	Purpose	Significant Impacts
<i>Potential amendments with anticipated significant impacts resulting from Proposed Action alternative evaluated in this document</i>		
<p><b>CPA-2001-2. Area east of 120<sup>th</sup> and 39<sup>th</sup>.</b> Eliminate the prohibition of office and multi-family residential uses on slopes greater than 15% on certain properties within the North Creek Valley Subarea of the <i>Imagine Bothell...</i> Comprehensive Plan; re-designate from R 2-5, R 11-15, OP to R 11-15, OP; rezone from R 4, R 15, OP to R 15, OP.</p>	<p>Increase the amount of land available for offices and multi-family residential uses on affected lands. Allow the critical areas regulations to control development on slopes as it does on all other areas and plan designations within the City.</p>	<p>Allowing offices and multi-family residential uses on non-critical slopes over 15% would likely increase the number of employees and residents on the subject properties and thus vehicle trips would increase. Due to the proximity to established office parks, it is likely that the area will develop as office buildings. The amount of impervious surface and runoff from the area may or may not be greater than that which would occur under residential development, depending on whether parking is at grade or structured.</p>
<p><b>CPA-2001-3. Gibson.</b> Amend the Canyon Park Subarea Land Use Policy 11 and the Plan map to re-designate a single subject property from R 6-10 to R 11-15. Amend the zoning designation on the subject property from R 8d to R 15. The subject property is located approximately 380 feet south of 228<sup>th</sup> St SE and west of 19<sup>th</sup> Ave SE and is approximately one acre in size.</p>	<p>Increase the marketability of the land and income per unit of land area. Match the designation of property immediately to the north of the subject property and under the same ownership.</p>	<p>Increasing the density to allow multi-family development at up to 15 dwelling units per acre could increase the number of vehicle trips to and from the area, increase impervious surface area and amount of runoff. Public services and park needs could be increased.</p>

Proposed Amendment	Purpose	Significant Impacts
<p><b>CPA-2001-4. MVSO.</b> Extend the Motor Vehicle Sales Overlay (MVSO) to include the R 11-15, OP, CB designated property located at 12542 NE 180<sup>th</sup> St.</p>	<p>Increase opportunities for automobile dealerships to locate in Bothell and increase the marketability and development potential for affected properties; enhance potential revenue generation for City services and facilities such as parks. Correct an oversight when the boundary of the MVSO area was erroneously located to exclude a property that should have been included.</p>	<p>Prospective buyers may “test drive” vehicles on nearby neighborhood streets on weekends; automobile dealerships have a tendency to employ garish visual devices to attract attention.</p>
<p><b>CPA-2001-5. Building Heights and Density.</b> Amend the maximum building heights in the Thrasher’s Corner, Canyon Park and downtown Community Activity Centers and the Canyon Park and North Creek Business Parks.</p> <p>The maximum building height in the Community Activity Centers would be increased from 35 feet to 65 feet; the maximum building height in the Canyon Park Regional Activity Center would be increased from 48 feet to 100 feet; the maximum building height on the valley floor of the North Creek Regional Activity Center would be decreased from unlimited to 100 feet; the maximum building height on the east slope of the North Creek Regional Activity Center would be increased from 35 feet to 65 feet; and the maximum building height on the southwest slope of the North Creek Regional Activity Center would be decreased from unlimited to 65 feet. Taller buildings adjacent to residential areas would be subject to greater setbacks and landscape buffering than are presently required.</p>	<p>Accommodate forecasted future job growth without designating more land for office and light industrial uses; increase the marketability and development potential for affected properties; enhance potential for revenue generation for City services and facilities; create building height consistency among Regional Activity Centers and among Community Activity Centers; encourage compact, pedestrian-friendly, mixed –use development patterns within Community Activity Centers.</p>	<p>The proposed building height and residential density amendments would increase population capacity and decrease employment capacity within the affected activity centers. In the short term, the amendments are expected to result in faster population and employment growth overall than would occur under existing regulations, thus increasing traffic and demand for City services. Where taller buildings are allowed there is a potential for adverse aesthetic impacts on nearby residential areas. Extensive existing development within affected areas could reduce the redevelopment potential of the areas and thus reduce or delay the impacts which could result from the requested Plan amendment.</p>

Proposed Amendment	Purpose	Significant Impacts
<p>(Continued)</p> <p>Remove the existing residential density requirement to allow unrestricted densities to be achieved subject to compliance with all dimensional, design, parking, landscaping and other development standards of the zoning classification. Establish a new residential Plan designation and zoning classification to be named "Residential-Activity Center" and abbreviated R-AC.</p>		
<p><b>CPA-2001-6. Wetland Mitigation.</b> Modify Plan and Code language which currently calls for no net loss of wetland acreage. Retain the acreage preservation requirement for Category 1 wetlands, but allow more flexibility in methods to mitigate impacts to Category 2 and 3 wetlands. Language mandating no net loss of functions and values would remain. The effect would be to allow impacts to Category 2 and 3 wetlands to be compensatorily mitigated by creation, restoration or enhancement, the last of which may result in a net loss of area. Also, modify Code language for clarity and consistency with DOE guidelines. The amendments would be consistent with state law and state and federal practice.</p>	<p>Establish consistency between the Plan, the Municipal Code, the Growth Management Act and state and federal practice; improve clarity of regulations; and update regulations to incorporate latest DOE replacement ratios.</p>	<p>Allowing enhancement as a compensatory mitigation method for impacts to Category 2 and 3 wetlands could result in some net loss of acreage of these types of wetlands. No net loss of acreage of Category 1 wetlands would be permitted.</p>

### Environmental Impacts and Mitigation Measures

In accordance with the State Environmental Policy Act (SEPA), the following analyzes the Proposed Amendment alternative's impact upon elements of both the natural and the built environment. For analysis purposes, the Proposed Amendment alternative impacts are evaluated against the No Action alternative impacts. The No Action alternative

impacts are those impacts that would occur if the Proposed Amendment alternative Plan and Code amendments were not adopted and the existing plan, policies and regulations remained in place.

Please note that the environmental analyses of CPA-2001-2, CPA-2001-3, and CPA-2001-4 are not repeated here, since these proposed amendments were not revised.

4. **CPA 2001-5. Building Height and Residential Density in Designated Activity Centers.** Amend the maximum building heights in the Thrasher's Corner, Canyon Park and Downtown Community Activity Centers and in the Canyon Park and North Creek Regional Activity Centers; and replace the existing residential density limitations in the Canyon Park and Downtown Community Activity Centers and the Canyon Park and North Creek Regional Activity Centers with regulations that would control number of residential units through site and building envelope regulations.

The maximum building heights would be revised as follows:

- In the Community Activity Centers, allowed height would be increased from 35 feet to 65 feet, subject to conditions; performing arts centers could be taller, subject to conditions;
- In the Canyon Park Regional Activity Center, allowed height would be increased from 48 feet to 100 feet, except for manufacturing processes which required taller structures, subject to conditions;
- On the valley floor of the North Creek Regional Activity Center allowed height would be decreased from unlimited to 100 feet, except for manufacturing processes which required taller structures, subject to conditions;
- On the east slope of the North Creek Regional Activity Center, allowed height would be increased from 35 feet to 65 feet, subject to conditions; and
- On the southwest slope of the North Creek Regional Activity Center, allowed height would be decreased from unlimited to 65 feet.

The replacement of residential density limits with a building-envelope restricted approach would apply to the Canyon Park and Downtown Community Activity Centers, a portion of the Canyon Park Regional Activity Center, and the valley floor of the North Creek Regional Activity Center. These Plan and Code amendments would involve establishing a new residential Plan designation and zoning classification, proposed to be named "Residential – Activity Center" and abbreviated R-AC.

#### Elements of the Natural Environment

**Earth.** The physiographic characteristics, soil types, soil classifications, topography and composite soil risk conditions are described in Bothell Comprehensive Stormwater Master Plan. The proposed amendment would generally retain the same environmental corridors, employment areas, and commercial centers that are defined by the present policies under the existing plan or No Action alternative.

The proposed amendments would increase development potential within all of the activity centers except in the North Creek Regional Activity Center valley floor, where employment and population capacity would be substantially reduced by decreasing maximum allowable building height from unlimited to 100 feet. Overall within the affected activity centers, employment capacity would decrease while population capacity would increase, compared to existing regulations. Whether or not those activity centers in which development potential would increase would actually experience faster growth as a result of the amendments is a question, but this analysis assumes that the amendments would increase the value of properties enough to create a marginal to moderate redevelopment incentive. The resulting increase in redevelopment activity would generate more employment and population earlier than might be expected under the existing regulations.

Assuming a realistic probable development intensity scenario (see Building Height Plan and Code amendments ((2001-CPA-5)) – Employment and Population Capacity and Growth analysis included in the GMA portion of this integrated SEPA / GMA document), water and sewer systems are generally adequate to serve growth under existing regulations and the proposed amendments. Where localized system improvements are necessary, development would be responsible for providing them (see Appendix B). City streets would require reconstruction and widening to support additional traffic under both existing regulations and the proposed amendments; depending on whether growth under the amendments exceeds that under existing regulations, additional street improvements may be necessary under the amendments earlier than would be warranted under existing regulations.

In some cases, significant environmental constraints to construction of private or public facilities may exist, for example, where widening of a road would impinge on a wetland. In these cases, potential impacts would be studied and mitigated in accordance with critical areas regulations at the time of specific development project application.

Allowing commercial and multi-family development with unrestricted densities on properties within the east slope North Creek Valley Subarea with slopes in excess of 15 percent might or might not result in greater areas of land with slopes being altered than would occur were the sloped properties to develop with single-family residences at a density of four units per acre as currently allowed. If primarily surface parking were to be constructed for such office and multi-family development, this would likely be the case. However, if parking were provided primarily under the buildings or in separate structures, the amount of land disturbed for such developments could be comparable to or less than that disturbed for single family development. Development of surface water

management systems could be necessary to avoid destabilizing the hillside soils with runoff seepage under either existing regulations or the proposed amendments. Depending on the intensity of development in the steep slope and landslide hazard areas, extensive engineering could be required to stabilize the lands. Bothell critical areas regulations and performance oriented development guidelines would provide the primary protection of any hazardous slopes or critical areas.

Earth impacts created by specific projects would be analyzed at the time of development and adverse impacts may have to be mitigated.

Air. Local and regional growth and development pose potential threats to the City's air quality under both the existing regulations and the proposed amendments. If the amendments stimulate faster growth than would occur under existing regulations, local generation of air pollutants would increase and ambient air quality may decrease. These increases are generally resulting from motor vehicle emissions that would be generated by the increase in area traffic. Construction activities could increase local fugitive dust.

Atmospheric impacts for specific development projects would be analyzed at the time of development and adverse impacts may have to be mitigated.

Water. The *Imagine Bothell...* Comprehensive Plan and the Bothell Comprehensive Stormwater Master Plan include detailed descriptions of the drainage basins, stream classifications, water quality criteria, wetlands boundaries, frequently flooded areas and ground water conditions. The impacts of development activity on streams, wetlands, estuaries and aquifers are not expected to be significantly different than the impacts expected under the No Action alternative. Under either alternative, critical areas regulations would control allowed development.

Redevelopment activity may create opportunities to improve existing conditions through the application of current regulations and standards to projects that may not meet the current standards.

The potential need to improve public facilities and streets to accommodate increases in population, employment and traffic under the amendments or the no-action alternative could create water impacts that would be analyzed at the time of development and adverse impacts may have to be mitigated.

Plants and Animals. The proposed amendment would not significantly reduce habitat for native plants and animals beyond the No Action alternative. Significant development already exists within the Activity Centers and little

vacant land is available for new development. Additionally, proposed Code amendments within the Activity Centers would require increased setbacks and mandatory landscaping buffers for buildings taller than 35 feet in height that are adjacent to any abutting exclusive residential zoned lands. This could potentially result in a greater amount of preservation or establishment of native or non-native plants and animals within the areas than the No Action alternative.

The proposed allowance of office and multi family development on certain sloped properties on the east hillside of the North Creek Regional Activity Center might or might not decrease the amount of open space and reduce the habitat for a few native plants and animals as compared to single family currently allowed. If parking for office and multi-family development is primarily contained within structures, impacts on habitat may be comparable or less than those which would result from single family development, which typically clears and grades substantial areas to allow for homes, yards, driveways and streets. Habitat impacts under the proposed amendments would be somewhat mitigated by increased setbacks and buffer landscaping adjacent to exclusively residential zoned lands.

The potential impacts on plant and animal species created by specific projects would be analyzed at the time of development. Adverse impacts would be mitigated in accordance with the requirements of development regulations described in the Bothell Municipal Code.

#### Elements Of The Human Environment

Relationship to Existing Plans and Policies. The state Growth Management Act, codified as RCW 36.70A, states in part that each city's "development regulations shall be subject to continuing evaluation and review by the county or city that adopted them." The City Council has formally initiated the building height and residential density Plan and Code amendments for detailed consideration as part of the round of selected 2001 Comprehensive Plan and Code amendments.

The proposed amendment areas are in King and Snohomish Counties and subject to both King and Snohomish County Countywide Planning Policies (CPPs). The amendment would comply with the above referenced CPPs and in particular supports common stated policies of both CPPs that local jurisdictions should develop regulations and goals that encourage residential densities and employment concentrations so that growth locates within designated local urban centers and activity areas, and that adequate provisions should be made for existing and projected housing needs for all economic segments of the county. Further, Snohomish County CPP HO-13 encourages the provision of adequate,

affordable housing choices for all segments of the work force within close proximity or adequate access to their places of work.

The state Growth Management Act requires development regulations to implement and be consistent with comprehensive plan policies. The *Imagine Bothell...* Comprehensive Plan is silent on building height, with the exception of North Creek Subarea Plan Urban Design Policy 8, which states that there is no building height restriction on the valley floor, provided that buildings taller than 35 feet be set back one additional foot horizontal for each foot vertical over 35 feet. This Plan policy is implemented via BMC 12.56.080(E). The proposed Plan and Code amendments would set height limits at 100 feet and increase setbacks for taller buildings adjacent to land zoned exclusively residential and it would eliminate the additional setbacks from land zoned other than exclusively residential. These proposed Plan and Code amendments would be more consistent with other Plan policies which call for efficient use of land. The proposed building height and residential density amendment is generally consistent with Economic Development policies that encourage the promotion of opportunities to create additional jobs, retail areas and dwelling units within designated areas without designating new areas of land to accommodate the growth. The Plan and Code amendments would result in a net decrease in employment capacity (from 70,916 to 64,906), but the remaining capacity is still sufficient to accommodate several decades of employment growth at historic rates.

The proposed Plan and Code amendments are explained in detail in the GMA section of this document.

Land Use. Within the Activity Centers, the proposed amendment would generally retain the same environmental corridors, employment areas, and commercial centers that are defined by the present policies under the existing plan or No Action alternative. The proposed Plan and Code amendments would increase employment capacity by allowing taller buildings in the Thrasher's Corner, Canyon Park and Downtown community activity centers, the Canyon Park regional activity center, and the east hillside portion of the North Creek regional activity center. The amendments would substantially decrease employment capacity by lowering allowed building height in the North Creek regional activity center valley floor and southwest hillside. The proposed amendments would increase residential capacity by allowing taller buildings in the Canyon Park and Downtown community activity centers and in the Canyon Park and east hillside of the North Creek regional activity centers. The amendments would decrease residential capacity in the North Creek regional activity center valley floor and southwest hillside. Overall, the amendments would decrease employment

capacity by 8.5 per cent (from 70,916 to 64,906) and increase population capacity by 25.8 percent (from 8,113 to 10,207) as compared to the No Action Alternative.

Additionally under the proposed amendments, all of the Community Activity Centers may see buildings develop or redevelop with externally-oriented at-grade space devoted to retail, eating and drinking establishments, recreation, culture and entertainment uses, personal services or other similar consumer-oriented uses as this is a design requirement to achieve taller building heights. Proposed Plan and Code amendments within the Community Activity Centers are intended to promote pedestrian-oriented mixed- use development and sustained community vitality and economic health, while maintaining a scale of development that supports, rather than overwhelms, ground-level shopping, dining, socializing and other desired activity.

Light and Glare. The proposed amendment could result in significantly taller buildings than are currently allowed in all of the Activity Centers with the exception of the North Creek Regional Activity Center valley floor and southwest hillside where building heights would decrease compared to existing unlimited heights.

In some cases interior building lighting and glare from reflected sunlight may be visible to adjacent residential zoned properties, but these impacts would be partially mitigated by increased setbacks and landscaping requirements.

Adverse impacts would be analyzed when development projects are developed and specific mitigation measures would be identified at that time.

Population and Housing. The proposed building height and density amendment would increase the employment capacity within the affected activity centers from 8,113 to 10,207, a 25.8 percent increase above that under the existing regulations. Most of this population is expected to locate in the Canyon Park and Downtown community activity centers, and in the Canyon Park regional activity center.

Under the proposed amendments, residential densities within all activity centers, with the exception of the Thrasher's Corner community activity center where residential use is not allowed or proposed, would increase to allow an unrestricted number of dwelling units per acre, which would be expected to encourage the development of townhouse, mid-rise apartment complexes and mixed-use residential, office and retail buildings. The proposed amendment would be expected to stimulate development of affordable housing choices for all segments of the work force within close proximity to employment in the Activity Centers.

Potential adverse impacts on population and housing would be analyzed for each individual project when it is developed and mitigation requirements would be identified at that time.

Transportation. The City of Bothell engaged the professional services of a traffic consultant to conduct a concurrency analysis for the proposed building height and density amendment. The full concurrency analysis, with identified mitigation measures, is included in Appendix A of this document. The City of Bothell provided the consultant with an employment and population capacity and growth estimates for both the No Action alternative (without amendments) and for the Proposed Amendment alternative (with amendments). The capacity and growth analysis is included as an exhibit in the GMA portion of this integrated SEPA / GMA document. The consultant used this capacity and growth analysis, and the assumptions outlined in the analysis, to prepare the traffic concurrency analysis.

**Please note that the traffic concurrency analysis was in progress when the Council decided to reduce the maximum height that would be considered in the Canyon Park and North Creek regional activity centers from 150 to 100 feet. Due to the amount of time and money already spent, the consultant was not requested to revise the analysis to reflect the lower heights. Changing the maximum height considered made a substantial difference in population and employment capacity, but would not have affected 20-year growth so dramatically. Thus, traffic generation under the proposed amendments would decrease somewhat under a 100-foot maximum height scenario, but not so much as to render the consultant's findings irrelevant. The reader is encouraged to keep in mind that actual traffic volumes under the 100-foot scenario would be lower than those indicated in the consultant's findings for the proposed amendments.**

The concurrency analysis concluded that by 2007 the No Action alternative would generate 2,560 additional peak hour trips and the Proposed Action alternative would generate 5,041 new trips, or an increase of 2,481 p.m. peak hour trips. The analysis found that all of the City's 35 designated concurrency intersections would be affected with three or more project trips with or without the proposed amendment.

The results of the 2007 LOS analysis showed that the control delay did not vary greatly at the majority of concurrency intersections between the existing regulations and proposed amendments. However, the LOS worsened at 13 intersections under the proposed amendments as compared to the existing regulations.

Under the existing regulations, five intersections in 2007 would operate at LOS E or worse, compared to eight intersections operating at that LOS under the proposed amendments. The mitigation proposed by the consultants to improve operations to LOS D for the five intersections failing under the existing regulations is the same mitigation as proposed for those intersections under the proposed amendments. Additional mitigation would be necessary for the three intersections which would fail concurrency under the proposed amendments but not under the existing regulations.

Mitigation for identified 2007 traffic impacts under the existing regulations or the proposed amendments should be incorporated into the City's Six Year Transportation Improvement Program.

By 2022 the proposed amendments would generate 2,998 more trips than the existing regulations. The consultants performed a screenline analysis to determine 2022 capacity needs throughout the City under both existing regulations and the proposed amendments. The results indicated that under either the existing regulations or the proposed amendments, total lane demand would not exceed lane capacity in any direction. However, under the proposed amendments, lane demand in the westbound and southbound directions increased by one travel lane, and in the northbound direction increased by three travel lanes.

Adverse impacts would be analyzed for each individual project when it is developed and mitigation requirements would be identified at that time.

Police and Court Services. The *Imagine Bothell...* Comprehensive Plan FEIS describes the services provided by the Bothell Police Department and legal and judicial services. Services provided by the King County and Snohomish County Sheriffs' departments and the state Highway Patrol are also described. The proposed amendment is expected to increase the resident population in the City over time and the incidents of crime and court cases that are associated with an urbanized area. Adequate police and court facilities and staff will be required to perform security and related judicial services within the Bothell planning area. Adverse impacts would be analyzed for each individual project when it is developed and mitigation requirements would be identified at that time.

Fire and Emergency Services. Impacts on fire and emergency services may slightly increase under the proposed amendments, if the changes stimulate faster growth – particularly residential growth - than may occur under existing regulations. Under either the existing regulations or the proposed amendments, new commercial and multi-family residential structures would be built to modern fire suppression standards including the use of fire sprinklers and fire retardant

materials. Adverse impacts would be analyzed for each individual project when it is developed and mitigation requirements would be identified at that time.

Schools. Northshore School District No. 417 provides educational and other services to families in Bothell with school-age children. The type of housing encouraged by the amendments – smaller low- and mid-rise apartment and condominiums – would not likely attract many families with school-age children. Thus, additional residential development which might be stimulated by the amendments would not be expected to significantly increase demand for educational services.

Actual impacts on the school system would be analyzed during individual project review and impact fees may be assessed to developers for costs required to provide educational facilities and services.

Water Utilities. The City of Bothell engaged the professional services of a consulting engineering firm to conduct a water system analysis for the proposed building height and density amendment. The full water system analysis, with identified mitigation measures, is included in Appendix B of this document. The City of Bothell provided the consultant with employment and population capacity and growth estimates that analyzed maximum and realistic development intensity scenarios for both the No Action alternative (without amendments) and for the Proposed Amendment alternative (with amendments). The capacity analysis is included in the GMA portion of this integrated SEPA / GMA document. The consultant used this capacity and growth analysis, and the assumptions outlined in the analysis, to prepare the water system analysis.

**Please note that the water utilities analysis was in progress when the Council decided to reduce the maximum height that would be considered in the Canyon Park and North Creek regional activity centers from 150 to 100 feet. Due to the amount of time and money already spent, the consultant was not requested to revise the analysis to reflect the lower heights. Changing the maximum height considered made a substantial difference in population and employment capacity, but would not have affected 20-year growth so dramatically. Thus, water usage under the proposed amendments would decrease somewhat under a 100-foot maximum height scenario, but not so much as to render the consultant's findings irrelevant. The reader is encouraged to keep in mind that actual water usage under the 100-foot scenario would be lower than that indicated in the consultant's findings for the proposed amendments.**

If the proposed amendment were adopted, the City water system could experience decreased service pressure at some elevations and booster pumps would likely be required to provide pressure to higher floors. Increased building heights would increase fire flow requirements and off-site distribution and transmission improvements and/or fire pumps within buildings may be required to pump water to the upper building levels. Prospective developers would be required to mitigate any such impacts to achieve required fire flow. Adverse impacts would be analyzed for each individual project when it is developed and mitigation requirements would be identified at that time.

Sanitary Sewer Utilities. The City of Bothell engaged the professional services of a consulting engineering firm to conduct a sewer system analysis for the proposed building height and density amendment. The full analysis, with identified mitigation measures, is included in Appendix B of this document. The City of Bothell provided the consultant with employment and population capacity and growth estimates that analyzed maximum and realistic development intensity scenarios for both the No Action alternative (without amendments) and for the Proposed Action alternative (with amendments). The capacity and growth analysis is included in the GMA portion of this integrated SEPA / GMA document. The consultant used this capacity and growth analysis, and the assumptions outlined in the analysis, to prepare the sewer system analysis based on the realistic development intensity scenario.

**Please note that the sanitary sewer utilities analysis was in progress when the Council decided to reduce the maximum height that would be considered in the Canyon Park and North Creek regional activity centers from 150 to 100 feet. Due to the amount of time and money already spent, the consultant was not requested to revise the analysis to reflect the lower heights. Changing the maximum height considered made a substantial difference in population and employment capacity, but would not have affected 20-year growth so dramatically. Thus, sanitary sewer demand under the proposed amendments would decrease somewhat under a 100-foot maximum height scenario, but not so much as to render the consultant's findings irrelevant. The reader is encouraged to keep in mind that actual sanitary sewer demand under the 100-foot scenario would be lower than that indicated in the consultant's findings for the proposed amendments.**

Impacts on the area sanitary sewer system are expected to include a net increase in the annual average daily and annual sewage flows in the Bothell/Alderwood sewer system. No impacts on gravity sewers are expected in the Thrasher's Corner Community Activity Center, the Canyon Park Regional Activity Center, the Canyon Park Community Activity Center, or the North Creek Regional Activity Center. Within the Downtown Community Activity Center, the consultant noted

that the proposed amendments, at buildout capacity, could cause some local surcharging, but added that this would not be problematic if sewers were not currently surcharging. According to Public Works Superintendent Mac McDonald, there is no surcharging currently within the Downtown sanitary sewer system.

Adverse impacts would be analyzed for each individual project when it is developed and mitigation requirements would be identified at that time.

Stormwater Drainage. The Bothell and regional stormwater systems are described in the City of Bothell Comprehensive Stormwater Master Plan. The proposed amendments would allow more intensive development in the Thrasher's Corner, Canyon Park and Downtown community activity centers, and the Canyon Park and east hillside of the North Creek regional activity centers. The amendments would decrease development potential in the North Creek regional activity center valley floor and southwest hillside. Under either the existing regulations or the proposed amendments, buildings, parking garages and lots, sidewalks and streets would cover large amounts of each developed parcel. This would result in an increase in impervious surface over existing conditions, and an increase in the amount of surface water runoff.

Impacts to stormwater quality could improve over existing conditions by stimulating redevelopment of sites which are out of conformance with the City's existing stormwater management requirements.

The proposed allowance of multi-family and commercial development on sloped properties east of 120<sup>th</sup> Avenue NE and 39<sup>th</sup> Avenue SE, might or might not increase the amount of surface runoff over the area than if it were to develop with single-family residences at an allowed density of R 2-5 as presently designated. This would depend on whether parking for the multi-family and commercial development were provided at grade or in parking structures.

Water impacts created by specific projects would be analyzed at the time of development and adverse impacts may have to be mitigated. Adverse impacts would be mitigated in accordance with the requirements of Bothell critical areas regulations, Design and Construction Standards and Specifications, and the Bothell Comprehensive Stormwater Master Plan, which adopts the King County Surface Water Design Manual requirements and standards for the design of surface and storm water management systems and addresses water quantity and quality issues.

Solid Waste. Solid waste, recycling and yard waste collection services within the City of Bothell are provided through contracted services. All households within

the City receive solid waste collection services. Solid waste collected within the City of Bothell is hauled to the Cedar Hills Regional Landfill located in Maple Valley. This landfill is expected to reach capacity and close in 2012, at which time it is likely that waste will be delivered to all King County transfer stations where it will be compacted and exported to landfills outside of King County.

The proposed amendments would increase the population capacity within the affected activity centers by an estimated 2,094 and would decrease the employment capacity by 6,010. Under either the No Action Alternative or the Preferred Alternative population and employment growth would occur, which would cause the total amount of waste generated to increase. Impacts of individual projects would be analyzed and mitigation requirements would be identified during the project design and development process.

Parks and Recreation. Bothell and other area parks are described in the City of Bothell Parks, Recreation & Open Space Action Program. Since the amendments would allow more population within the affected activity centers than are permitted under existing regulations, the amendments would likely increase demand for park services. This increase would be mitigated by payment of mitigation fees by developers for each residential unit constructed. Impacts of individual projects would be analyzed and mitigation requirements would be identified during the project design and development process.

Archaeology and History. Area archaeology and historical sites are described in the *Imagine Bothell...Comprehensive Plan*. Adoption of the proposed amendment is not expected to adversely impact archaeological sites as compared to the existing regulations.

The Downtown community activity center contains a high concentration of the City's historic buildings. Approximately 40 structures in the activity center are listed on the Historic Resources Inventory, including thirteen that are located on Downtown's Main Street. Potential reuse or redevelopment of these identified historic structures may occur earlier under the proposed amendments than they would under existing regulations. Special consideration has been made to preserve the historical and aesthetic character of structures within the Main Street Action Area by proposed Code amendments that would require third and higher building stories to be set back 20 feet from the front property line, mandate continuity of storefronts without interruption by parking lots, and require review by the Landmark Preservation Board.

Impacts of individual projects would be analyzed and mitigation requirements would be identified during the project design and development process and mitigation requirements would be identified at that time.



5. **2001 CPA-6. Wetland Impact Mitigation – Repeal of language calling for no net loss of wetland acreage.** Modify Plan and Code language which currently calls for no net loss of wetland functions, values and acreage. Retain the language as is for Category 1 wetlands, but allow more flexibility to mitigate impacts to Category 2 and 3 wetlands. Mitigation of impacts to Category 2 and 3 wetlands would be required to preserve functions and values, but not necessarily acreage. This would allow mitigation methods including creation, restoration and enhancement, the last of which may result in a net loss of area. The amendments would also incorporate the latest Department of Ecology replacement ratios, and would improve clarity of the regulations. The amendments would be more restrictive than the minimal GMA statutory requirement, and would be consistent with state and federal practice.

#### Elements of the Natural Environment

Earth. The City of Bothell has 540 acres of identified wetlands within the city limits. Not all of the wetlands included in this inventory have been delineated and, as they are delineated, the wetlands inventory is updated to reflect the established wetland boundaries, classifications and sizes.

Many of the wetlands in the City are isolated or fragmented and have diminished functions (the physical, biological, chemical and ecological processes provided by wetland) as a result of historical agricultural or development practices, neglect, or the invasion of non-native plant species such as reed canary grass, Himalyan blackberry, and purple loosestrife. The proposed amendment may encourage enhancement of existing, degraded Category 2 and 3 wetlands which, due to the presence of non-native and invasive plant species, would be unlikely to recover without intervening restoration efforts.

Category 2 and 3 wetland area may or may not be reduced in the City depending on the degree to which enhancement is utilized in lieu of creation or restoration to mitigate wetland impacts. In any case, the overall function and values of wetlands and their systems are expected to improve since the amendments would clarify regulatory support for returning some wetland areas to a more natural condition.

The regulations would not preclude use of enhancement to improve function of Category 1 wetlands, but enhancement could not be utilized if it would result in a net loss of acreage of these wetlands. This represents no change from current regulations.

Earth impacts created by specific projects would be analyzed at the time of development and adverse impacts may have to be mitigated.

Air. The proposed amendment is not expected to generate more air quality impacts than the No Action alternative. Atmospheric impacts for specific development projects would be analyzed at the time of development and adverse impacts may have to be mitigated.

Water. The *Imagine Bothell...* Comprehensive Plan and the Bothell Stormwater Master Plan include detailed descriptions of the drainage basins, stream classifications, water quality criteria, wetlands boundaries, frequently flooded areas and ground water conditions. Adoption of the proposed amendments is not expected to increase the impacts of human activities on streams, wetlands, estuaries and aquifers. Water impacts created by projects would be analyzed as part of the permitting process and any adverse impacts may have to be mitigated. Adverse impacts would be mitigated in accordance with the requirements of Bothell critical areas regulations.

Plants and Animals. Adoption of the proposed amendment is not expected to increase the number or severity of adverse impacts on plant and animal species as compared to existing regulations. Some non-native plant species and intrusions may be removed and areas replanted with more native plant species.

The quality of mitigation may improve under the proposed amendments since they would incorporate the latest Department of Ecology replacement ratios, which are more stringent than those in the current regulations.

Impacts on plant and animal species created by specific projects would be analyzed at the time of development. Adverse impacts would be mitigated in accordance with City critical areas regulations.

#### Elements Of The Human Environment

Relationship to Existing Plans and Policies. The relationship of the proposed Plan and Code amendments to existing Plans and Policies are explained in detail in the GMA section of this integrated SEPA / GMA document. The GMA section includes an analysis prepared for Bothell by a Professional Wetland Ecologist which concludes that wetland enhancement as a form of compensation is consistent with federal and state laws and regulations as implemented by the U.S. Army Corps of Engineers and the Washington State Department of Ecology. The proposed amendments would be more restrictive than – but consistent with – minimal GMA statutory requirements.

Land Use. Category 2 or 3 wetland area may or may not be reduced in the City depending on the degree to which enhancement is utilized in lieu of creation or restoration to mitigate wetland impacts. Insofar as prospective developers first have to demonstrate that wetland impacts are unavoidable, and only then can propose mitigation via creation, restoration or enhancement, it is not possible to estimate how much, if any, Category 2 or 3 wetland area might be lost.

The overall function and values of wetlands and their systems are expected to improve since the amendments would incorporate the latest replacement ratios and clarify the wetland mitigation regulations.

Individual projects would be analyzed when it is proposed and mitigation requirements would be identified at that time.

Light and Glare. Adoption of the proposed amendment is not expected to cause light or glare impacts. Light and glare created during construction projects may require screening. Light and glare impacts would be analyzed when specific projects are designed and proposed and mitigation measures would be identified at that time.

Population and Housing. Population and housing are not expected to be significantly affected by adoption of the proposed amendment. Potential adverse impacts on population and housing associated with it would be analyzed for each individual project when it is developed and mitigation requirements would be identified at that time.

Transportation. The City of Bothell engaged the professional services of a traffic consultant to conduct a concurrency analysis that identified the traffic impacts for the Proposed Action alternative compared to the No Action alternative traffic impacts. The full concurrency analysis is included in Appendix A of this document and mitigation measures, if required, are detailed in the analysis. The analysis determined that the proposed amendment would likely have no impact on the transportation network and no mitigation was identified. Adverse transportation system impacts would be analyzed for each individual project when it is developed and mitigation requirements would be identified at that time.

Police and Court Services. The *Imagine Bothell...* Comprehensive Plan FEIS describes the services provided by the Bothell Police Department and legal and judicial services. Services provided by the King County and Snohomish county Sheriffs' departments and the state Highway Patrol are also described. The proposed amendment is not expected to adversely impact these services. Adverse impacts would have to be analyzed for each individual project when it is developed and mitigation requirements would be identified at that time.

Fire and Emergency Services. Bothell and regional fire and emergency services are described in the *Imagine Bothell...Comprehensive Plan FEIS*. The proposed amendment is not expected to adversely impact these services. Adverse impacts would be analyzed for each individual project when it is developed and mitigation requirements would be identified at that time.

Schools. Northshore School District No. 417 provides educational and other services to families in Bothell with school-age children. The proposed amendment is not expected to result in an increased demand for school and other educational services. Actual impacts on the school system would be analyzed during individual project review and impact fees may be assessed to developers for costs required to provide educational facilities and services.

Water Utilities. The water utility systems that serve Bothell residents are described in the City of Bothell Water System Plan and in Appendix B. Adoption of the proposed amendment is not expected to increase or otherwise affect the demand for water utility services. The proposed amendment could potentially allow development on larger areas of sites containing wetlands than the No Action alternative. Construction of utilities on wetland hydric soils is difficult and expensive. Water pipes are prone to differential settlement and subsequent leakage and rupture and there may be additional costs associated with constructing in or near wetlands, such as dewatering.

Impacts on water utilities would be analyzed for each individual project when it is designed and developed and mitigation requirements would be identified at that time.

Sanitary Sewer Utilities. The sanitary sewer systems that serve Bothell residents are described in the City of Bothell Sanitary Sewer System Plan and in Appendix B. Adoption of the proposed amendment is not expected to increase or otherwise affect the demand for sanitary sewer utility services. Adverse impacts would be analyzed for each individual project when it is developed and mitigation requirements would be identified at that time.

Stormwater Drainage. The Bothell and regional stormwater drainage systems are described in the Bothell Comprehensive Stormwater Master Plan. The proposed amendment may require stormwater drainage systems to be designed and constructed to implement the requirements and meet the goals of the ESA and these implementing projects may cause the cost of properly disposing of stormwater to increase.

Water impacts created by specific projects would be analyzed at the time of development and adverse impacts may have to be mitigated. Adverse impacts would be mitigated in accordance with the requirements of Bothell critical areas regulations, Design and Construction Standards and Specifications, and the Bothell Comprehensive Stormwater Master Plan, which adopts the King County Surface Water Design Manual requirements and standards for the design of surface and storm water management systems and addresses water quantity and quality issues.

Solid Waste. Solid waste collection services within the City of Bothell are provided through contracted services. All households within the City receive solid waste collection services. Solid waste collected within the City of Bothell is hauled to the Cedar Hills Regional Landfill located in Maple Valley. This landfill is expected to reach capacity and close in 2012, at which time it is likely that waste will be delivered to all King County transfer stations where it will be compacted and exported to landfills outside of King County.

The proposed amendment is not expected to increase the demand for solid waste services as compared to existing conditions. Impacts of individual projects would be analyzed and mitigation requirements would be identified during the project design and development process.

Parks and Recreation. Bothell and other area parks are described in the City of Bothell Parks, Recreation & Open Space Action Program. The demand for park and recreation facilities and services would not be significantly impacted by adoption of the amendment as compared to the existing permitted land uses. Impacts of individual projects would be analyzed and mitigation requirements would be identified during the project design and development process.

Archaeology and History. Area archaeology and historical sites are described in the *Imagine Bothell...* Comprehensive Plan. Adoption of the proposed amendment is not expected to adversely impact the archaeological and/or historical sites as compared to the existing regulations. The proposed amendment may cause grading and construction activities to occur in wetlands and shorelines areas and these activities may impact historical and archaeological sites not yet identified. Adverse impacts would be analyzed and mitigation requirements would be identified during the project design and development process.

# **V. Appendices**

*Revised*

## **Appendices A and B**

Appendix A, Concurrency Analysis, and Appendix B, Water / Sewer Environmental Impact Study, are separately bound and are included at the back of this document.

## Appendix C

### References

- City of Bothell. *City of Bothell Comprehensive Stormwater Master Plan*. 1994.
- City of Bothell. *City of Bothell Parks, Recreation & Open Space Action Program*. 2001.
- City of Bothell. *City of Bothell Shorelines Master Program*. 1998.
- City of Bothell. *Final EIS for the City of Bothell Proposed Comprehensive Plan*. 1993.
- City of Bothell. *Imagine Bothell...* *City of Bothell Comprehensive Plan*. 1994.
- Property Counselors, Inc. *City of Bothell Market Analysis*. 1999.

# Appendix D

## Distribution List

U.S. Army Corps of Engineers, Regulatory Branch  
U.S. Environmental Protection Agency  
U.S. Department of Housing and Urban Development  
U.S. Department of Commerce  
U.S. Fish and Wildlife Service  
Washington State Department of Ecology, Northwest Regional Office  
Washington State Department of Fish and Wildlife  
Washington State Department of Natural Resources, EQCD/SEPA Center  
Washington State Department of Transportation  
Office of Archaeology and Historic Preservation, Dept. of Community Development  
Community Transit  
Sound Transit  
Muckleshoot Indian Tribe, Fisheries Department  
King County Department of Development and Environmental Services  
King County Department of Transportation, Environmental Unit  
King County Waste Water Treatment, SEPA Review  
Snohomish County Planning and Development Services  
Snohomish County Public Works  
City of Brier  
City of Kenmore  
City of Kirkland  
City of Lynnwood  
City of Mill Creek  
City of Woodinville  
Woodinville Water & Sewer District  
Alderwood Water & Sewer District  
Northshore Fire Department  
Northshore School District, Capital Projects Office  
Northshore Utility District, Engineering Office  
Puget Sound Energy  
Snohomish County Public Utility District  
Verizon

## Bothell Departments

City Manager Jim Thompson  
Assistant City Manager Manny Ocampo  
City Attorney Michael Weight  
Fire & EMS, Attn: Marcus Kragness  
Police, Attn: Mark Ericks  
Public Works, Attn: Dave Zabell  
Finance, Attn: Ilene Frisch  
Community Development, Attn: Bill Wiselogle

Bothell City Council  
Bothell Planning Commission

Bothell Landmark Preservation Board

Public Location (for viewing)

King County Library, Bothell Branch

Bothell City Hall

Bothell Department of Community Development



**CONCURRENCY ANALYSIS**  
***BOTHELL COMPREHENSIVE PLAN***  
***AMENDMENTS***

March 2002 Revised



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***Concurrency Analysis***

***BOTHELL COMPREHENSIVE PLAN  
AMENDMENTS***

**Bothell, Washington**

Prepared for

City of Bothell  
Community Development  
9654 NE 182nd Street  
Bothell, Washington 98011

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10900 NE 8th Street, Suite 300  
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March 2002

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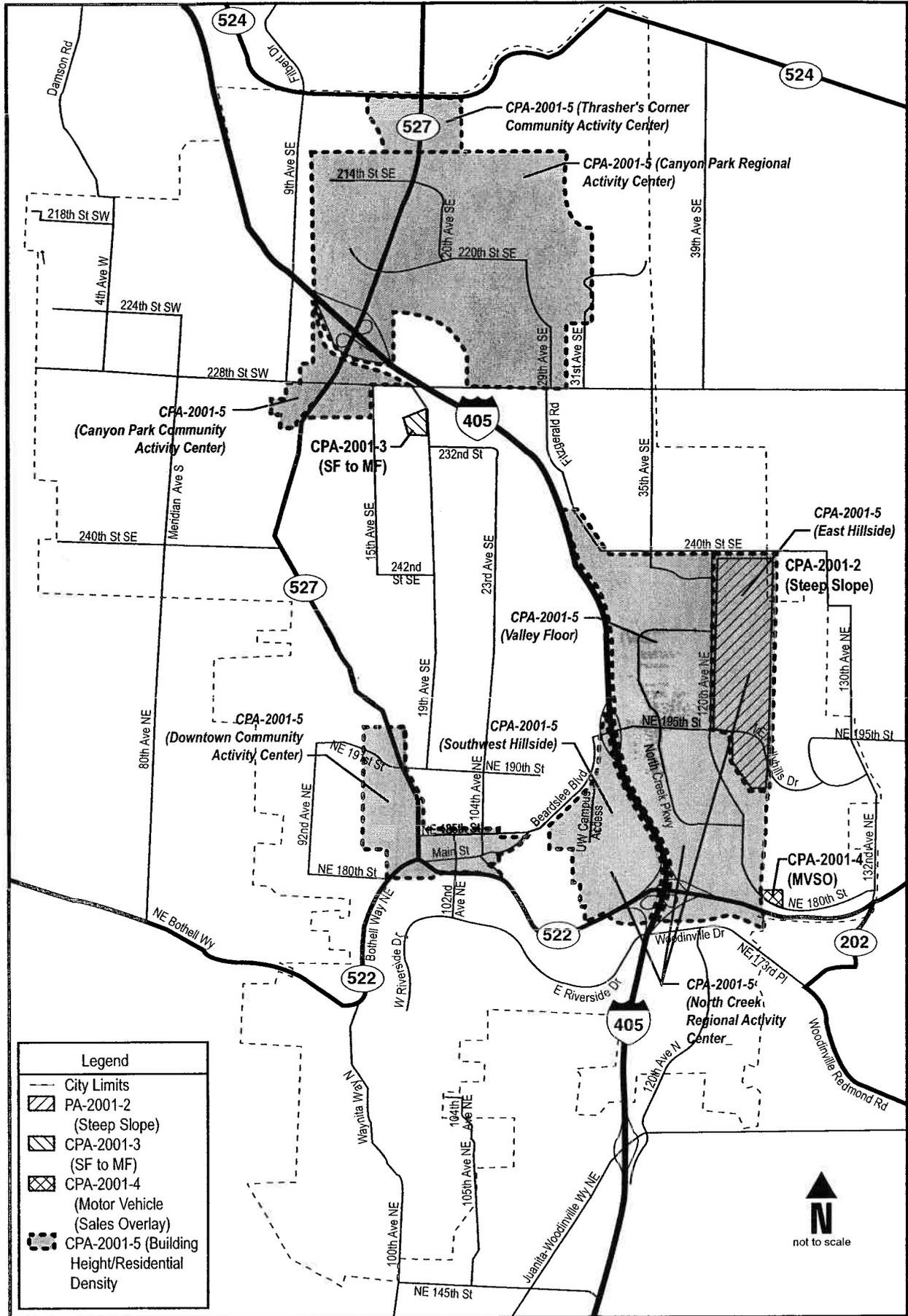
## INTRODUCTION

Land use affects transportation. Different land uses generate varying amounts of traffic, which is why local governments like the City of Bothell plan land use and transportation facilities together. The *"Imagine Bothell..." Comprehensive Plan* assigns specific land uses throughout the City upon which the Transportation Element of the Comprehensive Plan is based. If land use designations are changed, traffic could increase or decrease, which could change transportation facility needs. As in all jurisdictions within Washington State, the City of Bothell must ensure that transportation facilities are built concurrent with the land use generating the demand for the transportation facility. This concept is known as "concurrency."

The City of Bothell currently is considering changing five Plan amendments. Four of the five amendments involve changing the land use designations in the Comprehensive Plan for several parcels within the City. Three of the four amendments are for a specific property, while the fourth encompasses many parcels throughout the City. The fifth involves changing Plan and Code language that discourages net loss of wetland acreage. To be consistent with City references, in this report the five amendments are referred to as Plan Amendments 2, 3, 4, 5, and 6. Four of these amendments that include specific land use changes are discussed in detail. The fifth plan amendment, CPA-2001-6, will not be analyzed in this report because it is anticipated that it will not have any impact on the transportation network. In addition, CPA-2001-6 is not analyzed in the cumulative impacts scenario.

This report has been updated as requested by the City of Bothell to reflect the change in intensity of land to be redeveloped under CPA-2001-5 by the years 2007 and 2022. Although all four 2001 amendments are documented in this report, only CPA-2001-5 (Building Height/Residential Density) and the cumulative scenarios for the existing and proposed land uses have been revised. The remainder of the report is the same as that submitted in the November 2001 Bothell Comprehensive Plan Amendments Report.

**Figure 1** shows the location of the subject properties. Each is discussed in detail throughout this report where specific land uses are being amended. One property, a section of the North Creek east hillside, is affected by two land use amendments: CPA-2001-2 and CPA-2001-5.



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Figure 1  
Project Vicinity

Along with a description of each proposed land use amendment, this report also identifies the transportation concurrency impacts of allowing each of the four Comprehensive Plan specific land use amendments to occur, both separately and collectively, in the years 2007 and 2022. Specifically, this report:

- estimates the trip generation impacts of the proposed land use amendments
- documents the intersections that will fail concurrency in 2007 with, and without, the proposed land use amendments
- identifies the planning level transportation needs in 2022 based on the Comprehensive Plan amendments
- develops representative transportation mitigation to comply with the City's concurrency requirements with, and without, the proposed land use amendments
- compares the transportation impacts with, and without, the proposed land use amendments

## **METHODOLOGY**

### **Bothell Concurrency Standards**

The City of Bothell measures concurrency based on the level of service (LOS) concept at intersections. The LOS concept and methodology is documented in the Transportation Research Board's 1997 *Highway Capacity Manual*, which is a national publication used by many government entities in the United States. LOS is a measure of the operations at an intersection based on the average control delay experienced by a typical vehicle driving through the intersection. The LOS of an intersection is ranked from "A" (very little delay) to "F" (over-capacity operations and excessive delay). A more detailed discussion of the LOS concept is presented in **Appendix A**.

With the exception of 11 intersections, all intersections designated as a concurrency intersection in Bothell must operate at LOS D (Transportation Policy TR-P1). Eleven intersections are permitted to operate at LOS E or LOS F for not more than 1.5 hours during the peak period (Transportation Policy TR-P2). The "exception" concurrency intersections must return to LOS D operations before and after the 1.5-hour peak period.

Concurrency intersections in Bothell are defined as any intersection of two arterial streets. In Bothell, arterial streets include principal, minor, and collector arterials. There are a total of 36 concurrency intersections in Bothell.

New development in Bothell must perform a concurrency analysis. The concurrency analysis consists of calculating the LOS at any concurrency intersection affected by three or more new vehicle trips related to a new development. Each concurrency intersection affected by three or more vehicle trips was analyzed for each plan amendment to

determine the LOS in 2007, assuming the existing designations and the proposed designations amendment.

## **Street Network**

The existing channelization and signal phasing and timing of each concurrency intersection was field verified for this project.

### **2007 Network**

By 2007, the City of Bothell expects to have constructed several transportation improvements. Funded transportation improvements in the City's Six-Year Transportation Improvement Program (TIP) were assumed to be in place by 2007. If a transportation improvement changed the existing intersection configuration of a concurrency intersection, then the future channelization was updated accordingly for the LOS calculations. **Table 1** lists the transportation improvements that were assumed by 2007. Base channelization, along with the six-year transportation improvements, includes the mitigation from the cumulative scenario presented in the November 2000 report. Last year's amendments were 99-PA-4, 99-PA-5, 99-PA-7a, 99-PA-7b, 99-PA-11, and 99-PA-12. **Table 2** identifies the mitigation for the cumulative scenario that encompassed all of the amendments analyzed in the November 2000 report approved by Bothell's City Council last year.

The 2007 channelization and traffic control for each concurrency intersection analyzed is shown in **figure 2**. The 2007 base channelization is based on the existing channelization with planned improvements as presented in **table 1** and the cumulative scenario mitigation from the November 2000 report shown in **table 2**.

### **2022 Network**

The street network anticipated to be in place by 2022 was determined from the City's Comprehensive Plan, current planning studies underway, and judgments made by City staff. These improvements are in addition to the assumptions made in the 2007 street network.

## **Traffic Volumes**

The concurrency analysis was conducted for the years 2007 and 2022. The 2007 analysis allows for the incorporation of all short-term transportation improvements to be in place and for most of the known approved developments to be constructed. Commonly, agencies use a traffic forecasting model such as EMME/2 or TModel/2 to forecast future traffic volumes. The City of Bothell currently is developing a model; therefore, it was not available for use in this project.

**Table 1**  
**Bothell Planned Transportation Improvements**

<b>Location</b>	<b>Project No.</b>	<b>Planned Improvement</b>
SR 524 - SR 527 to County Line	TC5	Widening existing two-lane roadway to a five-lane roadway with Class II bike lane and sidewalk on both sides.
39th Ave SE - 228th St SE to 240th St SE	TC8	Extension of 39th Ave between 228th and 240th streets. Two lanes each direction with a two-way, left-turn lane.
Beardslee Blvd - NE 185th St to NE 195th St	TC10	Widen to 4-5 lanes, providing walkways, landscaping, bicycle lanes, drainage, sidewalks, curbs, and gutters.
228th St SE/35th Ave SE	TC16	Construct new traffic signal.
104th Ave NE/Kaysner Way	TC17	Construct a new traffic signal and associated intersection improvements.
240th St SE/ Meridian Ave SE	TC18	Construct a westbound right-turn lane at this intersection
NE 180th St/ 132nd Ave NE	TC20	Construct new traffic signal and interconnect this signal with the traffic signals at the SR 522/SR 202 interchange.
SR 527 - 214th St SE to 208th St SE	TC23	Widen SR 527 to add a continuous northbound lane. This lane will match the lane constructed by Fred Meyer to the north and eventually the lane will become a right-turn lane at the 208th St SE intersection.
SR 522 Corridor: Wayne Curve/96th Ave NE	TC 26	Widen to allow for center-raised median and additional BAT lanes in both directions. Additionally, turn lanes will be installed at the SR 522/96th Avenue intersection.
SR 522 Corridor: Kaysner Way to 107th Ave NE	TC 27	Install BAT lane in both directions and improve pedestrian crossings and access around the SR 522 Park-and-Ride.
SR 522 Corridor: SR 527 to 101st Ave NE	TC 28	Install BAT lane in both the eastbound and westbound directions.
SR 527: SR 524 to I-405 SB lane and intersection	TC 29	Includes intersection improvements at SR 524 and widening of the roadway in the southbound direction from 2-3 lanes between SR 524 and I-405.
120th Ave NE/North Creek Pkwy	TC 30	Construct new traffic signal and widen the northbound roadway from 1-2 travel lanes from N. Creek Pkwy to county line.
SR 527 Widening: 240th St SW to 228th St SW	TC 33	Widen roadway to five lanes providing walkways, landscaping, bicycle lanes, drainage, sidewalks, curbs, and gutters.

**Table 2**  
**Mitigation Analysis Summary for Cumulative Plan Amendments from November 2000 report**

it. 31	Intersection	Suggested Mitigation for Existing Designation
3	SR 527/214th St SE	<ul style="list-style-type: none"> <li>▪ Convert the WB right-turn lane into a free right and extend the receiving lane for this movement.</li> </ul>
4	SR 527/220th St SE	<ul style="list-style-type: none"> <li>▪ Construct a NB right-turn lane. The existing NB through-right will turn into a through lane only.</li> <li>▪ Add an additional WB left-turn lane and convert the EB right-turn lane into a free right.</li> <li>▪ Extend the receiving lane for this movement.</li> </ul>
8	SR 527/228th St SE	<ul style="list-style-type: none"> <li>▪ Add an additional EB left-turn lane and an additional NB left-turn lane.</li> <li>▪ Convert the WB right-turn lane into a free right and extend the receiving lane for this movement.</li> <li>▪ Add SB right-turn overlap phase.</li> </ul>
12	29th Ave SE/228th St SE	<ul style="list-style-type: none"> <li>▪ Signalize intersection and construct an additional WB through lane.</li> <li>▪ Extend the receiving lane for this movement.</li> </ul>
13	31st Ave SE/228th St SE	<ul style="list-style-type: none"> <li>▪ Signalize intersection</li> </ul>
19	120th Ave NE/ North Creek Pkwy	<ul style="list-style-type: none"> <li>▪ Signalize intersection</li> </ul>
22	104th Ave NE/ NE 190th St	<ul style="list-style-type: none"> <li>▪ Add NB left-turn lane</li> <li>▪ Convert existing NB left-through-right into through right.</li> </ul>
23	Beardslee Blvd/Campus North Access Rd	<ul style="list-style-type: none"> <li>▪ Add an additional NB through lane.</li> <li>▪ Extend the receiving lane for this movement.</li> </ul>
24	North Creek Pkwy/ NE 195th St	<ul style="list-style-type: none"> <li>▪ Convert the SB right-turn lane into a free right.</li> <li>▪ Convert the SB through-right lane into a through lane.</li> <li>▪ Convert the NB through-left lane into a left lane.</li> <li>▪ Convert the NB right lane into a through-right lane.</li> <li>▪ Eliminate NB/SB split phase operations, operate NB/SB lead-lag left-turn phasing.</li> </ul>
25	120th Ave NE/ NE 195th St	<ul style="list-style-type: none"> <li>▪ Construct SB left-turn lane.</li> <li>▪ The existing SB through-left lane will turn into a through lane.</li> <li>▪ The existing SB through-right lane will turn into a right lane.</li> <li>▪ Convert the existing EB through lane into a through-left lane.</li> <li>▪ Operate EB &amp; WB movements with split phases.</li> </ul>
27	SR 527/SR 522	<ul style="list-style-type: none"> <li>▪ Construct a WB right-turn lane.</li> <li>▪ The existing WB through right will turn into a through-lane only.</li> <li>▪ Convert the EB right-turn lane into a free right.</li> <li>▪ Extend the receiving lane for this movement.</li> <li>▪ Construct a NB left-turn lane.</li> <li>▪ Extend the receiving lane for the third NB left lane.</li> </ul>
28	102nd Ave NE/Main St	<ul style="list-style-type: none"> <li>▪ Add NB and WB LT Lane</li> </ul>
30	Beardslee Blvd/ NE 185th St	<ul style="list-style-type: none"> <li>▪ Signalize intersection</li> </ul>

Intersection ID refers to the location on **figure 2**

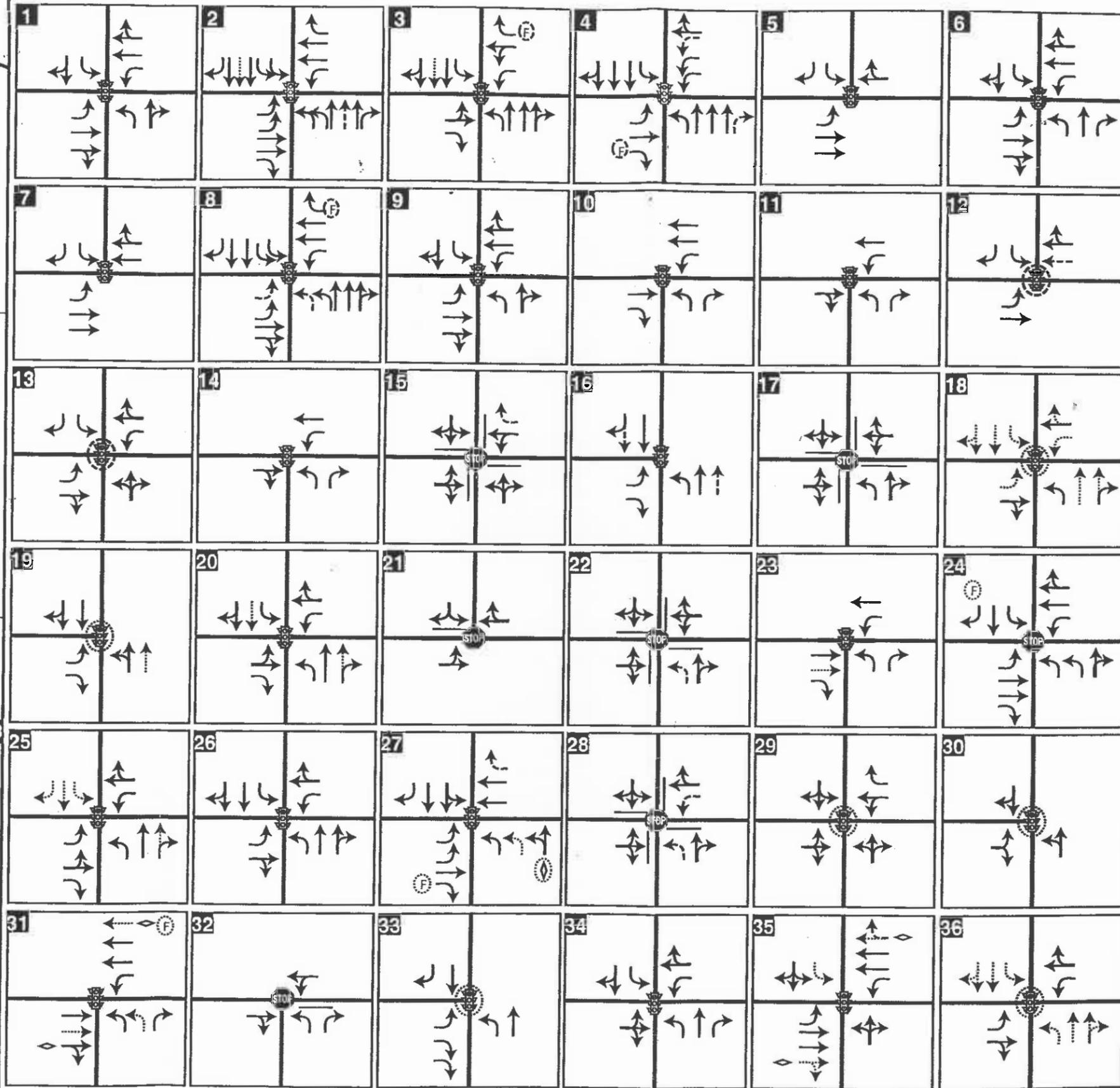
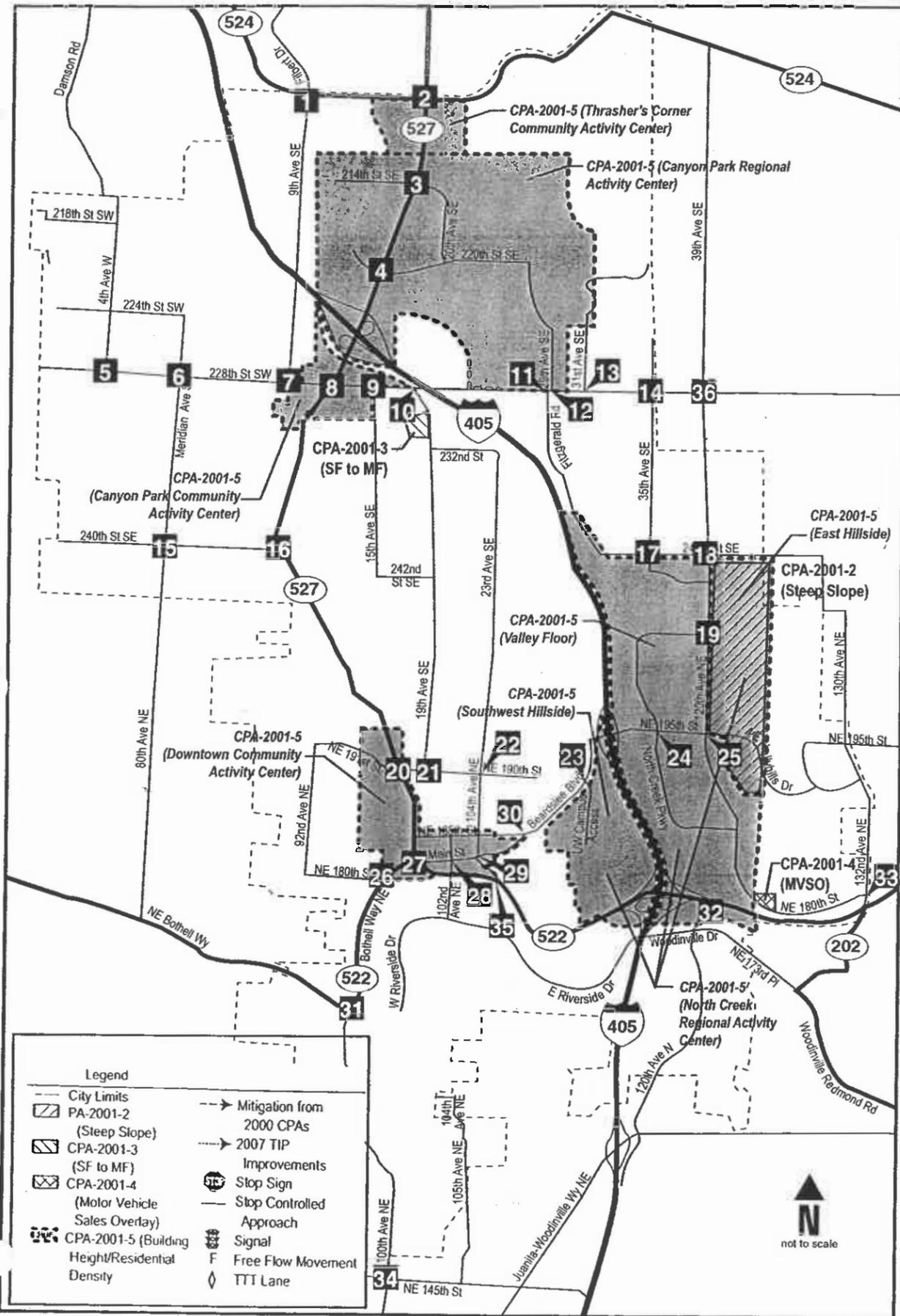


Figure 2  
2007 Base Channelization

### **2007 Base Volumes**

The City of Bothell maintains a database of p.m. peak-hour traffic volumes for all concurrency intersections. The database consists of counts conducted from 1998–2001. The 1998/1999 volumes were factored to 2000/2001 volumes using a growth rate of 2 percent per year. These 2000/2001 volumes then were factored to 2004 using a growth rate of 0.5 percent before adding project trips from approved proposed development. The 2004 volume, which included the base volumes and the development pipeline trips, then was factored to 2006 by adding another two percent total growth per year to account for growth from development in other jurisdictions using Bothell streets. The trips from the approved 1999 plan amendments then were added to this 2006 base. This 2006 total was factored by applying another two percent growth rate to give the 2007 base volumes used in the analysis.

Most of the TIP projects listed in **table 1** involve widening or installing signals. One project, TC8, constructs a new roadway that extends 39th Avenue SE. Currently, 39th Avenue SE does not extend from 228th Street SW to 240th Street SW. By 2007, Bothell expects to complete this missing gap in 39th Avenue SE. The City requested that the 39th Avenue SE Extension be included in the concurrency analysis, especially considering that several adjacent intersections are concurrency intersections. The 39th Avenue extension could redistribute existing traffic volumes.

The City provided Entranco with a 39th Avenue SE extension feasibility study completed by Reid Middleton in 1994. The study documented forecasted 2010 traffic volumes for the existing and the proposed network, including the 39th Avenue SE extension. The 2007 redistributed traffic volumes were estimated by Entranco for seven intersections within the vicinity of the 39th Avenue SE project based on the 2010 traffic volumes in the feasibility study. The affected intersections within the city limits were 35th Avenue SE and 228th Street SE, 31st Avenue SE and 228th Street SE, 29th Avenue SE and 228th Street SE, Fitzgerald Road and 28th Street SE, 39th Avenue SE and 240th Street SE, and 35th Avenue SE and 240th Street SE. The City of Bothell also requested that the intersection of 228th Street SE and 39th Avenue SE be analyzed because it also was affected by the 39th Avenue SE extension. Ideally, the redistribution would have been estimated using a forecasting model as stated previously.

The resultant 2007 base year traffic volumes for concurrency intersections are provided in **figure 3**.

### **2022 Base Volumes**

To determine 2022 baseline traffic volumes, a two percent per year growth rate was applied to the 2007 baseline traffic volumes for 15 years at each respective intersection. It should be noted that because the City does not have a transportation forecasting model, applying the two percent per year growth rate is the next best approximation in determining future traffic volumes at locations within the City.

## **Trip Generation**

Trip generation for each plan amendment was estimated based on equations and rates provided in the Institute of Transportation Engineers' (ITE) 1997 *Trip Generation* manual (sixth edition). Trip generation was calculated for both the a.m. and p.m. peak hours, and the peak hour with the highest trip generation and highest street volumes was used to analyze concurrency. In some cases, the a.m. peak hour trip generation was higher than the p.m. peak; however, existing counts on adjacent streets were higher in the p.m. peak than in the a.m. peak. The net effect was that in all plan amendment cases, it was determined that the p.m. peak hour resulted in the highest volume of traffic. One of the four amendments relates only to residential designations, while the other three relate to both residential and commercial designations.

### ***2007 Trip Generation***

To estimate the number of trips generated for three of the plan amendments, the amount of developable land had to be estimated. The assumptions listed next were used to determine how much land could be developed and the maximum building size on each plan amendment property for three of the amendments.

- The total area of each amendment parcel was determined by scaling off dimensions from the City of Bothell Designations Map, which was supplied by the City.
- For residential land use, no development was assumed on wetland areas.
- A 100-foot, no-development buffer was assumed for Class 1 streams.
- A 50-foot, no-development buffer was assumed for unclassified streams.
- It was assumed that development was permitted on all areas designated as steep slopes for parcels zoned for single-family residential land use.
- It was assumed that retail, office, or industrial development would be allowed on 50 percent of the wetland area.
- For parcels zoned for commercial land use, 15 percent of the developable area (total area minus wetland and stream buffer areas) was assumed to be dedicated to landscaping.
- For parcels zoned for commercial land use, one parking stall per 300 square feet of retail/office development was assumed. The size of each parking stall was calculated at 255 square feet.



For the fourth specific land use amendment (CPA-2001-5), City of Bothell staff provided estimates of employment and population with, and without, the plan amendments under existing policies and regulations for the year 2007. It should be noted that the 2007 population and employment estimates were interpolated based on a combination of 2001 existing estimates provided by the City of Bothell, 2010 and 2030 forecasts from PSRC, and an estimate of the ultimate capacities for population and employment provided by the City. In order to determine the net impact associated with existing and proposed zoning, the net population and employment values for each respective activity center was calculated by subtracting the 2001 values from the 2007 values. These values then were converted to square footage within each respective activity center. The total square footage for each activity center was separated into different land uses as determined by City of Bothell staff. These values were then applied to the equations/rates given in the ITE's 1997 *Trip Generation* manual to estimate trip generation for 2007 existing and proposed land use conditions.

The proposed designation for Plan Amendment CPA-2001-5 would allow a variety of land uses, including Retail Commercial, Multi-Family Residential, and Office Commercial. For retail commercial land use, the ITE Land Use "Shopping Center" was selected to best represent the variety of retail development that could occur. For the shopping center land use, a pass-by trip percentage was assumed to account for trips that already used the street network, and that would be attracted to the shopping center. The pass-by percentage (34 percent) was derived from the ITE's 1991 *Trip Generation* manual by averaging the pass-by percentages for every shopping center presented in the manual.

Internalization of trips between closely spaced land uses also were factored into the trip generation between office and multi-family residential (10 percent reduction), office and shopping center (5 percent in the p.m. peak only), and multi-family residential and shopping center (10 percent in the p.m. peak only) to account for trips that would not access an exterior roadway to get to their destination.

After the trip generation for the existing and proposed land uses was calculated and the pass-by and internal trips accounted for, trip credits—those trips currently in the roadway system—were factored by a ratio of 6:21 (which is the proportion of trips assumed by 2007 based in a buildout year of 2022) and subtracted from the trip generation to obtain the net new trips generated by the existing or proposed land use for 2007 in CPA-2001-2, CPA-2001-3, and CPA-2001-4. The net new trip generation for CPA-2001-5 is calculated by subtracting the pass-by and internal trips from the gross number of trips for each activity center. A detailed trip generation estimate for each plan amendment is discussed later in this report.

### ***2022 Trip Generation***

The 2022 trip generation estimate for each respective plan amendment was calculated using the same methodology described in the 2007 Trip Generation section.

## **Trip Distribution**

As indicated previously in this report, the City of Bothell currently is developing a traffic forecasting model; therefore, it was not available for use in this project.

### ***2007 Trip Distribution***

Alternatively, for each plan amendment, a hand distribution was performed to distribute the project trips through the roadway network. Trips were distributed based on existing travel patterns and the estimated 2007 traffic volumes. This methodology assumes that trips are assigned to the network without regard to existing congestion levels, i.e., vehicles will not use local streets to avoid congestion. If more than one road was available for access to and from the subject property, the distribution between each driveway was made according to the existing traffic patterns. Commonly, one driveway per adjacent roadway was assumed.

The distributed trips then were entered into a spreadsheet that identified the concurrency intersections that received three or more project trips and, therefore, needed to be analyzed for LOS. The trip distribution for each amendment is provided later in this report.

### ***2022 Trip Distribution***

The detailed trip distribution conducted for 2007 was used to estimate the trip distribution in 2022 for each plan amendment. The percent increase in trip generation between 2007 and 2022 for each plan amendment was applied to the 2007 trip distribution. A screenline analysis was performed throughout the City of Bothell and this analysis replaced the LOS analysis in 2022 at the concurrency intersections. This is discussed in greater detail in the next section.

## **Operational Analysis**

### ***2007 Level of Service Analysis***

A detailed LOS analysis was conducted for all “tripped” intersections in 2007 only. A “tripped” intersection is an intersection that had three or more trips sent through it as a result of the growth that occurred under the existing or proposed land use designation.

At signalized intersections, an LOS analysis was conducted using the principles of the Transportation Research Board’s 1997 *Highway Capacity Manual* and a computer program known as Synchro. Synchro, a macroscopic modeling program, was used to analyze each signalized intersection as an isolated intersection based on volumes and signal timings. Synchro also may be used to determine the optimal signal timing. The LOS reported for signalized intersections is the average control delay of all movements at the intersection.

At unsignalized intersections, the LOS analysis also was based on the methodology outlined in the 1997 *Highway Capacity Manual*. The LOS reported for unsignalized intersections is the worst case among all of the calculated movements (usually one of the stop-controlled side street approaches). The LOS at unsignalized intersections applies only to the capacity of the worst movement; it is not a valid indicator of overall traffic operations at an intersection.

At the 11 intersections where Bothell Concurrency requirements allow the intersection to operate at LOS E or F for no more than 1.5 hours during the peak period, an analysis was performed based on four consecutive, 15-minute intervals within a two-hour peak period. Because the analysis was performed for 2007 traffic volumes, the distribution of traffic counts for each 15-minute interval based on existing counts was applied to the 2007 forecasts to estimate 15-minute traffic volumes in 2007. The 11 intersections allowed to operate at LOS E or F for no more than 1.5 hours are:

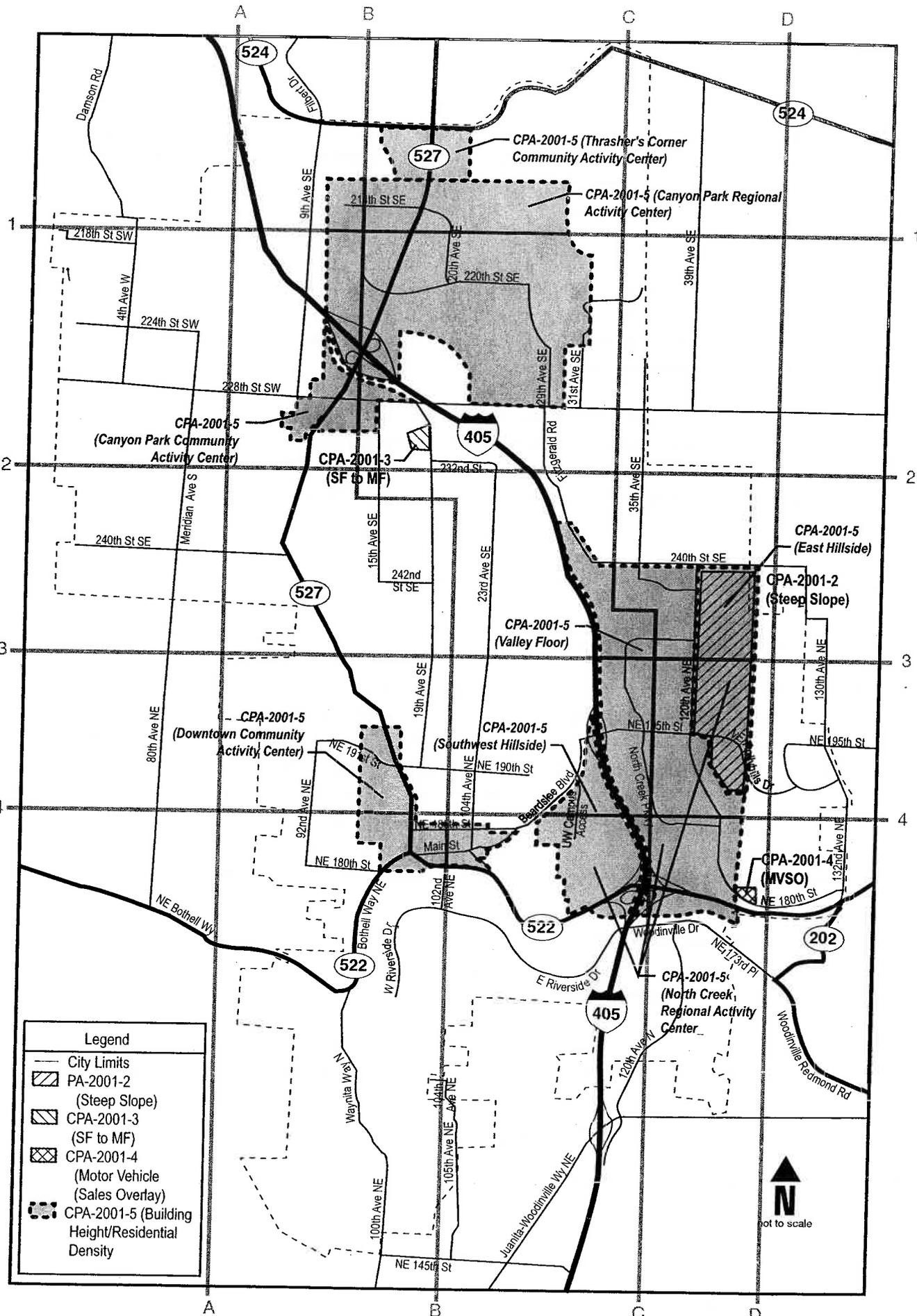
- SR 527 and 220th Street SE
- 9th Avenue SE and 228th Street SE
- SR 527 and 228th Street SE
- 15th Avenue SE and 228th Street SE
- 19th Avenue SE and 228th Street SE
- SR 527 and NE 191st Street
- SR 522 and NE 180th Street
- SR 527 and SR 522
- 102nd Avenue NE and Main Street
- 104th Avenue NE and Kaysner Way
- SR 522 and Kaysner Way

### ***2022 Screenline Capacity Analysis***

A detailed LOS analysis was not performed for 2022. Instead, a screenline capacity analysis in 2022 was performed throughout the entire City of Bothell. A screenline is an imaginary horizontal and vertical line across the city that intersects respective roadways. Four horizontal screenlines and four vertical screenlines were drawn across the city. Vertical screenlines (A, B, C, and D) intersect east and west roadways; horizontal screenlines (1, 2, 3, and 4) intersect north and south roadways. At each location where screenlines intersected roadways, the 2022 approach volumes were determined from adding the 2022 trip generation volumes to the 2022 baseline volumes at each respective location. Streets intersected by each screenline are listed in **table 3**. Screenlines are shown in **figure 4**.

**Table 3  
Streets Intersected by Screenlines**

<b>Screenline</b>	<b>Intersected with</b>
A	228th Street SW 240th Street SE NE Bothell Way
B	SR 524 228th Street SW NE 190th Street Main Street SR 522
C	SR 524 228th Street SW 240th Street SE North Creek Parkway N NE 195th Street North Creek Parkway S
D	228th Street SW 240th Street SE NE Hollyhills Drive NE 180th Street
1	39th Avenue SE 31st Avenue SE SR 527 9th Avenue SE 4th Avenue W
2	39th Avenue SE 35th Avenue SE Fitzgerald Road SR 527 Meridian Avenue S
3	130th Avenue NE 120th Avenue NE North Creek Parkway SR 527 80th Avenue NE
4	132nd Avenue NE NE 180th Street North Creek Parkway Beardslee Blvd 104th Avenue NE SR 527 80th Avenue NE



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**Figure 4**  
Screenlines for 2022 Analysis

At each location where a screenline intersects a roadway, capacity and demand in each direction were determined. Capacity refers to the number of travel lanes, excluding center turn lanes, in one direction that are anticipated to be completed by 2022. A single lane of roadway is assumed to accommodate 1,000 vehicles per hour (vph). In cases where the lane is adjacent to a center turn lane, the adjacent lane is assumed to accommodate 1,200 vph.

Demand refers to the number of travel lanes, excluding center turn lanes, in one direction that are needed to support the traffic demand generated by each respective zoning. The demand is calculated by dividing the 2022 traffic volumes at each respective screenline by the capacity of the respective roadway.

The demand and capacity at each screenline location (i.e., A1, A2, etc.) is added together to result in a total demand and capacity for each respective screenline. Locations where lane demand is greater than lane capacity would indicate a potential need for additional lanes. **Appendix B** contains the screenline analysis spreadsheets for each respective plan amendment.

## **CONCURRENCY ANALYSIS**

### **Plan Amendment CPA-2001-2**

The subject property associated with Plan Amendment 2 (CPA-2001-2) is located east of 120th Avenue SE and south of 240th Street SE. It is within the North Creek east hillside Subarea, according to the *"Imagine Bothell..." Comprehensive Plan*. Access to the site is provided from 240th Street SE, which is an east-west arterial that connects to Fitzgerald Road at its western terminus. A north-south collector arterial east of I-405, Fitzgerald Road provides access to 228th Street SE to the north. Southern access from the subject property is provided from 120th Avenue SE, a north-south arterial that connects to 180th Avenue SE at its southern terminus to provide access to SR 522 and SR 202.

#### ***2007 Land Use Description***

##### *Existing Plan Designation*

CPA-2001-2 currently is zoned for single-family residential development (permitted density of four dwelling units per net acre), multi-family residential development (permitted density of 15 dwelling units per net acre), and office park with the stipulation that only single-family residential development is permitted on steep slopes of more than 15 percent grade. The area of CPA-2001-2 is approximately 139 acres. Based on assumptions presented in the Methodology section to this report, it was determined that approximately 11 acres are developable for multi-family or office use, and 121 acres are developable for single-family housing, or roughly 95 percent of the total land is developable. Given the permitted density of development and the area of developable

land, 140 single-family dwelling units, 28 multi-family dwelling units, and 41,000 square feet of office can be developed on CPA-2001-2 under the existing designations.

### *Proposed Plan Designation*

The proposed designation classification for CPA-2001-2 is to allow multi-family residential and office park development on slopes greater than 15 percent grade. Given the permitted density of development and the area of developable land, 344 multi-family dwelling units (allowed density of 15 dwelling units per acre), and 372,000 square feet of office can be developed on CPA-2001-2 under the proposed designations.

### **2007 Trip Generation**

#### *Existing Plan Designation*

**Table 4** compares a.m. and p.m. peak-hour trip generation for CPA-2001-2 under the existing designations. It identifies net new trips generated for the a.m. and p.m. peak hours after pass-by trips, internalization, and trip credits, to account for existing trips in the system, have been subtracted.

A total of 103 new trips would be generated from CPA-2001-2 in the a.m. peak, as compared to 131 new trips in the p.m. peak. The p.m. peak represents the worst case trip generation and, therefore, is a conservative estimate to use for traffic analysis purposes.

#### *Proposed Plan Designation*

**Table 5** compares the a.m. and p.m. peak-hour trip generation for CPA-2001-2 under the proposed designations. The table identifies net new trips generated for the a.m. and p.m. peak hours after the pass-by trips, internalization, and trip credits, to account for existing trips in the system, have been subtracted.

A total of 742 new trips would be generated from CPA-2001-2 in the a.m. peak as compared to 695 new trips in the p.m. peak. Although, the a.m. peak trip generation in this case is worse by 47 trips, the baseline 2007 volumes used to perform the LOS calculations are higher for the p.m. peak. Therefore, the p.m. peak is still a conservative estimate to use for traffic analysis purposes.

### **2007 Trip Distribution**

#### *Existing Plan Designation*

**Figure 5** presents the existing designations trip distribution for CPA-2001-2. Based on the methodology described earlier, CPA-2001-2 affects 27 concurrency intersections.

**Table 4**  
**Plan Amendment CPA-2001-2 Existing Designation**  
**Trip Generation**

Land Use	ITE LUC <sup>1</sup>	No.	Units	Trip Rates			Peak-Hour Trips		
				In	Out	Total	In	Out	Total
<b>A.M. Peak Hour</b>									
Single-Family Detached Housing	210	140	DU	0.19	0.56	0.75	27	78	105
Office Park	750	41	GFA <sup>2</sup>	1.55	0.19	1.74	63	8	71
<i>Internal Trips (Office-Condo)</i>	10%						1	1	2
				Subtotal (less internal) =			62	7	69
Low-rise Condo/Townhome	231	28	DU	0.16	0.50	0.66	4	14	18
<i>Internal Trips (Condo-Office)</i>	10%						1	1	2
				Subtotal (less internal) =			3	13	16
				<b>Gross A.M. Peak Hour Trips Generated =</b>			<b>94</b>	<b>100</b>	<b>194</b>
				<i>Less Total Internal Trips =</i>			2	2	4
				<i>Less Trip Credits (29%) =</i>			51	36	87
				<b>Net New A.M. Peak Hour Trips Generated =</b>			<b>41</b>	<b>62</b>	<b>103</b>
<b>P.M. Peak Hour</b>									
Single-Family Detached Housing	210	140	DU	0.65	0.36	1.01	91	50	141
Office Park	750	41	GFA <sup>2</sup>	0.21	1.25	1.50	9	53	62
<i>Internal Trips (Office-Condo)</i>	10%						1	1	2
				Subtotal (less internal) =			8	52	60
Low-rise Condo/Townhome	231	28	DU	0.47	0.36	0.83	13	10	23
<i>Internal Trips (Condo-Office)</i>	10%						1	1	2
				Subtotal (less internal) =			12	9	21
				<b>Gross P.M. Peak Hour Trips Generated =</b>			<b>113</b>	<b>113</b>	<b>226</b>
				<i>Less Total Internal Trips =</i>			2	2	4
				<i>Less Trip Credits (29%) =</i>			35	56	91
				<b>Net New P.M. Peak Hour Trips Generated =</b>			<b>76</b>	<b>55</b>	<b>131</b>

1. Institute of Transportation Engineers, Trip Generation Manual, 6th Edition, 1997 Land Use Code  
2. GFA = Gross Floor Area in square feet.

**Table 5  
Plan Amendment CPA-2001-2 Proposed Designation  
Trip Generation**

Land Use	ITE LUC <sup>1</sup>	No.	Units	Trip Rates			Peak-Hour Trips		
				In	Out	Total	In	Out	Total
<b>A.M. Peak Hour</b>									
Office Park	750	372	GFA <sup>2</sup>	1.55	0.19	1.74	576	71	647
<i>Internal Trips (Office-Condo)</i>	<i>10%</i>						17	6	23
Subtotal (less internal) =							559	65	624
Low-rise Condo/Townhome	231	344	DU	0.16	0.50	0.66	55	172	227
<i>Internal Trips (Condo-Office)</i>	<i>10%</i>						6	17	23
Subtotal (less internal) =							49	155	204
<b>Gross A.M. Peak Hour Trips Generated =</b>							<b>631</b>	<b>243</b>	<b>874</b>
<i>Less Total Internal Trips =</i>							<i>23</i>	<i>23</i>	<i>46</i>
<i>Less Trip Credits (29%) =</i>							<i>51</i>	<i>36</i>	<i>86</i>
<b>Net New A.M. Peak Hour Trips Generated =</b>							<b>557</b>	<b>181</b>	<b>742</b>
<b>P.M. Peak Hour</b>									
Office Park	750	372	GFA <sup>2</sup>	0.21	1.25	1.50	78	480	558
<i>Internal Trips (Office-Condo)</i>	<i>10%</i>						12	17	29
Subtotal (less internal) =							66	463	529
Low-rise Condo/Townhome	231	344	DU	0.47	0.36	0.83	162	124	286
<i>Internal Trips (Condo-Office)</i>	<i>10%</i>						17	12	29
Subtotal (less internal) =							145	112	257
<b>Gross P.M. Peak Hour Trips Generated =</b>							<b>240</b>	<b>604</b>	<b>844</b>
<i>Less Total Internal Trips =</i>							<i>29</i>	<i>29</i>	<i>58</i>
<i>Less Trip Credits (29%) =</i>							<i>35</i>	<i>56</i>	<i>91</i>
<b>Net New P.M. Peak Hour Trips Generated =</b>							<b>176</b>	<b>519</b>	<b>695</b>

1. Institute of Transportation Engineers, Trip Generation Manual, 6th Edition, 1997 Land Use Code  
2. GFA = Gross Floor Area in square feet.

### *Proposed Plan Designation*

**Figure 5** presents the proposed designations trip distribution for CPA-2001-2. Based on the methodology described earlier, CPA-2001-2 affects 34 concurrency intersections. For the LOS analysis, the 34 concurrency intersections affected by the proposed designations of CPA-2001-2 were analyzed for both the existing and proposed designations.

### **2007 Level-of-Service Analysis**

#### *Existing Plan Designation*

**Table 6** presents results of the 2007 LOS analysis for CPA-2001-2 under existing designations; supporting calculations are provided in **Appendix C**. Of the 34 concurrency intersections analyzed, three intersections will operate at or below LOS E in 2007. The remaining 31 intersections operate at LOS D or better. The intersections of SR 527 and SR 522, 102nd Ave NE and Main Street, and 228th Street SE and 39th Avenue SE all operate at or below LOS E in 2007. The intersections of SR 527 and SR 522 and 102nd Ave NE and Main Street operate at or below LOS E and are included in the 1.5-hour analysis zone; however, neither intersection's operations improved to LOS D outside the 1.5-hour time period.

#### *Proposed Plan Designation*

**Table 6** presents the 2007 LOS analysis for the proposed designations of CPA-2001-2; calculations are provided in Appendix C. Five of the 34 concurrency intersections analyzed will operate at or below LOS E in 2007. The remaining 29 intersections analyzed all operate at LOS D or better. The intersections of Meridian Ave S and 240th Ave SE, 100th Ave SE and NE 190th St, SR 527 and SR 522, 102nd Ave NE and Main Street, and 228th Street SE and 39th Avenue SE operate below LOS E. The intersections of SR 527 and SR 522 and 102nd Ave NE and Main Street are at or below LOS E and are included in the 1.5-hour analysis zone; however, neither intersection's operations improved to LOS D outside the 1.5-hour time period.

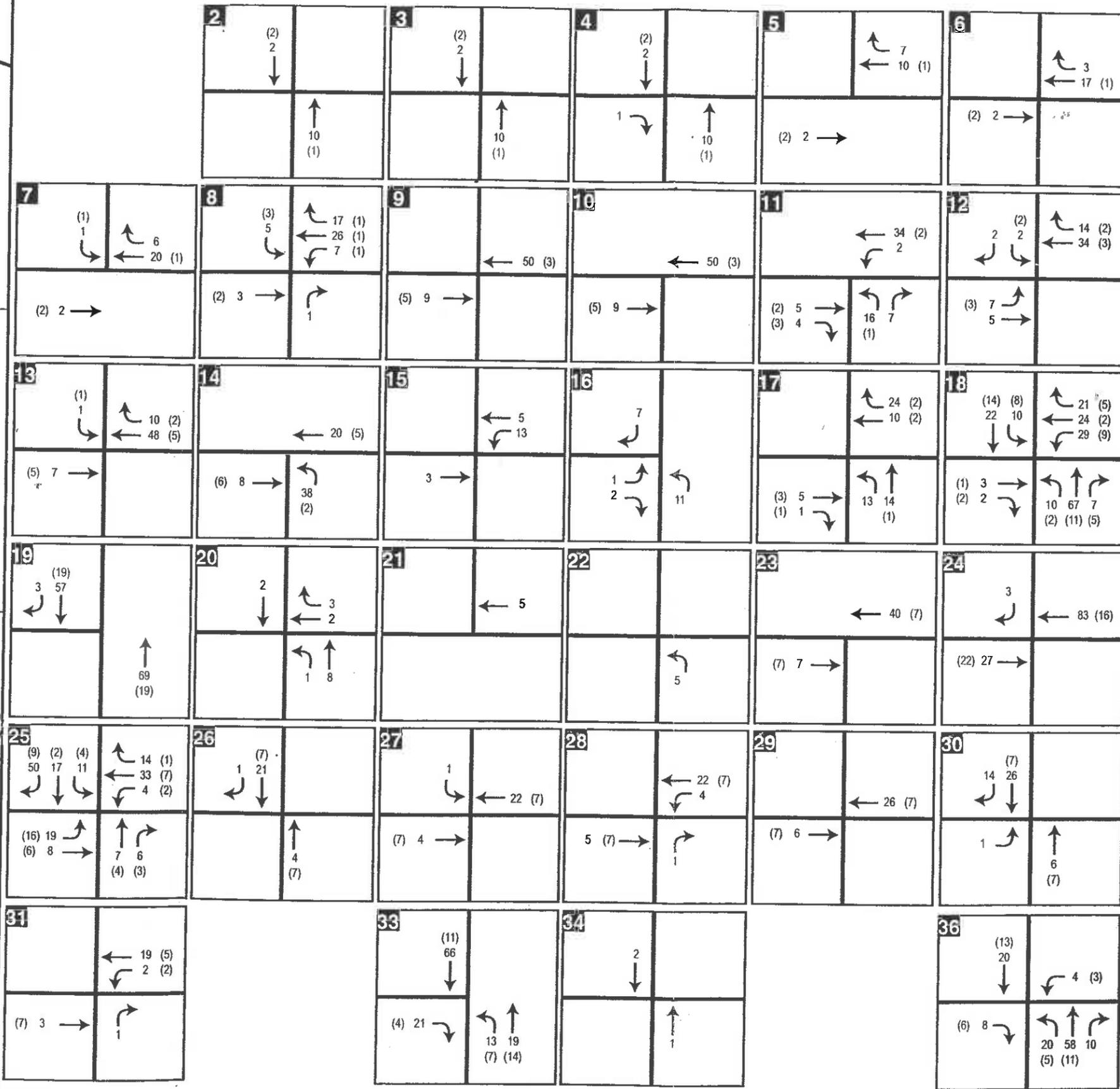
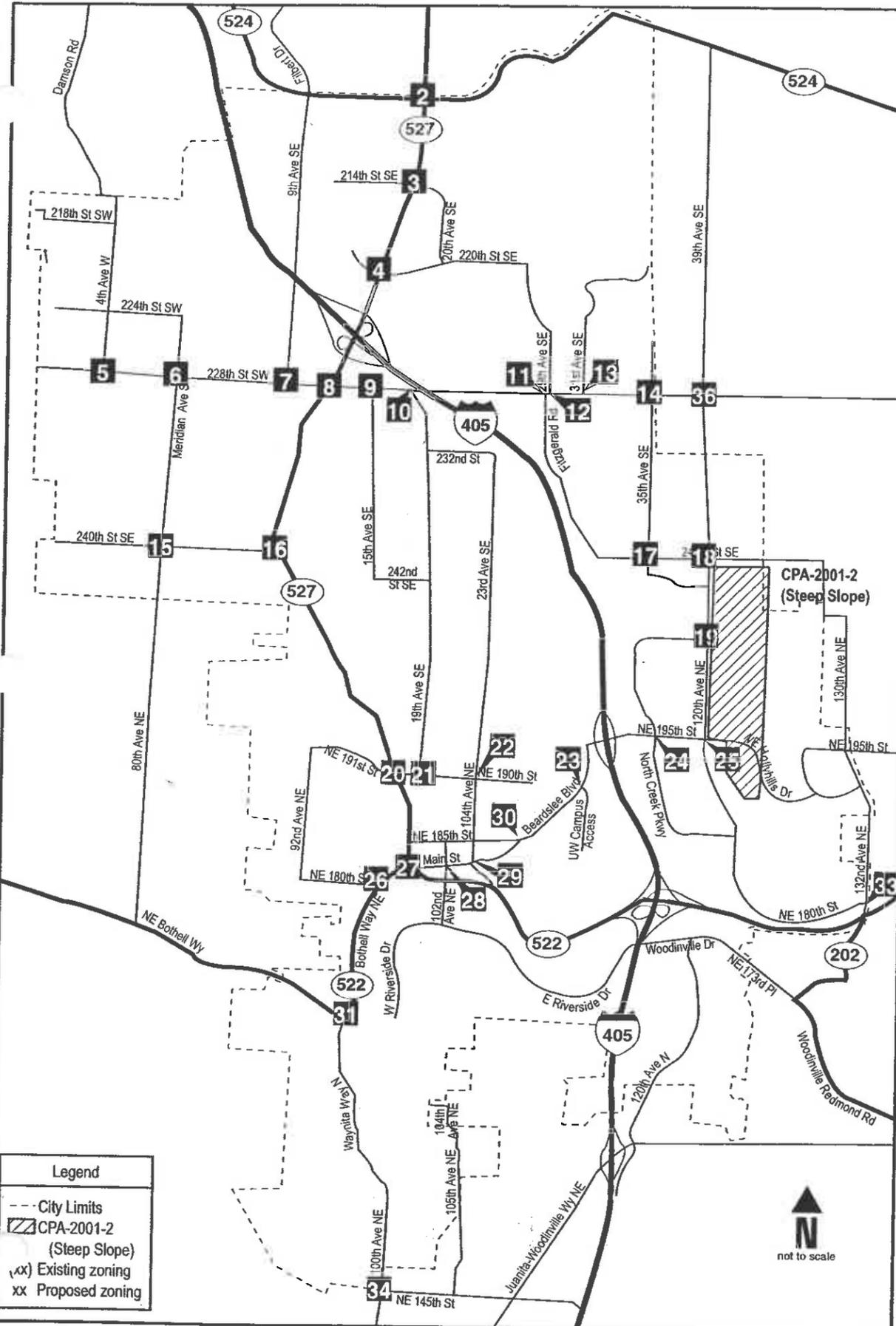


Figure 5  
2007 CPA-2001-2 (Steep Slope) Project Trips

**Table 6  
Plan Amendment CPA-2001-2, P.M. Peak-Hour Level of Service Summary**

INT No. <sup>1</sup>	Concurrency Intersection Description	Control Type <sup>2</sup>	at LOS E/F and in 1.5-Hour Zone? <sup>3</sup>	Existing Designation			Proposed Designation		
				Control Delay/Veh <sup>4</sup>	LOS <sup>5</sup>	1.5-Hour Analysis Satisfied? <sup>6</sup>	Control Delay/Veh <sup>4</sup>	LOS <sup>5</sup>	1.5-Hour Analysis Satisfied? <sup>6</sup>
1	SR 524/Filbert Rd	Signal	No	17.1	B	N/A <sup>6</sup>	17.2	B	N/A
2	SR 527/SR 524	Signal	No	39.5	D	N/A	40.1	D	N/A
3	SR 527/214th St SE	Signal	No	39.5	D	N/A	40.7	D	N/A
4	SR 527/220th St SE	Signal	No	34.3	C	N/A	34.9	C	N/A
5	4th Ave W/ 228th St SE	Signal	No	13.7	B	N/A	15.7	B	N/A
6	Meridian Ave S/ 228th St SE	Signal	No	21.3	C	N/A	22.9	C	N/A
7	9th Ave SE/ 228th St SE	Signal	No	20.2	C	N/A	22.3	C	N/A
8	SR 527/228th St SE	Signal	No	44.6	D	N/A	46.3	D	N/A
9	15th Ave St/ 228th St SE	Signal	No	41.9	D	N/A	40.5	D	N/A
10	19th Ave SE/ 228th St SE	Signal	No	32.1	C	N/A	33.4	C	N/A
11	Fitzgerald Rd/ 228th St SE	Signal	No	18.5	B	N/A	21.6	C	N/A
12	29th Ave SE/ 228th St SE	TWSC	No	12.8	B	N/A	13.9	B	N/A
13	31st Ave SE/ 228th St SE	TWSC	No	14.2	B	N/A	15.3	B	N/A
14	35th Ave SE/ 228th St SE	Signal	No	7.3	A	N/A	9.4	A	N/A
15	Meridian Ave S/ 240th St SE	AWSC	Yes	41.5	E	N/A	43.8	E	N/A
16	240th St SE/SR 527	Signal	No	10.0	A	N/A	10.1	B	N/A
17	35th Ave SE/ 240th St SE	TWSC	No	17.5	C	N/A	21.0	C	N/A

1. INT No. refers to intersection number shown in figure 5.
2. AWSC = All way stop controlled intersection, TWSC = Two-way stop-controlled intersection, Signal = Signalized intersection
3. All intersections designated as concurrency intersections must operate at LOS D or better with the exception of these intersections which are permitted to operate at LOS E or F for no more than 1.5 hours during the peak period. These intersections must also return to LOS D operations before and after the 1.5-hour period.
4. Control delay, measured in seconds per vehicle, is a measure of all the delay contributable to traffic control measures, such as traffic signals or stop signs. At signalized intersections, the delay reported is the average of all the control delay experienced for all the movements. At unsignalized intersections, the reported delay is for only one movement, the movement experiencing the worst control delay, which is typically one of the stop-controlled side street approaches. The control delay reported at unsignalized intersections is not a valid indication of the operations at the entire intersection.
5. LOS is the level of service, a concept based on the 1997 Highway Capacity Manual for unsignalized and signalized intersections.
6. Yes = LOS D or better
7. N/A: This does not apply to intersections outside of the 1.5-hour zone, or those intersections in the 1.5-hour zone which are operating at LOS D or better.

**Table 6 (continued)**  
**Plan Amendment CPA-2001-2, P.M. Peak-Hour Level of Service Summary**

INT No. <sup>1</sup>	Concurrency Intersection Description	Control Type <sup>2</sup>	at LOS E/F and in 1.5-Hour Zone? <sup>3</sup>	Existing Designation		Proposed Designation			
				Control Delay/Veh <sup>4</sup>	LOS <sup>5</sup>	Control Delay/Veh <sup>4</sup>	LOS <sup>5</sup>		
18	39th Ave SE/240th St SE	Signal	No	24.2	C	N/A <sup>8</sup>	31.7	C	N/A
19	120th Ave NE/North Creek Pkwy	TWSC	No	19.3	B	N/A	21.8	C	N/A
20	NE 191st St/SR 527	Signal	No	19.4	B	N/A	19.9	B	N/A
21	100th Ave SE/NE 190th St	TWSC	Yes	46.1	E	N/A	48.1	E	N/A
22	228th St SE/39th Ave SE	AWSC	No	14.8	B	N/A	14.9	B	N/A
23	Beardslee Blvd./UW N. Campus Access	Signal	No	18.1	B	N/A	17.9	B	N/A
24	North Creek Pkwy/NE 195th St	Signal	No	26.5	C	N/A	26.3	C	N/A
25	120th Ave NE/NE 195th St	Signal	No	35.4	C	N/A	39.9	D	N/A
26	SR 522/NE 180th St	Signal	No	23.6	C	N/A	25.2	C	N/A
27	SR 527/SR 522	Signal	Yes	63.8	E	No	67.2	E	No
28	102nd Ave NE/Main St	AWSC	Yes	69.4	F	N/A	76.7	F	N/A
29	104th Ave NE/Kaysner Way	Signal	No	13.1	B	N/A	13.8	B	N/A
30	NE 185th St / Beardslee Blvd.	Signal	No	6.9	A	N/A	7.5	A	N/A
31	96th Ave NE/SR 522	Signal	No	18.4	B	N/A	18.4	B	N/A
33	132nd Ave NE/NE 180th St	Signal	No	11.5	B	N/A	13.3	B	N/A
34	NE 145th St/100th Ave NE	Signal	No	21.3	C	N/A	21.4	C	N/A
36	228th Street SE/39th Avenue SE	Signal	No	85.4	F	N/A	94.3	F	N/A

1. INT No. refers to intersection number shown in **figure 5**.
2. AWSC = All way stop controlled intersection, TWSC = Two-way stop-controlled intersection, Signal = Signalized intersection
3. All intersections designated as concurrency intersections must operate at LOS D or better with the exception of these intersections which are permitted to operate at LOS E or F for no more than 1.5 hours during the peak period. These intersections must also return to LOS D operations before and after the 1.5-hour period.
4. Control delay, measured in seconds per vehicle, is a measure of all the delay contributable to traffic control measures, such as traffic signals or stop signs. At signalized intersections, the delay reported is the average of all the control delay experienced for all the movements. At unsignalized intersections, the reported delay is for only one movement, the movement experiencing the worst control delay, which is typically one of the stop-controlled side street approaches. The control delay reported at unsignalized intersections is not a valid indication of the operations at the entire intersection.
5. LOS is the level of service, a concept based on the 1997 Highway Capacity Manual for unsignalized and signalized intersections.
6. Yes = LOS D or better
7. N/A: This does not apply to intersections outside the 1.5-hour zone, or intersections in the 1.5-hour zone which are operating at LOS D or better.

### *Proposed Plan Designation*

**Table 7** presents the mitigation LOS analysis for the existing designation of CPA-2001-2; calculations are provided in **Appendix D**. Mitigation at the signalized intersections of SR 527 and SR 522 and 228th Street SE and 39th Avenue SE involves widening to accommodate additional lanes. This mitigation improves operations to LOS D at both intersections. The mitigation at the unsignalized intersections of Meridian Avenue S and 240th Street SE and 100th Avenue SE and NE 190th Street, which now is needed with the proposed land use designation, also involves widening to accommodate additional lanes. This mitigation improves operations to LOS C. In addition, signalizing the intersection of 102nd Avenue NE and Main Street is recommended as mitigation; this improves operations to LOS B.

### **2022 Land Use Description**

#### *Existing Plan Designation*

The assumptions made for 2007 would apply in 2022 to determine the amount of development under CPA-2001-2 under existing designations. Based on the realistic building area square footage provided by the City, 320 single-family dwelling units, 98 multi-family dwelling units, and 103,000 square feet of office can be developed in 2022 under CPA-2001-2 under the existing designations.

#### *Proposed Plan Designation*

The assumptions made for 2007 would apply for 2022 to determine the amount of development under CPA-2001-2 under proposed designations. Based on the realistic building area square footage provided by the City, 819 multi-family dwelling units (allowed density of 15 dwelling units per acre) and 857,000 square feet of office can be developed in 2022 under CPA-2001-2 under the proposed designations.

### **2022 Trip Generation**

#### *Existing Plan Designation*

**Table 8** presents a comparison of 2022 a.m. and p.m. peak-hour trip generation for CPA-2001-2 under the existing designations. It shows the net new trips generated for the a.m. and p.m. peak hours after subtracting pass-by trips, internalization, and trip credits to account for existing trips in the system.

**Table 7  
Mitigation Analysis Summary for Plan Amendment CPA-2001-2**

Int. ID <sup>1</sup>	Intersection	Leg	No. of lanes on intersection leg with Suggested Mitigation			Existing Zoning Delay <sup>2</sup> /LOS		Proposed Zoning Delay <sup>2</sup> /LOS	
			2007 Base	Existing Zoning	Proposed Zoning	Before Mit.	After Mit.	Before Mit.	After Mit.
15	Meridian Ave S/ 240th Street SE	North	2	2	2	41.5 / E <sup>3</sup>	-	43.8 / E	24.0/C
		South	2	3	3				
		East	3	3	3				
		West	2	2	2				
21	100th Ave SE / NE 190th Street	North	2	3	2	46.1 / E <sup>3</sup>	-	48.1 / E	28.5/D
		East	2	3	3				
		West	2	2	2				
27	SR 527/SR 522	North	4	4	4	63.8/E	51.7/D	67.2/E	53.9D
		South	6	6	6				
		East	4	4	4				
		West	6	7	7				
28	102nd Ave NE/Main St	North	2	2	2	69.4/F	12.7/B	76.7/F	19.6/B
		South	2	3	3				
		East	2	2	2				
		West	2	2	2				
36	228th Street SE / 39th Avenue SE	North	5	5	5	85.4/ F	53.6/D	94.3/ F	50.3/D
		South	5	6	6				
		East	3	4	4				
		West	3	4	4				

1. Intersection ID refers to the location on **figure 5**.
2. Delay refers to control delay, which is measured in seconds per vehicle.
3. The mitigation shown here is not needed for the existing land use designation because these intersections had fewer than three trips sent through them. The LOS shown for existing designations at these intersections is for comparison purposes only.

**Table 8**  
**Plan Amendment CPA-2001-2 Existing Designation**  
**2022 Trip Generation**

Land Use	ITE LUC <sup>1</sup>	No.	Units <sup>2</sup>	Trip Rates			Peak-Hour Trips		
				In	Out	Total	In	Out	Total
<b>A.M. Peak Hour</b>									
Single-Family Detached Housing	210	320	DU	0.19	0.56	0.75	61	179	240
Office Park	750	103	GFA	1.55	0.19	1.74	159	20	179
<i>Internal Trips (Office-Condo)</i>	10%						5	2	7
				Subtotal (less internal) =			154	18	172
Low-rise Condo/Townhome	231	98	DU	0.16	0.50	0.66	16	49	65
<i>Internal Trips (Condo-Office)</i>	10%						2	5	7
				Subtotal (less internal) =			14	44	58
				<b>Gross A.M. Peak Hour Trips Generated =</b>			<b>236</b>	<b>248</b>	<b>484</b>
				<i>Less Total Internal Trips =</i>			<i>7</i>	<i>7</i>	<i>14</i>
				<i>Less Trip Credits =</i>			<i>175</i>	<i>123</i>	<i>298</i>
				<b>Net New A.M. Peak Hour Trips Generated =</b>			<b>54</b>	<b>118</b>	<b>172</b>
<b>P.M. Peak Hour</b>									
Single-Family Detached Housing	210	320	DU2	0.65	0.36	1.01	208	115	323
Office Park	750	103	GFA	0.21	1.25	1.50	22	133	155
<i>Internal Trips (Office-Condo)</i>	10%						4	4	8
				Subtotal (less internal) =			18	129	147
Low-rise Condo/Townhome	231	98	DU	0.47	0.36	0.83	46	35	81
<i>Internal Trips (Condo-Office)</i>	10%						4	4	8
				Subtotal (less internal) =			42	31	73
				<b>Gross P.M. Peak Hour Trips Generated =</b>			<b>276</b>	<b>283</b>	<b>559</b>
				<i>Less Total Internal Trips =</i>			<i>8</i>	<i>8</i>	<i>16</i>
				<i>Less Trip Credits =</i>			<i>122</i>	<i>193</i>	<i>315</i>
				<b>Net New P.M. Peak Hour Trips Generated =</b>			<b>146</b>	<b>82</b>	<b>228</b>

1. Institute of Transportation Engineers, Trip Generation Manual, 6th Edition, 1997 Land Use Code  
2. GFA = Gross Floor Area in 1,000 square feet and DU = Dwelling Units

A total of 172 new trips in 2022 would be generated from CPA-2001-2 in the a.m. peak as compared to 228 new trips in the p.m. peak. The p.m. peak represents the worst case trip generation and, therefore, is a conservative estimate to use for traffic analysis purposes.

### *Proposed Plan Designation*

**Table 9** presents a comparison of 2022 a.m. and p.m. peak-hour trip generation for CPA-2001-2 under the proposed designations. It shows the net new trips generated for the a.m. and p.m. peak hours after subtracting pass-by trips, internalization, and trip credits to account for existing trips in the system.

A total of 1,626 new trips would be generated from CPA-2001-2 in the a.m. peak as compared to 1,515 new trips in the p.m. peak. Although the a.m. peak trip generation is 111 trips higher, the baseline 2022 volumes used to analyze the capacity and demand are higher for the p.m. peak. As such, the p.m. peak generation still would be considered a conservative estimate.

### **2022 Capacity Needs**

#### *Existing Plan Designation*

**Table 10** presents the results of the 2022 screenline analysis for CPA-2001-2. Results indicate that the total lane demand does not exceed the lane capacity at any screenline locations under the existing plan designations. The surplus in lane capacity for north-south roadways throughout the City ranges between two and seven travel lanes, while the surplus in lane capacity for east-west roadways throughout the City ranges between two and four travel lanes.

#### *Proposed Plan Designation*

**Table 10** presents the results of the 2022 screenline analysis for CPA-2001-2. Results indicate that the total lane demand does not exceed the lane capacity at any screenline locations under the proposed plan designations. The surplus in lane capacity for north-south roadways throughout the City ranges between two and six travel lanes, while the surplus in lane capacity for east-west roadways throughout the City ranges between two and four travel lanes.

**Table 9**  
**Plan Amendment CPA-2001-2 Proposed Designation**  
**2022 Trip Generation**

Land Use	ITE LUC <sup>1</sup>	No.	Units <sup>2</sup>	Trip Rates			Peak-Hour Trips		
				In	Out	Total	In	Out	Total
<b>A.M. Peak Hour</b>									
Office Park	750	857	GFA	1.55	0.19	1.74	1,328	163	1,491
Internal Trips (Office-Condo)	10%						41	13	54
Subtotal (less internal) =							1,287	150	1,437
Low-rise Condo/Townhome	231	819	DU	0.16	0.50	0.66	131	410	541
Internal Trips (Condo-Office)	10%						13	41	54
Subtotal (less internal) =							118	369	487
<b>Gross A.M. Peak Hour Trips Generated =</b>							<b>1,459</b>	<b>573</b>	<b>2,032</b>
<i>Less Total Internal Trips =</i>							54	54	108
<i>Less Trip Credits =</i>							175	123	298
<b>Net New A.M. Peak Hour Trips Generated =</b>							<b>1,230</b>	<b>396</b>	<b>1,626</b>
<b>P.M. Peak Hour</b>									
Office Park	750	857	GFA	0.21	1.25	1.50	180	1,106	1,286
Internal Trips (Office-Condo)	10%						30	38	68
Subtotal (less internal) =							150	1,068	1,218
Low-rise Condo/Townhome	231	819	DU	0.47	0.36	0.83	385	295	680
Internal Trips (Condo-Office)	10%						38	30	68
Subtotal (less internal) =							347	265	612
<b>Gross P.M. Peak Hour Trips Generated =</b>							<b>565</b>	<b>1,401</b>	<b>1,966</b>
<i>Less Total Internal Trips =</i>							68	68	136
<i>Less Trip Credits =</i>							122	193	315
<b>Net New P.M. Peak Hour Trips Generated =</b>							<b>375</b>	<b>1,140</b>	<b>1,515</b>

1. Institute of Transportation Engineers, Trip Generation Manual, 6th Edition, 1997 Land Use Code
2. GFA = Gross Floor Area in 1,000 square feet and DU = Dwelling Units

**Table 10  
2022 Screenline Analysis  
Comprehensive Plan Amendment 2**

Screenline <sup>1</sup>	Direction	Number of Travel Lanes			
		2022 Existing Zoning		2022 Proposed Zoning	
		Capacity <sup>2</sup>	Demand <sup>3</sup>	Capacity <sup>2</sup>	Demand <sup>3</sup>
A	Eastbound	6	3	6	3
	Westbound	6	5	6	5
B	Eastbound	9	5	9	5
	Westbound	9	7	9	7
C	Eastbound	8	4	8	4
	Westbound	8	4	8	5
D	Eastbound	5	2	5	2
	Westbound	5	3	5	3
1	Northbound	8	6	8	6
	Southbound	8	3	8	3
2	Northbound	7	5	7	5
	Southbound	7	2	7	2
3	Northbound	7	4	7	4
	Southbound	7	3	7	3
4	Northbound	10	6	10	6
	Southbound	10	3	10	4

Notes:

1. A screenline is an imaginary line drawn across horizontally or vertically across the City. At locations where the screenline crosses an arterial street, the capacity and demand of the road are totaled and recorded in this table. For illustration of screenlines, see **figure 4**.
2. The capacity refers to the number of travel lanes, excluding center turn lanes, in one direction that are anticipated to exist by 2022 on the screenline identified based on the City's Comprehensive Plan, current planning studies underway, and city staff judgment.
3. The demand refers to the number of travel lanes, excluding center turn lanes, in one direction that are needed to support the traffic demand generated by the zoning along the screenline identified. One lane of road in this urban setting is assumed to accommodate 1,000 vehicles per hour (vph) at capacity. In cases where the lane is adjacent to a center turn lane, the lane is assumed to accommodate 1,200 vph at capacity.

**Conclusion**

The purpose of CPA-2001-2 is to eliminate the 15 percent slope restriction on multi-family residential and office park developments in the North Creek east hillside area. This amendment will change the existing designation of permitting only single-family residential

development on steep slopes of more than 15 percent grade to the proposed designation of multi-family residential development (allowed density of 15 dwelling units per net acre) and office park allowed on slopes of 15 percent grade or more. Consequently, the proposed designations for CPA-2001-2 generate more trips than the existing designations, with the existing and proposed designations generating 131 and 695 new trips in 2007, respectively, or an increase of 564 p.m. peak-hour trips. As a result, the existing designations will affect 27 concurrency intersections with three or more project trips as compared to 34 concurrency intersections for the proposed designations.

The results of the 2007 LOS analysis for CPA-2001-2 show that under existing designations, three intersections will operate at LOS E or below, and that under proposed designations, five intersections will operate at or below LOS E. Three of these intersections are failing under both designations: SR 527 and SR 522, 102nd Avenue NE and Main Street, and 228th Street SE and 39th Avenue SE. For most of the concurrency intersections, the control delay for the proposed designations remains the same or increases by less than three seconds per vehicle when compared to the existing designations. The mitigation proposed to improve the operations at each of these intersections to LOS D or above is the same for both existing and proposed designations (see **table 7**). Therefore, the impacts of changing the land use for CPA-2001-2 are negligible.

By 2022, the proposed designation for CPA-2001-2 during the p.m. peak hour would generate 1,515 trips, which is an increase of 1,287 trips as compared to the existing designation. A screenline analysis was performed to determine the capacity needs throughout the City. Results indicated that a surplus of between two to six travel lanes would exist with the proposed designation. Therefore, the impacts of changing the land use for CPA-2001-2 in 2022 are negligible.

### **Plan Amendment CPA-2001-3 (Gibson)**

The affected properties associated with Plan Amendment 3 (CPA-2001-3) are located 380 feet south of 228th Street SE and west of 19th Avenue SE. These properties are within the most southerly portion of the Canyon Park/Thrasher's Corner Subarea according to the *"Imagine Bothell..." Compliance Plan*. Land on the north and west sides of this property is designated R 11-15; land south of this property is designated R 6-10. This amendment would "square off" the boundaries of the plan designation R 11-15 by changing the Gibson property land use designation from R 6-10 to R 11-15. Access to the site is provided from 228th Street SW, which is an east-west arterial that runs the entire length of the city and provides connections to SR 527 and I-405. Access also is provided from the south by 19th Avenue SE, a north-south arterial that connects to NE 190th Street to provide access to SR 527 and SR 522.

Based on discussions with the city, it was determined that the property associated with CPA-2001-3 would be fully developed by 2007. As such, the project trips from this plan amendment would already be accounted for in the street network in 2022. Therefore, a

trip generation analysis was not performed. A capacity needs analysis, however, was performed to determine the areas where the lane demand exceeded the lane capacity in 2022. The detailed 2007 analysis and a description of the 2022 capacity needs are provided below.

## ***2007 Land Use Description***

### ***Existing Plan Designation***

CPA-2001-3 currently is zoned for single-family residential development at a density of eight dwelling units per acre (R-8). This property, which is approximately 0.95 acre, is zoned R-8. Based on the assumptions given in the Methodology section to this report, it was determined that approximately 75 percent of the total land area, or 0.75 acre in the site of CPA-2001-3 is developable land. Given the permitted density of development and the area of developable land, 11 dwelling units can be developed in CPA-2001-3 under the existing designations.

### ***Proposed Plan Designation***

The proposed designation classification for CPA-2001-3 is multi-family residential development, specifying 15 dwelling units per net acre (R-15). Given the proposed density of development and the area of developable land, 11 dwelling units could be developed on CPA-2001-3 under the proposed designation.

## ***2007 Trip Generation***

### ***Existing Plan Designation***

**Table 11** presents the a.m. and p.m. peak-hour trip generation comparison for CPA-2001-3 under the existing designations. There are a total of four new trips generated from CPA-2001-3 in the a.m. peak as compared to six new trips in the p.m. peak. The p.m. peak represents the worst case trip generation and, therefore, is a conservative estimate to use for traffic analysis purposes.

**Table 11  
Plan Amendment CPA-2001-3 Existing Designations  
2007 Trip Generation**

Land Use	No.	Units	ITE LUC <sup>1</sup>	Trip Rates			Peak-Hour Trips		
				In	Out	Total	In	Out	Total
<b>A.M. Peak Hour</b>									
Single-Family Detached Housing	210	6	DU	0.19	0.56	0.75	1	3	4
<b>P.M. Peak Hour</b>									
Single-Family Detached Housing	210	6	DU	0.65	0.36	1.01	4	2	6

1. Institute of Transportation Engineers, Trip Generation Manual, 6th Edition, 1997 Land Use Code
2. GFA = Gross Floor Area in square feet

*Proposed Plan Designation*

**Table 12** presents a comparison of the a.m. and p.m. peak-hour trip generation for CPA-2001-3 under the proposed designation. There are a total of seven new trips generated CPA-2001-3 in the a.m. peak as compared to nine new trips in the p.m. peak. The p.m. peak represents the worst case trip generation and, therefore, is a conservative estimate to use for traffic analysis purposes.

**Table 12  
Plan Amendment CPA-2001-3 Proposed Designation  
2007 Trip Generation**

Land Use	No.	Units	ITE LUC <sup>1</sup>	Trip Rates			Peak-Hour Trips		
				In	Out	Total	In	Out	Total
<b>A.M. Peak Hour</b>									
Low-rise Condo/Townhome	231	11	DU	0.16	0.50	0.66	2	5	7
<b>P.M. Peak Hour</b>									
Low-rise Condo/Townhome	231	11	DU	0.47	0.36	0.83	5	4	9

1. Institute of Transportation Engineers, Trip Generation Manual, 6th Edition, 1997 Land Use Code
2. GFA = Gross Floor Area in square feet

## **2007 Trip Distribution**

### *Existing Plan Designation*

**Figure 6** presents the existing designations trip distribution for CPA-2001-3. Based on the methodology described in this report, CPA-2001-3 affects four concurrency intersections.

### *Proposed Plan Designation*

**Figure 6** presents the proposed designation trip distribution for CPA-2001-3. Based on the methodology used in this report, CPA-2001-3 affects five concurrency intersections. For the purposes of the LOS analysis, the five concurrency intersections affected by the proposed designations of CPA-2001-3 were analyzed for both the existing designation and proposed designation.

## **2007 Level-of-Service Analysis**

### *Existing Plan Designation*

**Table 13** presents the 2007 LOS analysis for the existing designation of CPA-2001-3 with calculations provided in **Appendix E**. Of the five concurrency intersections analyzed, one intersection, 19th Avenue SE/NE 190th Street, will operate at LOS E in 2007. The remaining four intersections analyzed operate at LOS D or better. The intersections of SR 527 and 228th Street SE, 15th Avenue SE and 228th Street SE, 19th Avenue SE and 228th Street SE, and SR 527 and NE 191st Street operate at or above the City of Bothell's LOS D standard. These intersections also are included in the 1.5-hour analysis zone; however, this analysis was not needed because operations at these intersections were above LOS E for the existing land use designation.

### *Proposed Plan Designation*

**Table 13** presents the 2007 LOS analysis for the proposed amendment CPA-2001-3; calculations are provided in **Appendix E**. Of the five concurrency intersections analyzed, one intersection, 19th Avenue SE and NE 190th Street, will operate at LOS E in 2007. The remaining four intersections, SR 527 and SR 524, SR 527 and 228th Street SE, 15th Avenue SE and 228th Street SE, 19th Avenue SE and 228th Street SE, and SR 527 and NE 191st Street, operate at or above the City of Bothell's LOS D standard. These intersections are also included in the 1.5-hour analysis zone; however, this analysis was not needed because operations at these intersections were above LOS E for the proposed land use designation.



**Table 13**  
**Plan Amendment CPA-2001-3**  
**2007 P.M. Peak-Hour Level of Service Summary**

Concurrency Intersection	Control Type <sup>2</sup>	At LOS E/F in 1.5 hour zone? <sup>3</sup>	Existing Designation			Proposed Designation		
			Control Delay/Veh <sup>4</sup>	LOS <sup>5</sup>	1.5-Hour Analysis Satisfied? <sup>6</sup>	Control Delay/Veh <sup>4</sup>	LOS <sup>5</sup>	1.5-Hour Analysis Satisfied? <sup>6</sup>
8 SR 527/228th St SE	Signal	Yes	44.6	D	N/A <sup>6</sup>	44.6	D	N/A
15th Ave St/228th St SE	Signal	Yes	41.8	D	N/A	41.8	D	N/A
19th Ave SE/228th St SE	Signal	Yes	31.8	C	N/A	31.8	C	N/A
20 SR 527/NE 191st St	Signal	Yes	19.4	B	N/A	19.4	B	N/A
21 19th Ave SE/NE 190th St	TWSC	No	47.2	E	N/A	47.6	E	N/A

1. INT No. refers to intersection number shown in **figure 6**.
2. AWSC = All way stop controlled intersection, TWSC = Two-way stop controlled intersection, Signal = Signalized intersection
3. All intersections designated as concurrency intersections must operate at LOS D or better with the exception of these intersections which are permitted to operate at LOS E of F for no more than 1.5 hours during the peak period. These intersections must also return to LOS D operations before and after the 1.5-hour period.
4. Control delay, measured in seconds per vehicle, is a measure of all the delay contributable to traffic control measures, such as traffic signals or stop signs. At signalized intersections, the delay reported is the average of all the control delay experienced for all the movements. At unsignalized intersections, the reported delay is for only one movement, the movement experiencing the worst control delay, which is typically one of the stop-controlled side street approaches. The control delay reported at unsignalized intersections is not a valid indication of the operations at the entire intersection.
5. LOS is the level of service, a concept based on the 1997 Highway Capacity Manual for unsignalized and signalized intersections.
6. Yes = LOS D or better
7. N/A: This does not apply to intersections outside the 1.5-hour zone, or intersections in the 1.5-hour zone which are operating at LOS D or better.

## **2007 Mitigation**

### *Existing Plan Designation*

**Table 14** presents the mitigation LOS analysis for the existing designation of CPA-2001-3; calculations are provided in **Appendix F**. Under the existing plan designation, mitigation was required only at the intersection of 19th Avenue SE and NE 190th Street. Mitigation at this unsignalized intersection involves constructing both a southbound left-turn pocket and a westbound right-turn pocket. This mitigation improves operations to LOS D or better at this intersection.

### *Proposed Plan Designation*

**Table 14** presents the mitigation LOS analysis for the proposed amendments of CPA-2001-3; calculations are provided in **Appendix F**. Under the proposed plan designation, mitigation was required only at the intersection of 19th Avenue SE and NE 190th Street.

Mitigation at this unsignalized intersection was the same for the existing designation and involves constructing both a southbound left-turn pocket and a westbound right-turn pocket. This mitigation improves operations to LOS D or better at this intersection.

**Table 14**  
**2007 Mitigation Analysis Summary for Plan Amendment CPA-2001-3**

Int. ID <sup>1</sup>	Intersection	No. of lanes on intersection leg with Suggested Mitigation	Existing Zoning Delay <sup>2</sup> /LOS		Proposed Zoning Delay <sup>2</sup> /LOS				
			2007 Base	Existing Zoning	Proposed Zoning	Before Mit.	After Mit.	Before Mit.	After Mit.
21	19th Ave SE/ NE 190th St	North	2	3	3	47.2 / E	32.9 / D	47.6 / F	32.9 / D
		East	2	3	3				
		West	2	2	2				

1. Intersection ID refers to the location on figure 6.  
2. Delay refers to control delay, which is measured in seconds per vehicle.

## 2022 Capacity Needs

### Existing Plan Designation

**Table 15** provides the results of the 2022 screenline analysis for CPA-2001-3. Results indicate that the total lane demand does not exceed the lane capacity at any screenline locations under the existing plan designations. The surplus in lane capacity for north-south roadways throughout the City ranges between two and seven travel lanes while the surplus in lane capacity for east-west roadways throughout the City ranges between two and four travel lanes.

### Proposed Plan Designation

**Table 15** provides the results of the 2022 screenline analysis for CPA-2001-3. Results indicate that the total lane demand does not exceed the lane capacity at any screenline locations under the proposed plan designations. The surplus in lane capacity for north-south roadways throughout the City ranges between two and six travel lanes, while the surplus in lane capacity for east-west roadways throughout the City ranges between two and four travel lanes.

**Table 15**  
**2022 Screenline Analysis**  
**Comprehensive Plan Amendment 3**

Screenline <sup>1</sup>	Direction	Number of Travel Lanes			
		2022 Existing Zoning		2022 Proposed Zoning	
		Capacity <sup>2</sup>	Demand <sup>3</sup>	Capacity <sup>2</sup>	Demand <sup>3</sup>
A	Eastbound	6	3	6	3
	Westbound	6	5	6	5
B	Eastbound	9	5	9	5
	Westbound	9	7	9	7
C	Eastbound	8	4	8	4
	Westbound	8	4	8	4
D	Eastbound	5	2	5	2
	Westbound	5	3	5	3
1	Northbound	8	6	8	6
	Southbound	8	3	8	3
2	Northbound	7	5	7	5
	Southbound	7	2	7	2
3	Northbound	7	4	7	4
	Southbound	7	3	7	3
4	Northbound	10	5	10	5
	Southbound	10	3	10	3

Notes:

1. A screenline is an imaginary line drawn across horizontally or vertically across the City. At locations where the screenline crosses an arterial street, the capacity and demand of the road are totaled and recorded in this table. For illustration of screenlines, see **figure 4**.
2. The capacity refers to the number of travel lanes, excluding center turn lanes, in one direction that are anticipated to exist by 2022 on the screenline identified based on the City's Comprehensive Plan, current planning studies underway, and city staff judgment.
3. The demand refers to the number of travel lanes, excluding center turn lanes, in one direction that are needed to support the traffic demand generated by the zoning along the screenline identified. One lane of road in this urban setting is assumed to accommodate 1,000 vehicles per hour (vph) at capacity. In cases where the lane is adjacent to a center turn lane, the lane is assumed to accommodate 1,200 vph at capacity.

## **Conclusion**

The land use associated with CPA-2001-3 will change from the existing designation of single-family residential development (R-8), with a density of eight dwelling units per net acre, to the proposed designation of multi-family residential with an increased density of 15 dwelling units per net acre (R-15). The land use change provides up to five additional units on the parcel. Consequently, the proposed designation for CPA-2001-3 generates more trips than the existing designations, with the existing and proposed designations generating six and nine net new trips in 2007, respectively, or an increase of three p.m. peak-hour trips. As a result, the proposed designations of CPA-2001-3 will impact five concurrency intersections with three or more project trips as compared to four concurrency intersections for the existing designations.

The results of the LOS analysis show that under both the existing and proposed designations of CPA-2001-3, the same concurrency intersection, out of the five analyzed, will operate at LOS E in 2007. At each concurrency intersection, the control delay for the proposed designations remains the same or increases by a maximum of 0.5 seconds per vehicle when compared to the existing designations. The failing intersection is 19th Avenue SE and NE 190th Street. The mitigation proposed to improve the operations to LOS D or better at this intersection is the same for both the existing and proposed designations; therefore, the impacts of changing the land use for CPA-2001-3 are negligible.

Results of the 2022 analysis indicate that the total lane demand does not exceed the lane capacity at any screenline locations under both the existing and proposed plan designations. The surplus in lane capacity for both north-south roadways and east-west roadways throughout the city also are the same under both designations.

## **Plan Amendment CPA-2001-4**

The affected property associated with Plan Amendment CPA-2001-4 is the North Creek Subarea located south and east of the Home Depot site at 12542 NE 180th Street. This amendment proposes expanding the Motor Vehicle Sales Overlay (MVS0) to include this Community Business designated property. The neighboring properties to the east of this site were granted the MVS0 designation in December 2000 by the Bothell City Council with the passage of ordinance 1841. This property was not included in last year's Plan Amendment 99-PA-7b. At that time, the property in question was excluded partly because a Conditional Use Permit application for a senior housing development was being processed for the site.

Last year's Plan Amendment 99-PA-7b allowed some, but not all, of the land zoned Community Business to be developed as auto dealerships. For this reason, a quantitative analysis was not performed for 99-PA-7b. Some of the areas within the City of Bothell that were considered for 99-PA-7b included the downtown area, Canyon Park area, and North Creek Business Park area. The discussion that follows is the qualitative analysis of

impacts related to allowing the MVSO in Community Business designated areas for 99-PA-7b that was presented in the November 2000 report. The results of this discussion also are applicable to CPA-2001-4.

### ***2007 Land Use Description***

#### ***Existing Plan Designation***

Currently, 99-PA-7b is any parcel of land zoned for Community Business, which allows some form of retail, office, and industrial development, but not auto dealerships. The property included in CPA-2001-4 is zoned for community business.

#### ***Proposed Plan Designation***

The proposed designations classification for 99-PA-7b would allow auto dealerships on some of the parcels in the city currently zoned for Community Business. This designation would apply to CPA-2001-4.

### ***2007 Trip Generation***

#### ***Existing Plan Designation***

Of the land uses permitted under Community Business designations, ITE LUC 820, Shopping Center represents a worst case trip generation land use. The trip rate for Shopping Center during the weekday a.m. and p.m. peak periods, with pass-by trips reduced, is 0.65 and 2.37 trips, respectively, per 1,000 square feet of gross leasable area. Because the rate is based on gross leasable area, the entire buildable area of a lot is considered to generate trips.

#### ***Proposed Plan Designation***

For the proposed designations, land use designation of 99-PA-7b, ITE LUC 841, Auto Car Sales was selected to represent the auto dealerships. The trip rate for Auto Car Sales during the weekday a.m. and p.m. peak periods is 2.21 and 2.80 trips, respectively, per 1,000 square feet of gross floor area. Because the rate is based on gross floor area, for an auto dealership lot, only the area designated for the sales building and auto repair shop is considered to generate trips. Generally, the area taken up by the sales building and auto repair shop is much less than the total area of an auto dealership lot. Also, auto dealerships tend to be located within close proximity to other auto dealerships, which encourages pass-by trips among consumers who want to visit several auto dealerships to comparison shop. There are no studies available in the ITE Trip Generation Manual that document pass-by rates for auto dealerships.

## **2022 Capacity Analysis**

Based on the same reasons as documented in the 2007 section, trips associated with CPA-2001-4 under the existing plan designation would be higher than the proposed designation. As such, the impacts of changing the land use under the proposed zoning would be negligible. Therefore, a trip generation and screenline analysis was not performed.

## **Conclusion**

The trip rate for an auto dealership during the weekday p.m. peak, without any adjustment for pass-by trips, is 2.80 trips per 1,000 square feet of gross floor area. The trip rate for a shopping center during the same time period, with a pass-by adjustment, is 2.37 trips per 1,000 square feet of gross leaseable area. If a pass-by adjustment of 15 percent were assumed for the auto dealership, the trip rate would be equal to the pass-by adjusted trip rate for the shopping center. Also, it is more than likely that the gross leaseable area of a shopping center would be greater in size on any given developable lot than a sales building and auto repair shop for an auto dealership. In our engineering judgment, the trips generated by a shopping center would be equal to or greater than the trips generated by an auto dealership, and therefore, the impacts of changing the land use for CPA-2001-4 are negligible. The impacts of this amendment in 2022 are negligible.

## **Plan Amendment CPA-2001-5**

Plan Amendment CPA-2001-5 includes Plan and Code amendments recommended by the City of Bothell Planning Commission that would increase allowable building height in four activity centers and substantially decrease it in one. CPA-2001-5 also includes increasing residential density land use designations to provide more multi-family residential dwelling units throughout the city. The affected land areas included in Plan Amendment CPA-2001-5 are Thrasher's Corner, Canyon Park, and Downtown Community Activity Centers, and the Canyon Park and North Creek Regional Activity Centers. For location of these areas see **figure 1**. The Planning Commission invoked the following list of stipulations for this building height Plan Amendment CPA-2001-5:

- In the Thrasher's Corner and Canyon Park Community Activity Centers, the height limits should be raised from 35 feet to 65 feet to promote pedestrian-oriented mixed-use development and consequent sustained vitality and economic health of the community activity centers. Buildings over 35 feet in height would be required to devote at least 10 percent of the area of the average story to externally-oriented at-grade space for retail, dining, personal services, etc. Additionally, such buildings also would be required to devote at least 40 percent of the area of the average story to parking, either within the building or within a separate parking structure. This purpose is to ensure the compact, pedestrian-friendly, mixed-use development desired in community

activity center areas. The impacts of all buildings heights over 35 feet are to be handled by requiring a graduated setback of three feet horizontal for each foot of building over 35 feet.

- In the Canyon Park Regional Activity Center, the height limits should be raised from 48 feet to 150 feet to accommodate the forecasted future job growth without having to dedicate more land for office and light industrial use. These buildings also must remain in proportion with what is appropriate for the valley's geographic setting. The impacts of all buildings heights over 35 feet are to be handled by requiring a graduated setback of three feet horizontal for each foot of building over 35 feet.
- In the valley floor of the North Creek Regional Activity Center, the building heights should be lowered from an unlimited height to a height of 150 feet for consistency with the Canyon Park Regional Activity Center and to ensure a building size appropriate with the valley's geographic setting. The impacts of all buildings heights over 35 feet are to be handled by requiring a graduated setback of three feet horizontal for each foot of building over 35 feet.
- In the North Creek Regional Activity Center's southwest and east hillsides, the height limits were restricted to 65 feet to accommodate for forecasted job growth, while recognizing the potential for adverse aesthetic impacts on nearby residential areas. These impacts are to be handled by requiring a graduated setback of three feet horizontal for each foot of building over 35 feet. In addition, when a property abuts a residential zone, a buffer landscaping of 0.25 feet for each foot of building height in excess of 35 feet, up to a maximum of 10 feet, also is required. The University of Washington Bothell/Cascadia Community College (UWB/CCC) is located in this area; however, no revision to building height limits will be made to the campus as part of this plan amendment.
- The Downtown Community Activity Center's height limits should be raised from 35 feet to 65 feet. In addition, these areas are also subject to the incorporation of structured parking and ground-floor retail like the Thrasher's Corner and Canyon Park Community Activity Center areas. The impacts of all buildings heights over 35 feet are to be handled by requiring a graduated setback of three feet horizontal for each foot of building over 35 feet. For the preservation of the Historic scale of Main Street, buildings on 101st and 102nd would be required to step the third and higher floors back from the front line by 20 feet.

## ***2007 Land Use Description and Projected Residential/Employment Numbers***

### ***Existing Plan Designation***

Land use assumptions for the areas affected by Plan Amendment CPA-2001-5 were provided by the City of Bothell staff. These assumptions included the existing zoning and allowed building height, the total land area, and the deductions assumed to determine the total developable land (i.e., ROW, CAs, public facilities, market factor). From these assumptions, the staff determined the city's ultimate capacity for development in terms of the net land area in acres and total estimated building area in square feet that could realistically be redeveloped.

Next, PSRC population and employment growth forecasts for the affected areas were examined for the years 2010, 2020, and 2030. City of Bothell staff then used the PSRC growth rates in combination with the 2001 existing and ultimate capacity estimates and applied them to the population and employment capacities based on the amount of land that would redevelop under the existing land use designations. For the analysis of CPA-2001-5, the numbers for population and employment for 2007 and 2022, under existing land use designations, were converted into square footage using the following factors: 350 SF/employee for office, 800 SF/employee for retail, 650 SF/employee for light industrial, and 500 SF/resident for residential. These square footage numbers were used in the trip generation for CPA-2001-5. Additional details of the calculations performed by City of Bothell staff to get future year residential and employment numbers can be found in **Appendix G**.

### ***Thrasher's Corner Community Activity Center***

Currently, Thrasher's Corner Community Activity Center is zoned for two types of development: Office Professional (OP) and Community Business (CB). The buildings are assumed to be only two stories (max. 35 feet), with 50 percent of the space being office and 50 percent of the space being retail. Lot coverage and surface parking of 33 percent was also assumed for existing zoning.

This area is approximately 48 acres total. Based on the assumptions stated above, it was determined that approximately 51 percent of the total land area, or 24.5 acres, is developable land.

Thrasher's Corner is not zoned for residential land uses, however, the number of employees is expected to increase by 49 in 2007 under existing land use designations.

### ***Canyon Park Community Activity Center***

The existing zoning designation for the Canyon Park Community Activity Center is Office Professional (OP), Community Business (CB), and Multi-Family residential (R15), although according to City of Bothell staff no residential was included in the existing zoning analysis for this area. The buildings are assumed to be only two stories (max. 35

feet), with 50 percent of the space being office and 50 percent of the space being retail. Lot coverage and surface parking of 33 percent was also assumed for existing zoning.

The Canyon Park Community Activity Center area is approximately 98 acres total. Based on the assumptions stated earlier, it was determined that approximately 51 percent of the total land area, or 50 acres, is developable land.

Per the City of Bothell staff, under the current allowed building heights for the Canyon Park Community Activity Center, it is not likely that residences will be developed in the foreseeable future. More likely is that existing homes will be demolished to make way for commercial development. Although the increase in residential land use was assumed to be zero, the number of employees is expected to increase by 198 in 2007 under existing land use designations.

### *Downtown Community Activity Center*

Currently, the Downtown Community Activity Center is zoned for three types of development: Office Professional (OP), Community Business (CB), and Multi-Family residential (R15). However, per the City of Bothell staff no new residential land use was included in the existing zoning analysis for this area. The buildings are assumed to be only two stories (max. 35 feet), with 50 percent of the space being office and 50 percent of the space being retail. Lot coverage and surface parking of 33 percent was also assumed for existing zoning.

This area is approximately 111 acres total. Based on the assumptions stated earlier, it was determined that approximately 51 percent of the total land area, or 56.6 acres, is developable land.

For the Downtown Community Activity Center no increase in residential land use was assumed by 2007 under existing land use designations for this area; however, the number of employees is expected to increase by 42 in 2007 under existing land use designations.

### *Canyon Park Regional Activity Center*

The zoning in the Canyon Park Regional Activity Center allows for four types of development under existing conditions: Office Professional (OP), Community Business (CB), Multi-Family residential (R15), and Light Industrial (LI). The buildings are assumed to be three stories (max. 48 feet), with 42 percent of the space being office, 6 percent being retail, 42 percent light industrial, and 10 percent multi-family residential. Lot coverage and surface parking of 25 percent was also assumed for existing zoning.

This area is approximately 637 acres total. Based on the assumptions stated at the beginning of this section, it was determined that approximately 51 percent of the total land area, or 324.9 acres, is developable land.

For the Canyon Park Regional Activity Center the number of residents is expected to increase by 166 and the number of employees is expected to increase by 1,151 in 2007 under existing land use designations.

#### *North Creek Regional Activity Center – Valley Floor*

The valley floor of the North Creek Regional Activity Center is currently zoned for four types of development: Office Professional (OP), Community Business (CB), Multi-Family residential (R15), and Light Industrial (LI). The buildings heights have no limits, but the required 1:1 setback aides in limiting the maximum possible building heights. Buildings in this area were assumed to be 13 stories, with 50 percent of the space being office, 10 percent being retail, 30 percent light industrial, and 10 percent multi-family residential. Nineteen percent main building coverage and all parking in a 35-foot parking structure was also assumed for existing zoning.

This area is approximately 681 acres. Based on the assumptions stated at the beginning of this section, it was determined that approximately 51 percent of the total land area, or 347.3 acres, is developable land.

Although the zoning for the North Creek Regional Activity Center-Valley Floor allows residential uses, it is not anticipated that any residential development will result until substantially increased property values stimulate the redevelopment in significantly taller buildings, therefore there were zero residents assumed for 2007. The number of employees is expected to increase by 154 in 2007 under existing land use designations.

#### *North Creek Regional Activity Center – Part of East Hillside*

This part of the North Creek east hillside is affected by Plan Amendment CPA-2001-2 (steep slopes) as well as by this building height amendment, CPA-2001-5. This part of the east hillside of the North Creek Regional Activity Center is currently zoned for three types of development: Office Professional (OP), Multi-Family residential (R15), and Single-Family residential (R4). The buildings are assumed to be two to three stories (max. 35 feet), with 40 percent of the space being office and 60 percent multi-family residential, but the required 1:1 setback aides in limiting the maximum possible building heights. Per the City of Bothell staff, no new single-family residential development was assumed. Lot coverage and surface parking of 33 percent also was assumed for existing zoning.

This area is approximately 140 acres. Based on the assumptions stated at the beginning of this section, it was determined that approximately 51 percent of the total land area, or 71.4 acres, is developable land.

For the east hillside of the North Creek Regional Activity Center the number of residents is expected to increase by 40 and the number of employees is expected to increase by 4 in 2007 under existing land use designations.

### *North Creek Regional Activity Center – Southwest Hillside*

The zoning for the southwest hillside of the North Creek Regional Activity Center currently is Office Professional (OP) and Multi-Family residential (R15). Buildings heights are assumed to be unlimited, but the required 1:1 setback aides in limiting the maximum possible building heights. Eighty percent of the space is office and 20 percent multi-family residential. Lot coverage and surface parking of 33 percent was also assumed for existing zoning.

This area is approximately 56.9 acres which includes the UWB/CCC campus. Based on the assumptions stated at the beginning of this section, it was determined that approximately 51 percent of the total land area, or 29 acres, is developable land.

The southwest hillside of the North Creek Regional Activity Center was treated as a special case by the City of Bothell staff for projection of employment, since the land area is primarily dominated by the UWB/CCC campus. Based on the February 10, 1998 UWB/CCC Traffic Impact Report, the campus buildout would accommodate 10,000 Full-Time Equivalants (FTE – which includes students, staff, faculty, and visitors). For analysis purposes, it was assumed that full UWB/CCC buildout would occur in 2030. A linear interpolation was used to estimate employment numbers for 2007. These employment numbers were adjusted up to include the employees at the Franciscan Health Center and Beardslee Cove Apartments, or their future replacement uses.

The number of residents is expected to increase by 98 and the number of FTE's is expected to increase by 1,655 in 2007 under the proposed land use designations.

### *Proposed Plan Designation*

Land use assumptions for the areas affected by Plan Amendment CPA-2001-5 were provided by City of Bothell staff. These assumptions included the proposed zoning and allowed building height with the proposed amendment, the total land area, and the deductions assumed to determine the total developable land (i.e., ROW, CAs, market factor, public facilities). From these assumptions, City staff determined the city's ultimate capacity for development in terms of net land area in acres and the total estimated building area in square feet that could realistically be redeveloped. Next, PSRC population and employment growth forecasts for the affected areas were examined for the years 2010, 2020, and 2030. City of Bothell staff then used the PSRC growth rates in combination with the 2001 existing and ultimate capacity estimates and applied them to the population and employment capacities based on the amount of land that would redevelop under the existing land use designations. For the analysis of CPA-2001-5, the numbers for population and employment for 2007 and 2022, under existing land use designations, were converted into square footage using the following factors: 350 SF/employee for office, 800 SF/employee for retail, 650 SF/employee for light industrial, and 500 SF/resident for residential. These square footage numbers were used in the trip generation for CPA-2001-5. The same process as used for the Existing Plan Designation

was then followed to get residential and employment projections for 2007 under the proposed land use designations.

### *Thrasher's Corner Community Activity Center*

The proposed zoning land use designation for the Thrasher's Corner Community Activity Center is the same as the existing zoning: Office Professional (OP) and Community Business (CB). The proposed zoning assumes that the buildings are five stories in height (maximum 65 feet with conditions), with 80 percent of the space being office and 20 percent of the space being retail. Twenty-three percent main building coverage and 50 percent of the parking structured also was assumed for proposed zoning.

This area is approximately 48 acres total. Based on the assumptions stated above, it was determined that approximately 51 percent of the total land area, or 24.5 acres, is developable land.

Thrasher's Corner is not zoned for residential land uses, however, the number of employees is expected to increase by 120 in 2007 under the proposed land use designations.

### *Canyon Park Community Activity Center*

The Canyon Park Community Activity Center proposed zoning now includes multi-family residential. The three designations for the proposed land use for this area are: Office Professional (OP), Community Business (CB), and Multi-Family residential (R15). The buildings are assumed to be five stories (maximum 65 feet with conditions), with 40 percent of the space being office, 20 percent retail, and 40 percent multi-family residential. Twenty-three percent main building coverage and 50 percent of the parking structured also was assumed for proposed zoning.

This area is approximately 98 acres total. Based on the assumptions stated at the beginning of this section, it was determined that approximately 51 percent of the total land area, or 50 acres, is developable land.

For the Canyon Park Community Activity Center no residential land use was included in the 2007 proposed zoning analysis for this area, however, the number of employees is expected to increase by 434 in 2007 under the proposed land use designations.

### *Downtown Community Activity Center*

Proposed zoning for the Downtown Community Activity Center now includes Office Professional (OP), Community Business (CB), and Multi-Family residential (R15). The buildings are assumed to be five stories (maximum 65 feet with conditions), with 40 percent of the space being office, 20 percent retail, and 40 percent multi-family residential. Twenty-three percent main building coverage and 50 percent of the parking structured also was assumed for proposed zoning.

This area is approximately 111 acres total. Based on the assumptions stated at the beginning of this section, it was determined that approximately 51 percent of the total land area, or 56.6 acres, is developable land.

For the Downtown Community Activity Center the number of residents was expected to increase by 120 under proposed land use designations for this area and the number of employees is expected to increase by 447 in 2007 under the proposed land use designations.

### *Canyon Park Regional Activity Center*

The zoning in the Canyon Park Regional Activity Center allows for four types of development under the proposed amendment: Office Professional (OP), Community Business (CB), Multi-Family residential (R15), and Light Industrial (LI). The buildings are assumed to be 10 stories (maximum 150 feet with conditions), with 50 percent of the space being office, 10 percent being retail, 30 percent light industrial, and 10 percent multi-family residential. Twenty-three percent main building coverage and 100 percent of parking structured in 35-foot maximum garages also was assumed for the proposed zoning scenario.

The Canyon Park Regional Activity Center area is approximately 637 acres total. Based on the assumptions stated at the beginning of this section, it was determined that approximately 51 percent of the total land area, or 324.9 acres, is developable land.

For the Canyon Park Regional Activity Center the number of residents is expected to increase by 310 and the number of employees is expected to increase by 2,823 in 2007 under existing land use designations.

### *North Creek Regional Activity Center – Valley Floor*

The proposed zoning for the valley floor of the North Creek Regional Activity Center is Office Professional (OP), Community Business (CB), Multi-Family residential (R15), and Light Industrial (LI). The buildings heights are now limited to a maximum of 150 feet with conditions. Buildings in this area were assumed to be 10 stories, with 50 percent of the space being office, 10 percent being retail, 30 percent light industrial, and 10 percent multi-family residential. Twenty-three percent main building coverage and 100 percent of parking in a 35-foot parking structure also was assumed for the proposed zoning scenario.

This area is approximately 681 acres. Based on the assumptions stated at the beginning of this section, it was determined that approximately 51 percent of the total land area, or 347.3 acres, is developable land.

Although the zoning for the North Creek Regional Activity Center-Valley Floor allows residential used, it is not anticipated that any residential development will result until substantially increased property values stimulate the redevelopment in significantly taller buildings, therefore there were zero residents assumed for 2007. The number of

employees is expected to increase by 1,649 in 2007 under the proposed land use designations.

#### *North Creek Regional Activity Center – Part of East Hillside*

This part of the North Creek east hillside is affected by Plan Amendment CPA-2001-2 (steep slopes), and by Building Height Amendment CPA-2001-5. The proposed zoning for this part of the east hillside of the North Creek Regional Activity Center is Office Professional (OP), Multi-Family residential (R15), and Single-Family residential (R4). The buildings are assumed to be five stories (maximum 65 feet with conditions), with 50 percent of the space being office and 50 percent multi-family residential. Twenty-three percent main building coverage and 50 percent of parking in a structure also was assumed for the proposed zoning.

This area is approximately 140 acres. Based on the assumptions stated at the beginning of this section, it was determined that approximately 51 percent of the total land area, or 71.4 acres, is developable land.

For the east hillside of the North Creek Regional Activity Center the number of residents is expected to increase by 154 and the number of employees is expected to increase by 39 in 2007 under the proposed land use designations.

#### *North Creek Regional Activity Center – Southwest Hillside*

The zoning proposed for the southwest hillside of the North Creek Regional Activity Center currently is Office Professional (OP) and Multi-Family residential (R15). Building heights are no longer unlimited, but are now assumed to be four stories office and three stories residential (maximum 65 feet with conditions). Eighty percent of the space is office and 20 percent multi-family residential. Thirty-three percent main building coverage and parking on the surface and in a structure also was assumed for the proposed zoning.

The southwest hillside of the North Creek Regional Activity Center is approximately 57 acres, which includes the UWB/CCC campus. Based on the assumptions stated at the beginning of this section, it was determined that approximately 51 percent of the total land area, or 29 acres, is developable land.

The southwest hillside of the North Creek Regional Activity Center was treated as a special case by the City of Bothell staff for projection of employment, since the land area is primarily dominated by the UWB/CCC campus. Based on the February 10, 1998 UWB/CCC Traffic Impact Report, the campus buildout would accommodate 10,000 Full-Time Equivalents (FTE – which includes students, staff, faculty, and visitors). For analysis purposes, it was assumed that full UWB/CCC buildout would occur in 2030. A linear interpolation was used to estimate employment numbers for 2007. These employment numbers were adjusted up to include the employees at the Franciscan Health Center and Beardslee Cove Apartments, or their future replacement uses.

The number of residents is expected to increase by 98 and the number of FTE's is expected to increase by 1,655 in 2007 under the proposed land use designations.

### ***2007 Trip Generation***

The City of Bothell has various land use plan designations. A land use code with a corresponding designation is not always available from the *1997 ITE Trip Generation Manual*. Therefore, Community Business (CB) was assumed to be Shopping Center, which has the highest trip generation rates for retail, to be conservative in analysis. Multi-Family Residential (R15) was assumed to have the trip generation of low-rise condominiums or townhouses, which are common in most suburban areas. Trip generation rates for Light Industrial (LI) and Single-Family residential (SF) were given in the *1997 ITE Trip Generation Manual*. Trips associated with the UWB campus were based on rates outlined in the UW report (UWB/CCC Traffic Impact Report, February 10, 1998).

The 2007 trip generation was based on the methodology discussed previously which used the land use and residential and population forecasts under the existing and proposed designations to calculate the trip generation for the affected areas.

### ***Existing Plan Designation***

**Tables 16** and **17** present the a.m. and p.m. peak-hour trip generation comparison for CPA-2001-5 under the existing designations. Only the number of net new trips is listed in the table. This is the number after subtracting the internal trips and pass-by trips from the gross trips.

There are a total of 2,367 new trips generated from CPA-2001-5 in the a.m. peak. The majority of these a.m. peak trips originate from the Southwest Hillside area of the North Creek Regional Activity Center and the Canyon Park Regional Activity Center. In the p.m. peak the number of new trips generated by CPA-2001-5 increases to 2,560. The majority of these p.m. peak hour trips are generated by the southwest hillside of the North Creek Activity Center which includes the UWB/CCC campus. Since the p.m. peak generates 1,498 more trips than the a.m. peak, and the background traffic levels in Bothell are projected to be higher in the p.m. peak than in the a.m. peak, the p.m. peak represents a worst-case scenario for traffic analysis purposes. For detailed trip generation calculations refer to **Appendix G**.

**Table 16**  
**Plan Amendment CPA-2001-5**  
**Existing Designation**  
**2007 A.M. Peak Trip Generation**

	<u>Peak-Hour Trips</u>		
	In	Out	Total
<i>Thrasher's Corner Community Activity Center</i>			
Office Park and Shopping Center			
<b>Total Existing Zoning Net New A.M. Peak Hour Trips =</b>	26	6	32
<i>Canyon Park Community Activity Center</i>			
Office Park and Shopping Center			
<b>Total Existing Zoning Net New A.M. Peak Hour Trips =</b>	95	27	122
<i>Downtown Community Activity Center</i>			
Office Park and Shopping Center			
<b>Total Existing Zoning Net New A.M. Peak Hour Trips =</b>	26	5	31
<i>Canyon Park Regional Activity Center</i>			
Office Park, Shopping Center, Low-Rise Condo/Townhouse, Light Industrial			
<b>Total Existing Zoning Net New A.M. Peak Hour Trips =</b>	637	116	753
<i>North Creek Regional Activity Center – Valley Floor</i>			
Office Park, Shopping Center, Low-Rise Condo/Townhouse, Light Industrial			
<b>Total Existing Zoning Net New A.M. Peak Hour Trips =</b>	78	14	92
<i>North Creek Regional Activity Center – Part of East Hillside</i>			
Office Park and Low-Rise Condo/Townhouse			
<b>Total Existing Zoning Net New A.M. Peak Hour Trips =</b>	12	7	19
<i>North Creek Regional Activity Center – Southwest Hillside</i>			
Office Park, Low-Rise Condo/Townhouse, and UWB/CCC campus			
<b>Total Existing Zoning Net New A.M. Peak Hour Trips =</b>	1,316	2	1,318
<b>Total Net New A.M. Peak Hour Trips for Existing Zoning in 2007 =</b>	<b>2,190</b>	<b>177</b>	<b>2,367</b>

**Table 17  
Plan Amendment CPA-2001-5  
Existing Designation  
2007 P.M. Peak Trip Generation**

	<b>Peak-Hour Trips</b>		
	<b>In</b>	<b>Out</b>	<b>Total</b>
<i>Thrasher's Corner Community Activity Center</i> Office Park and Shopping Center			
<b>Total Existing Zoning Net New P.M. Peak Hour Trips =</b>	16	32	48
<i>Canyon Park Community Activity Center</i> Office Park and Shopping Center			
<b>Total Existing Zoning Net New P.M. Peak Hour Trips =</b>	63	114	177
<i>Downtown Community Activity Center</i> Office Park and Shopping Center			
<b>Total Existing Zoning Net New P.M. Peak Hour Trips =</b>	22	26	48
<i>Canyon Park Regional Activity Center</i> Office Park, Shopping Center, Low-Rise Condo/Townhouse, Light Industrial			
<b>Total Existing Zoning Net New P.M. Peak Hour Trips =</b>	150	658	808
<i>North Creek Regional Activity Center – Valley Floor</i> Office Park, Shopping Center, Low-Rise Condo/Townhouse, Light Industrial			
<b>Total Existing Zoning Net New P.M. Peak Hour Trips =</b>	22	73	95
<i>North Creek Regional Activity Center – Part of East Hillside</i> Office Park and Low-Rise Condo/Townhouse			
<b>Total Existing Zoning Net New P.M. Peak Hour Trips =</b>	6	13	19
<i>North Creek Regional Activity Center – Southwest Hillside<sup>1</sup></i> Office Park, Low-Rise Condo/Townhouse, and UWB/CCC campus			
<b>Total Existing Zoning Net New P.M. Peak Hour Trips =</b>	895	470	1,365
<b>Total Net New P.M. Peak Hour Trips for Existing Zoning in 2007 =</b>	<b>1,174</b>	<b>1,386</b>	<b>2,560</b>

There are a total of 2,367 new trips generated from CPA-2001-5 in the a.m. peak. The majority of these a.m. peak trips originate from the changes that occurred in the Canyon Park Regional Activity Center. In the p.m. peak, the number of new trips generated by CPA-2001-5 increases to 2,560. The majority of these p.m. peak hour trips are generated by the southwest hillside of the North Creek Activity Center, which includes the UWB/CCC campus. Since the p.m. peak generates 193 more trips than the a.m. peak, and the background traffic levels in Bothell are projected to be higher in the p.m. peak than in the

a.m. peak. The p.m. peak represents a worst-case scenario for traffic analysis purposes. For detailed trip generation calculations, refer to **Appendix G**.

### *Proposed Plan Designation*

**Table 18** presents the a.m. peak-hour trip generation comparison for CPA-2001-5 under the proposed designations. Only the number of net new trips is listed in the table. This is the number after subtracting the internal trips and pass-by trips from the gross trips.

There are a total of 4,750 new trips generated from CPA-2001-5 in the a.m. peak. With the proposed land use, the Canyon Park Regional Activity Center is generating about 38 percent of these trips. The other large portion of the total trips is generated by the southwest hillside of the North Creek Regional Activity Center. As shown in **table 19**, a total of 5,041 new trips are generated in the p.m. peak from CPA-2001-5. Many of these trips were generated in the Canyon Park Regional Activity Center and the southwest hillside of the North Creek Regional Activity Center. Since the p.m. peak generates 291 more trips than the a.m. peak, and the background traffic levels in Bothell are projected to be higher in the p.m. peak than in the a.m. peak, the p.m. peak represents a worst-case scenario for traffic analysis purposes. For detailed trip generation calculations, refer to **Appendix G**.

### *2007 Trip Generation Summary*

**Figure 7** presents a graphical display of the trips generated by each activity center within CPA-2001-5. The figure also compares the trips generated by the existing plan designation to the trips generated by the proposed plan designation. The colors in the bar chart represent:

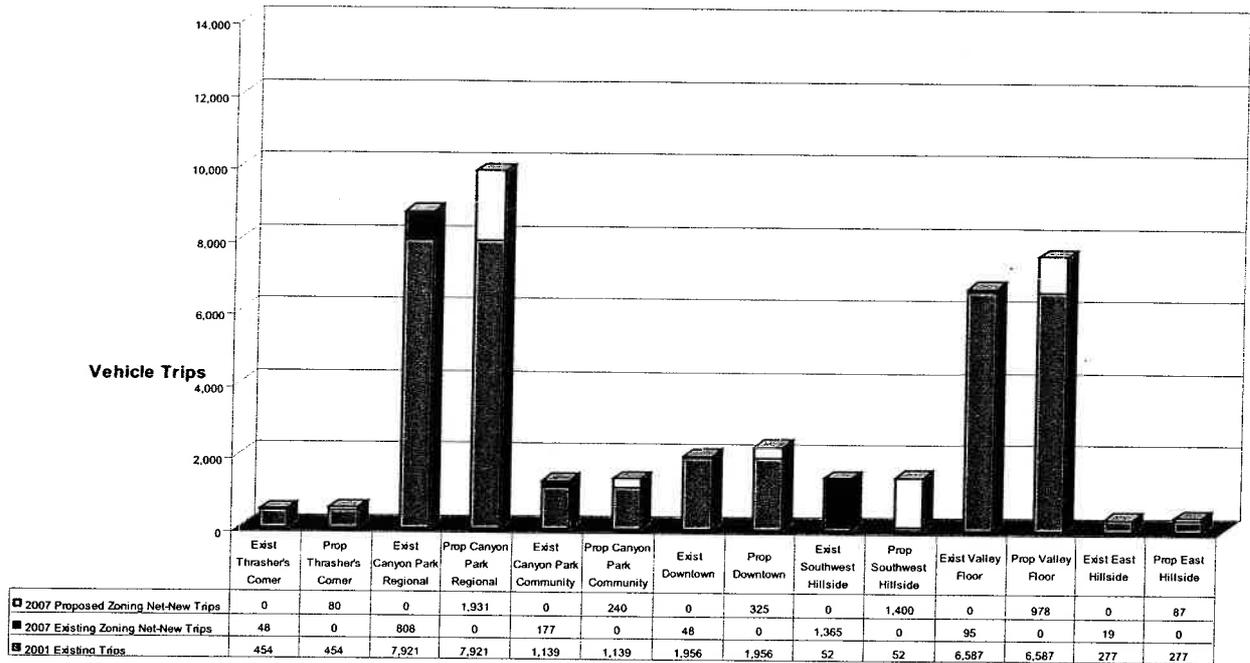
- Blue bars graphically represent the amount of traffic currently generated in the p.m. peak hour by each activity center.
- Red bars graphically represent the additional new traffic that will be generated by 2007 or 2022 if the existing zoning were to develop at anticipated levels (depending on the year, i.e., 2007 or 2022).
- Yellow bars graphically represent the additional new traffic that will be generated by 2007 or 2022 if the proposed zoning were to develop at anticipated levels (depending on the year, i.e., 2007 or 2022).

### *2007 Trip Distribution*

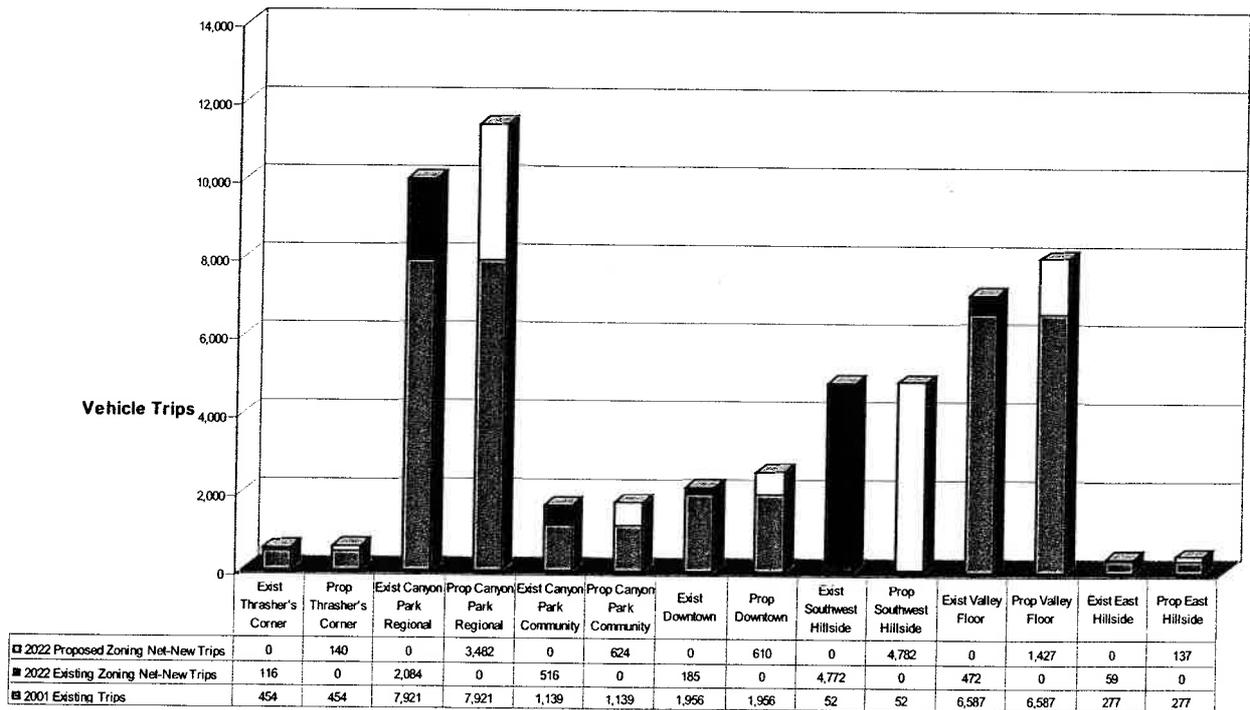
#### *Existing Plan Designation*

**Figure 8** presents the existing designations trip distribution for CPA-2001-5. Based on the methodology described earlier, CPA-2001-5 affects 35 concurrency intersections.

2007 P.M. Peak Existing and Proposed Zoning Trip Summary



2022 P.M. Peak Existing and Proposed Zoning Trip Summary



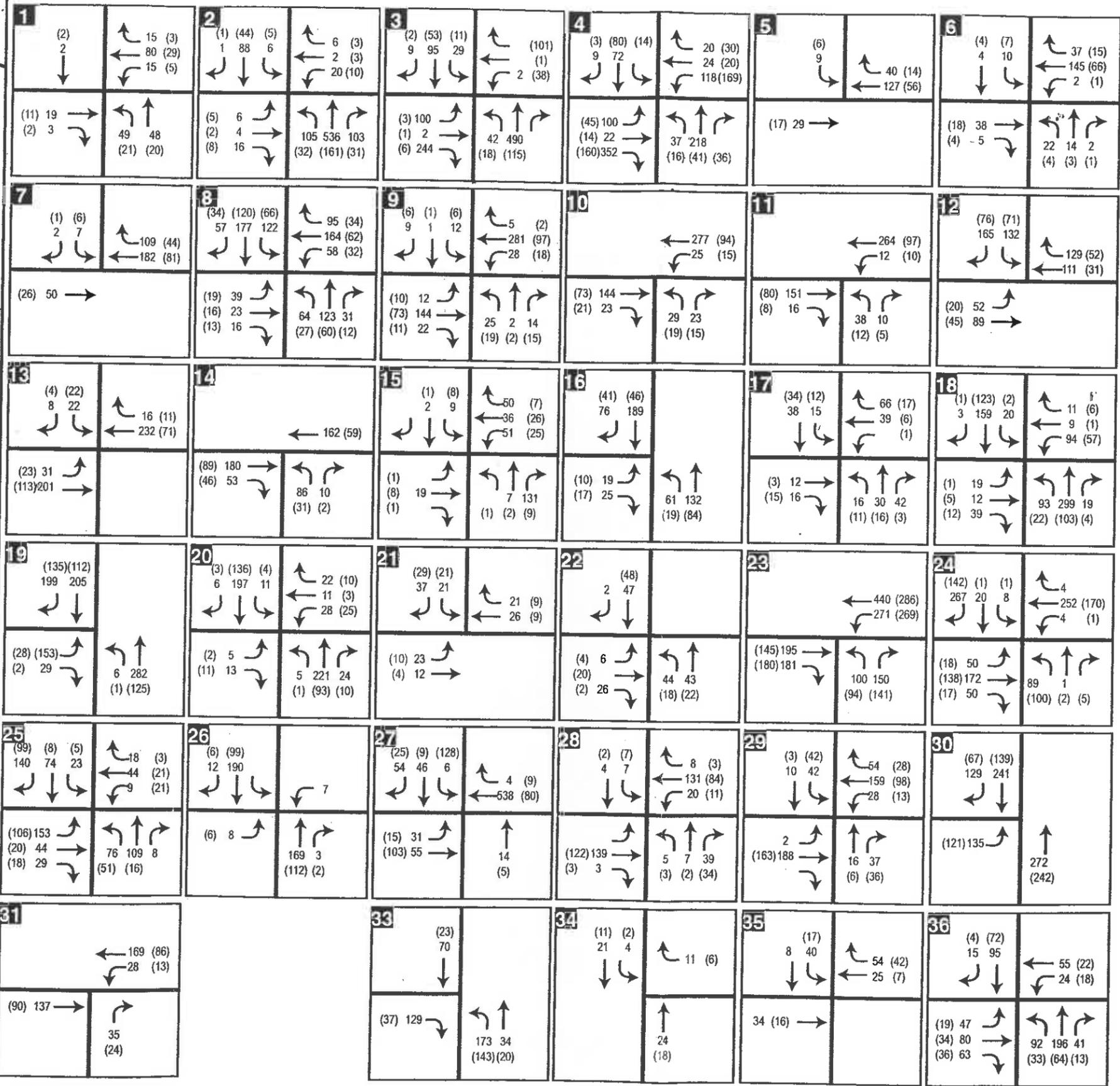
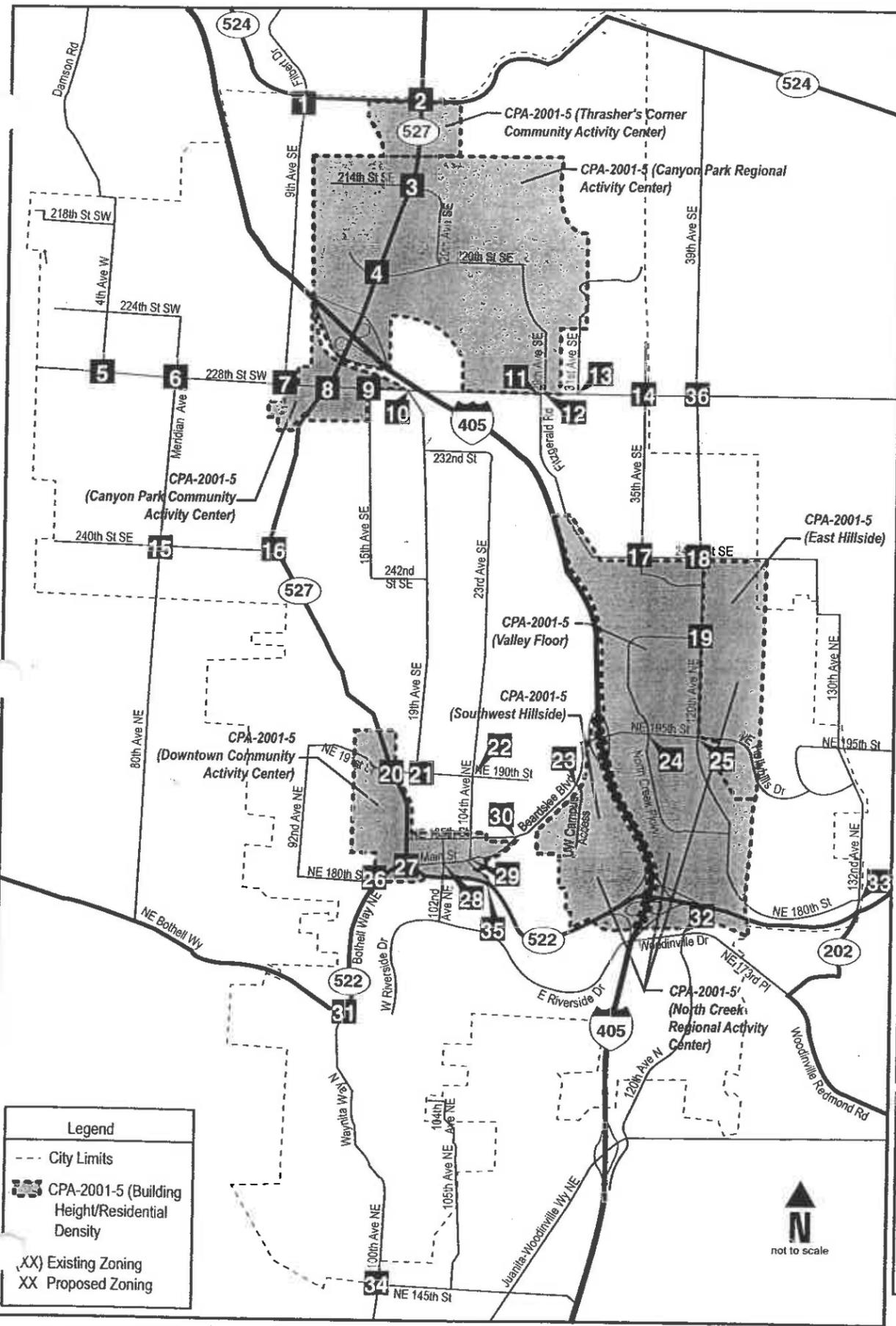


Figure 8  
2007 CPA-2001-5 (Building Height/Residential Density) Project Trips

**Table 18  
Plan Amendment CPA-2001-5  
Proposed Designation  
2007 A.M. Peak Trip Generation**

	<b>Peak-Hour Trips</b>		
	<b>In</b>	<b>Out</b>	<b>Total</b>
<i>Thrasher's Corner Community Activity Center</i> Office Park and Shopping Center <b>Total Proposed Zoning Net New A.M. Peak Hour Trips =</b>	64	12	76
<i>Canyon Park Community Activity Center</i> Office Park and Shopping Center <b>Total Proposed Zoning Net New A.M. Peak Hour Trips =</b>	140	54	194
<i>Downtown Community Activity Center</i> Office Park and Shopping Center <b>Total Proposed Zoning Net New A.M. Peak Hour Trips =</b>	188	82	270
<i>Canyon Park Regional Activity Center</i> Office Park, Shopping Center, Low-Rise Condo/Townhouse, Light Industrial <b>Total Proposed Zoning Net New A.M. Peak Hour Trips =</b>	1,525	284	1,809
<i>North Creek Regional Activity Center – Valley Floor</i> Office Park, Shopping Center, Low-Rise Condo/Townhouse, Light Industrial <b>Total Proposed Zoning Net New A.M. Peak Hour Trips =</b>	803	148	951
<i>North Creek Regional Activity Center – Part of East Hillside</i> Office Park and Low-Rise Condo/Townhouse <b>Total Proposed Zoning Net New A.M. Peak Hour Trips =</b>	65	25	90
<i>North Creek Regional Activity Center – Southwest Hillside<sup>1</sup></i> Office Park, Low-Rise Condo/Townhouse, and UWB/CCC campus <b>Total Proposed Zoning Net New A.M. Peak Hour Trips =</b>	1,350	10	1,360
<b>Total Net New A.M. Peak Hour Trips for Proposed Zoning in 2007 =</b>	<b>4,135</b>	<b>615</b>	<b>4,750</b>

**Table 19**  
**Plan Amendment CPA-2001-5**  
**Proposed Designation**  
**2007 P.M. Peak Trip Generation**

	Peak-Hour Trips		
	In	Out	Total
<i>Thrasher's Corner Community Activity Center</i>			
Office Park and Shopping Center			
<b>Total Proposed Zoning Net New P.M. Peak Hour Trips =</b>	18	62	80
<i>Canyon Park Community Activity Center</i>			
Office Park and Shopping Center			
<b>Total Proposed Zoning Net New P.M. Peak Hour Trips =</b>	83	157	240
<i>Downtown Community Activity Center</i>			
Office Park and Shopping Center			
<b>Total Proposed Zoning Net New P.M. Peak Hour Trips =</b>	111	214	325
<i>Canyon Park Regional Activity Center</i>			
Office Park, Shopping Center, Low-Rise Condo/Townhouse, Light Industrial			
<b>Total Proposed Zoning Net New P.M. Peak Hour Trips =</b>	398	1,533	1,931
<i>North Creek Regional Activity Center – Valley Floor</i>			
Office Park, Shopping Center, Low-Rise Condo/Townhouse, Light Industrial			
<b>Total Proposed Zoning Net New P.M. Peak Hour Trips =</b>	206	772	978
<i>North Creek Regional Activity Center – Part of East Hillside</i>			
Office Park and Low-Rise Condo/Townhouse			
<b>Total Proposed Zoning Net New P.M. Peak Hour Trips =</b>	24	63	87
<i>North Creek Regional Activity Center – Southwest Hillside<sup>1</sup></i>			
Office Park, Low-Rise Condo/Townhouse, and UWB/CCC campus			
<b>Total Proposed Zoning Net New P.M. Peak Hour Trips =</b>	901	499	1,400
<b>Total Net New P.M. Peak Hour Trips for Proposed Zoning in 2007 =</b>	<b>1,741</b>	<b>3,300</b>	<b>5,041</b>

### *Proposed Plan Designation*

**Figure 8** presents the proposed designations trip distribution for CPA-2001-5. Based on the methodology described earlier, CPA-2001-5 affects the same 35 concurrency intersections as the existing zoning designations. These 35 intersections were analyzed for both existing and proposed designations.

### **2007 Level-of-Service Analysis**

#### *Existing Plan Designation*

**Table 20** presents the 2007 LOS analysis for the existing designation of CPA-2001-5; calculations are provided in **Appendix H**. Of the 35 concurrency intersections analyzed, five will operate at or below LOS E in 2007. The five intersections operating below LOS D are: Meridian Avenue S and 240th Street SE, 100th Avenue NE and NE 190th Street, SR 527 and SR 522, 102nd Avenue NE and Main Street, and 228th Street SE and 39th Avenue SE. The remaining 30 intersections will operate at LOS D or better. The intersection of SR 527 and SR 522 is in the 1.5-hour analysis zone and is at or below LOS E. Operations do not improve to LOS D outside the 1.5-hour time period.

The remaining 30 intersections will operate at LOS D or better. The intersection of SR 527/SR 522 and 102nd Avenue NE/Main Street is in the 1.5-hour analysis zone and at or below LOS E; however, the operations do not improve to LOS D outside the 1.5-hour time period.

#### *Proposed Plan Designation*

**Table 20** presents the 2007 LOS analysis for the proposed designation of CPA-2001-5; calculations are provided in **Appendix H**. Of the 35 concurrency intersections analyzed, eight will operate at or below LOS E in 2007. The eight intersections operating below LOS D are as follows: SR 527 and 220th Street SE, SR 527 and 228th Street SE, Meridian Avenue S and 240th Street SE, 120th Avenue NE and North Creek Parkway, 100th Avenue NE and NE 190th Street, SR 527 and SR 522, 102nd Avenue NE and Main Street, and 228th Street SE and 39th Avenue SE. The remaining 27 intersections will operate at LOS D or better.

The intersections of SR 527 and 220th Street SE, SR 527 and 228th Street SE, SR 522/SR 527, and 102nd Avenue NE and Main Street are in the 1.5-hour analysis zone and are at or below LOS E. Operations at these intersections did not improve to LOS D outside the 1.5-hour time period.

**Table 20  
Plan Amendment CPA-2001-5, 2007 P.M. Peak-Hour Level of Service Summary**

INT No. <sup>1</sup>	Concurrency Intersection Description	Control Type <sup>2</sup>	at LOS E/F and in 1.5-Hour Zone? <sup>3</sup>	Existing Designation			Proposed Designation		
				Control Delay/Veh <sup>4</sup>	LOS <sup>5</sup>	1.5-Hour Analysis Satisfied? <sup>6</sup>	Control Delay/Veh <sup>4</sup>	LOS <sup>5</sup>	1.5-Hour Analysis Satisfied? <sup>6</sup>
1	9th Ave SE/SR 524	Signal	No	18.0	B	N/A <sup>8</sup>	19.6	B	N/A
2	SR 527/SR 524	Signal	No	41.8	D	N/A	49.0	D	N/A
3	SR 527/214th St SE	Signal	No	37.3	D	N/A	50.6	D	N/A
4	SR 527/220th St SE	Signal	Yes	36.7	D	N/A	70.2	E	No
5	4th Ave W/ 228th St SE	Signal	No	14.7	B	N/A	25.5	C	N/A
6	Meridian Ave S/ 228th St SE	Signal	No	27.5	C	N/A	23.1	C	N/A
7	9th Ave SE/ 228th St SE	Signal	Yes	26.0	C	N/A	33.7	C	N/A
8	SR 527/228th St SE	Signal	Yes	53.6	D	N/A	69.3	E	No
9	15th Ave St/ 228th St SE	Signal	Yes	41.5	D	N/A	44.9	D	N/A
10	19th Ave SE/ 228th St SE	Signal	Yes	35.6	D	N/A	40.0	D	N/A
11	Fitzgerald Rd/ 228th St SE	Signal	No	21.1	C	N/A	43.4	D	N/A
12	29th Ave SE/ 228th St SE	TWSC	No	17.0	B	N/A	25.5	C	N/A
13	31st Ave SE/ 228th St SE	TWSC	No	16.6	B	N/A	26.1	C	N/A
14	35th Ave SE/ 228th St SE	Signal	No	9.7	A	N/A	14.7	B	N/A
15	Meridian Ave S/ 240th St SE	AWSC	No	50.9	F	N/A	59.2	F	N/A
16	SR 527/240th St SE	Signal	No	9.2	A	N/A	12.2	B	N/A
17	35th Ave SE/ 240th St SE	TWSC	No	19.4	C	N/A	27.5	D	N/A
18	39th Ave SE/ 240th St SE	Signal	No	27.0	C	N/A <sup>8</sup>	45.4	D	N/A
19	120th Ave NE/North Creek Pkwy	TWSC	No	26.8	C	N/A	58.3	E	N/A

1. INT No. refers to intersection number shown in figure 8.
2. AWSC = All way stop controlled intersection, TWSC = Two-way stop-controlled intersection, Signal = Signalized intersection
3. All intersections designated as concurrency intersections must operate at LOS D or better with the exception of these intersections which are permitted to operate at LOS E of F for no more than 1.5 hours during the peak period. These intersections must also return to LOS D operations before and after the 1.5-hour period.
4. Control delay, measured in seconds per vehicle, is a measure of all the delay contributable to traffic control measures, such as traffic signals or stop signs. At signalized intersections, the delay reported is the average of all the control delay experienced for all the movements. At unsignalized intersections, the reported delay is for only one movement, the movement experiencing the worst control delay, which is typically one of the stop-controlled side street approaches. The control delay reported at unsignalized intersections is not a valid indication of the operations at the entire intersection.
5. LOS is the level of service, a concept based on the 1997 Highway Capacity Manual for unsignalized and signalized intersections.
6. Yes = LOS D or better
7. >180 = Control delay exceeds 180 sec/veh. When control delay value becomes large, the intersection is over capacity and the estimated delay becomes unreliable.
8. N/A: This does not apply to intersections outside of the 1.5-hour zone, or those intersections in the 1.5-hour zone which are operating at LOS D or better.

**Table 20 (continued)**  
**Plan Amendment CPA-2001-5, 2007 P.M. Peak-Hour Level of Service Summary**

INT No. <sup>1</sup>	Concurrency Intersection Description	Control Type <sup>2</sup>	at LOS E/F and in 1.5-Hour Zone? <sup>3</sup>	Existing Designation			Proposed Designation		
				Control Delay/Veh <sup>4</sup>	LOS <sup>5</sup>	1.5-Hour Analysis Satisfied? <sup>6</sup>	Control Delay/Veh <sup>4</sup>	LOS <sup>5</sup>	1.5-Hour Analysis Satisfied? <sup>6</sup>
20	SR 527/NE 191st St	Signal	Yes	21.7	C	N/A	27.6	C	N/A
21	100th Ave NE/NE 190th St	TWSC	No	105.3	F	N/A	147.3	F	N/A
22	104th Ave SE/NE 190th Street	AWSC	No	17.4	C	N/A	19.0	C	N/A
23	Beardslee Blvd./UW N. Campus Access	Signal	No	15.4	B	N/A	17.6	B	N/A
24	North Creek Pkwy/NE 195th St	Signal	No	31.2	C	N/A	39.1	D	N/A
25	120th Ave NE/NE 195th St	Signal	No	43.2	D	N/A	48.1	D	N/A
26	SR 522/NE 180th St	Signal	Yes	27.2	C	N/A	26.9	C	N/A
27	SR 527/SR 522	Signal	Yes	71.4	E	No	75.1	E	No
28	102nd Ave NE/Main St	AWSC	Yes	170.8	F	No	>180 <sup>7</sup>	F	No
29	104th Ave NE/Kaysner Way	Signal	Yes	15.5	B	N/A	19.1	B	N/A
30	NE 185th St / Beardslee Blvd.	Signal	No	12.4	B	N/A	18.3	B	N/A
31	96th Ave NE/SR 522	Signal	No	19.2	B	N/A	21.5	C	N/A
33	132nd Ave NE/NE 180th St	Signal	No	13.4	B	N/A	15.0	B	N/A
34	100th Ave NE/NE 145th St	Signal	No	22.1	C	N/A	22.6	C	N/A
35	SR 522 / Kaysner Way	Signal	No	29.9	C	N/A	31.4	C	N/A
36	228th Street SE/39th Avenue SE	Signal	No	101.5	F	N/A	132.4	F	N/A

1. INT No. refers to intersection number shown in **figure 8**.
2. AWSC = All way stop controlled intersection, TWSC = Two-way stop-controlled intersection, Signal = Signalized intersection
3. All intersections designated as concurrency intersections must operate at LOS D or better with the exception of these intersections which are permitted to operate at LOS E or F for no more than 1.5 hours during the peak period. These intersections must also return to LOS D operations before and after the 1.5-hour period.
4. Control delay, measured in seconds per vehicle, is a measure of all the delay contributable to traffic control measures, such as traffic signals or stop signs. At signalized intersections, the delay reported is the average of all the control delay experienced for all the movements. At unsignalized intersections, the reported delay is for only one movement, the movement experiencing the worst control delay, which is typically one of the stop-controlled side street approaches. The control delay reported at unsignalized intersections is not a valid indication of the operations at the entire intersection.
5. LOS is the level of service, a concept based on the 1997 Highway Capacity Manual for unsignalized and signalized intersections.
6. Yes = LOS D or better
7. >180 = Control delay exceeds 180 sec/veh. When control delay value becomes large, the intersection is over capacity and the estimated delay becomes unreliable.
8. N/A: This does not apply to intersections outside of the 1.5-hour zone, or those intersections in the 1.5-hour zone which are operating at LOS D or better.

## **2007 Mitigation**

### *Existing Plan Designation*

**Table 21** presents the mitigation LOS analysis for the existing designation of CPA-2001-5, with calculations, is provided in **Appendix I**. Five intersections need mitigation to bring them to LOS D or above under the existing plan designation. **Table 21** identifies the number of lanes that would be present on each leg of the intersection with the suggested mitigation in place. This mitigation improves operations to LOS D or better at these five intersections. For all of the intersections, the existing zoning mitigation is the same as or less than the proposed zoning mitigation.

### *Proposed Plan Designation*

**Table 21** presents the mitigation LOS analysis for the proposed designations of CPA-2001-5; calculations are provided in **Appendix I**. Mitigation at the intersections of SR 527 and 220th Street SE, SR 527 and 228th Street SE, 120th Avenue NE and North Creek Parkway involved more widening than needed for the existing zoning designation to improve operations to LOS D or better. However, at the 120th Avenue NE/North Creek Parkway, 100th Avenue SE/NE 190th Street, and 102nd Avenue NE/Main Street intersections, the only mitigation required is the installation of a traffic signal and keeping the channelization the same.

## **2022 Land Use Description**

### *Existing Plan Designation*

The same assumptions in 2007 would apply in 2022 to determine the amount of development under existing designations for CPA-2001-5.

The total areas given for the different affected areas would remain the same as that given in the 2007 land use existing designation description. The following list documents the increase in the number of residents and employees that would realistically be added by 2022 for each respective area within CPA-2001-5 with the existing plan designation:

#### Thrasher's Corner Community Activity Center

Residential population is to remain at zero in 2022, and employment is projected to increase by 125 employees under the 2022 existing plan designation.

#### Canyon Park Community Activity Center

Residential population is projected to decrease by 15, and employment is projected to increase by 560 employees under the 2022 existing plan designation.

**Table 21  
2007 Mitigation Analysis Summary for Plan Amendment CPA-2001-5**

Int ID <sup>1</sup>	Intersection	Leg	No. of lanes on intersection leg with Suggested Mitigation			Existing Zoning Delay <sup>2</sup> /LOS		Proposed Zoning Delay <sup>2</sup> /LOS	
			2007 Base	Existing Zoning	Proposed Zoning	Before Mit.	After Mit.	Before Mit.	After Mit.
4	SR 527/ 220th St SE	North	7	7	7	36.7/D <sup>3</sup>	-	70.2/E	48.4/D
		South	9	9	9				
		East	5	5	6				
		West	4	4	5				
8	SR 527/ 228th St SE	North	9	9	10	53.6/D <sup>3</sup>	-	69.3/E	53.9/D
		South	7	7	8				
		East	6	6	6				
		West	6	6	6				
15	Meridian Ave S/ 240th St SE	North	2	2	2	50.9/F	26.5/D	59.2/F	31.7/D
		South	2	3	3				
		East	3	3	3				
		West	2	2	2				
19	120th Ave NE/ North Creek Pkwy	North	4	4	4	26.8/C <sup>3</sup>	-	58.3/E	8.3/A <sup>5</sup>
		South	4	4	4				
		West	3	3	3				
21	100th Ave SE/ NE 190th St	North	2	2	2	105.3/F	8.1/A <sup>5</sup>	147.3/F	11.4/B <sup>5</sup>
		East	2	2	2				
		West	2	2	2				
27	SR 527/SR 522	North	4	5	5	71.4/E	46.3/D	75.1/E	48.4/D
		South	5	6	6				
		East	4	4	4				
		West	6	6	6				
28	102nd Ave NE/ Main St	North	2	2	2	170.8/F	11.7/B <sup>5</sup>	>180 <sup>4</sup>	13.3/B <sup>5</sup>
		South	3	3	3				
		East	3	3	3				
		West	2	2	2				
36	228th St SE/ 39th Avenue SE	North	5	5	5	101.5/F	52.4/D	132.4/F	51.6/D
		South	5	7	7				
		East	3	4	4				
		West	3	5	5				

1. Intersection ID refers to the location on **figure 8**.
2. Delay refers to control delay, which is measured in seconds per vehicle.
3. No mitigation is needed at this intersection under existing designations because it is operating at or above the City's LOS D standard. The LOS shown here is the LOS in 2007 without any mitigation.
4. At intersections with delay values greater than 180 sec/veh, the operational output becomes unreliable.
5. The proposed mitigation is adding a traffic signal and keeping the channelization the same.

#### Downtown Community Activity Center

Residential population is projected to be unchanged from 2001. Employment, however, is projected to increase by 199 employees under the 2022 existing plan designation.

#### Canyon Park Regional Activity Center

Residential population is projected to increase by 445, and employment is projected to increase by 2,960 employees under the 2022 existing plan designation.

#### North Creek Regional Activity Center (Valley Floor)

Residential population is projected to increase by 60, and employment is projected to increase by 733 employees under the 2022 existing plan designation.

#### North Creek Regional Activity Center (Part of East Hillside)

Residential population is projected to increase by 120, and employment is projected to increase by 18 employees under the 2022 existing plan designation.

#### North Creek Regional Activity Center (Southwest Hillside)

Residential population is projected to increase by 77, and employment is projected to increase by 5,069 employees/students under the 2022 existing plan designation. This portion of the North Creek Regional Activity Center contains the UWB/CCC campus.

#### *Proposed Plan Designation*

The same assumptions in 2007 would apply in 2022 to determine the amount of development under proposed designations for CPA-2001-5. The total areas given for the different affected areas would remain the same as that given in the 2007 land use proposed designation description.

The following list documents the approximate area that realistically would develop or re-develop by 2022 for each respective area within CPA-2001-5 with the proposed plan designation:

#### Thrasher's Corner Community Activity Center

Residential population is to remain at zero in 2022, and employment is projected to increase by 211 employees under the 2022 proposed plan designation.

#### Canyon Park Community Activity Center

Residential population is projected to increase by 225, and employment is projected to increase by 869 employees under the 2022 proposed plan designation.

#### Downtown Community Activity Center

Residential population is projected to increase by 420, and employment is projected to increase by 635 employees under the 2022 proposed plan designation.

Canyon Park Regional Activity Center

Residential population is projected to increase by 645, and employment is projected to increase by 4,994 employees under the 2022 proposed plan designation.

North Creek Regional Activity Center (Valley Floor)

Residential population is projected to increase by 60, and employment is projected to increase by 2,344 employees under the 2022 proposed plan designation.

North Creek Regional Activity Center (Part of East Hillside)

Residential population is projected to increase by 250, and employment is projected to increase by 56 employees under the 2022 proposed plan designation.

North Creek Regional Activity Center (Southwest Hillside)

Residential population is projected to increase by 99, and employment is projected to increase by 5,069 employees/students under the 2022 proposed plan designation. This portion of the North Creek Regional Activity Center contains the UWB/CCC campus.

The revised population and employment estimates provided by City of Bothell staff used in the analysis of CPA-2001-5 are provided in **Appendix G**.

**2022 Trip Generation**

The 2022 trip generation was based on the methodology discussed previously that used the land use and residential and population forecasts under the existing and proposed designations to calculate the trip generation for the affected areas.

*Existing Plan Designation*

**Tables 22** and **23** present the 2022 a.m. and p.m. peak-hour trip generation comparison for CPA-2001-5 under the existing designations. **Tables 22** and **23** presents the net new trips generated for the a.m. and p.m. peak hours after subtracting pass-by trips, internalization, and trip credits to account for existing trips in the system.

A total of 7,637 new trips in 2022 would be generated from CPA-2001-5 in the a.m. peak as compared to 8,204 new trips in the p.m. peak. The majority of these a.m. and p.m. peak hour trips originate from the Canyon Park Regional Activity Center and the southwest hillside of the North Creek Activity Center, which includes the UWB/CCC campus. Since the p.m. peak generates 567 more trips than the a.m. peak, and because the background traffic levels in Bothell are projected to be higher in the p.m. peak than in the a.m. peak, the p.m. peak represents a worst-case scenario for traffic analysis purposes. For detailed trip generation calculations, refer to **Appendix G**.

**Table 22**  
**Plan Amendment CPA-2001-5**  
**Existing Designation**  
**2022 A.M. Peak Trip Generation**

	<u>Peak-Hour Trips</u>		
	In	Out	Total
<i>Thrasher's Corner Community Activity Center</i>			
Office Park and Shopping Center			
<b>Total Existing Zoning Net New A.M. Peak Hour Trips =</b>	62	16	78
<i>Canyon Park Community Activity Center</i>			
Office Park and Shopping Center			
<b>Total Existing Zoning Net New A.M. Peak Hour Trips =</b>	287	73	360
<i>Downtown Community Activity Center</i>			
Office Park and Shopping Center			
<b>Total Existing Zoning Net New A.M. Peak Hour Trips =</b>	98	28	126
<i>Canyon Park Regional Activity Center</i>			
Office Park, Shopping Center, Low-Rise Condo/Townhouse, Light Industrial			
<b>Total Existing Zoning Net New A.M. Peak Hour Trips =</b>	1,648	295	1,943
<i>North Creek Regional Activity Center – Valley Floor</i>			
Office Park, Shopping Center, Low-Rise Condo/Townhouse, Light Industrial			
<b>Total Existing Zoning Net New A.M. Peak Hour Trips =</b>	385	73	458
<i>North Creek Regional Activity Center – Part of East Hillside</i>			
Office Park and Low-Rise Condo/Townhouse			
<b>Total Existing Zoning Net New A.M. Peak Hour Trips =</b>	40	21	61
<i>North Creek Regional Activity Center – Southwest Hillside<sup>1</sup></i>			
Office Park, Low-Rise Condo/Townhouse, and UWB/CCC campus			
<b>Total Existing Zoning Net New A.M. Peak Hour Trips =</b>	4,604	7	4,611
<b>Total Net New A.M. Peak Hour Trips for Existing Zoning in 2022 =</b>	<b>7,124</b>	<b>513</b>	<b>7,637</b>

**Table 23  
Plan Amendment CPA-2001-5  
Existing Designation  
2022 P.M. Peak Trip Generation**

	<u>Peak-Hour Trips</u>		
	In	Out	Total
<i>Thrasher's Corner Community Activity Center</i> Office Park and Shopping Center <b>Total Existing Zoning Net New P.M. Peak Hour Trips =</b>	42	74	116
<i>Canyon Park Community Activity Center</i> Office Park and Shopping Center <b>Total Existing Zoning Net New P.M. Peak Hour Trips =</b>	181	335	516
<i>Downtown Community Activity Center</i> Office Park and Shopping Center <b>Total Existing Zoning Net New P.M. Peak Hour Trips =</b>	68	117	185
<i>Canyon Park Regional Activity Center</i> Office Park, Shopping Center, Low-Rise Condo/Townhouse, Light Industrial <b>Total Existing Zoning Net New P.M. Peak Hour Trips =</b>	387	1,697	2,084
<i>North Creek Regional Activity Center – Valley Floor</i> Office Park, Shopping Center, Low-Rise Condo/Townhouse, Light Industrial <b>Total Existing Zoning Net New P.M. Peak Hour Trips =</b>	101	371	472
<i>North Creek Regional Activity Center – Part of East Hillside</i> Office Park and Low-Rise Condo/Townhouse <b>Total Existing Zoning Net New P.M. Peak Hour Trips =</b>	18	41	59
<i>North Creek Regional Activity Center – Southwest Hillside<sup>1</sup></i> Office Park, Low-Rise Condo/Townhouse, and UWB/CCC campus <b>Total Existing Zoning Net New P.M. Peak Hour Trips =</b>	3,131	1,641	4,772
<b>Total Net New P.M. Peak Hour Trips for Existing Zoning in 2022 =</b>	<b>3,928</b>	<b>4,276</b>	<b>8,204</b>

### *Proposed Plan Designation*

**Tables 24** and **25** present the 2022 a.m. and p.m. peak-hour trip generation comparison for CPA-2001-5 under the proposed designations. **Tables 24** and **25** present the net new trips generated for the a.m. and p.m. peak hours after subtracting pass-by trips, internalization, and trip credits to account for existing trips in the system.

A total of 10,576 new trips would be generated from CPA-2001-5 in the a.m. peak as compared to 11,202 new trips in the p.m. peak. The majority of these trips (approximately 75 percent) are associated with the Canyon Park Regional Activity Center and the North Creek Regional Activity Center—southwest hillside, which includes the UWB/CCC campus. For the proposed plan designation, p.m. peak represents the worst case trip generation and, therefore, is a conservative estimate to use for traffic analysis purposes.

### **2022 Trip Generation Summary**

**Figure 7** is a graphical display of the trips generated by each activity center within CPA-2001-5 for 2022. The figure also compares the trips generated by the existing plan designation to the trips generated by the proposed plan designation. As described next, colors in the bar chart are significant:

- Blue bars represent the amount of traffic currently generated in the p.m. peak hour by each activity center.
- Red bars represent the additional new traffic that will be generated by 2007 or 2022 if the existing zoning were to develop at anticipated levels (depending on the year, i.e., 2007 or 2022).
- Yellow bars represent the additional new traffic that will be generated by 2007 or 2022 if the proposed zoning were to develop at anticipated levels (depending on the year, i.e., 2007 or 2022).

### **2022 Capacity Needs**

#### *Existing Plan Designation*

**Table 26** presents the results of the 2022 screenline analysis for CPA-2001-5. Results indicate that the total lane demand does not exceed the lane capacity in any direction.

#### *Proposed Plan Designation*

**Table 26** presents the results of the 2022 screenline analysis for CPA-2001-5. Results are similar to the existing plan designation in that the total lane demand does not exceed the lane capacity in any given direction. However, the lane demand in the westbound and southbound directions increased by one travel lane in the proposed plan designation

compared to the existing plan designation. Also, the lane demand in the northbound direction of the city increased by three travel lanes in the proposed plan designation compared to the existing plan designation.

<b>Table 24</b>			
<b>Plan Amendment CPA-2001-5</b>			
<b>Proposed Designation</b>			
<b>2022 A.M. Peak Trip Generation</b>			
	<b>Peak-Hour Trips</b>		
	<b>In</b>	<b>Out</b>	<b>Total</b>
<i>Thrasher's Corner Community Activity Center</i>			
Office Park and Shopping Center			
<b>Total Proposed Zoning Net New A.M. Peak Hour Trips =</b>	116	20	136
<i>Canyon Park Community Activity Center</i>			
Office Park and Shopping Center			
<b>Total Proposed Zoning Net New A.M. Peak Hour Trips =</b>	374	146	520
<i>Downtown Community Activity Center</i>			
Office Park and Shopping Center			
<b>Total Proposed Zoning Net New A.M. Peak Hour Trips =</b>	361	147	508
<i>Canyon Park Regional Activity Center</i>			
Office Park, Shopping Center, Low-Rise Condo/Townhouse, Light Industrial			
<b>Total Proposed Zoning Net New A.M. Peak Hour Trips =</b>	2,745	508	3,253
<i>North Creek Regional Activity Center – Valley Floor</i>			
Office Park, Shopping Center, Low-Rise Condo/Townhouse, Light Industrial			
<b>Total Proposed Zoning Net New A.M. Peak Hour Trips =</b>	1,173	220	1,393
<i>North Creek Regional Activity Center – Part of East Hillside</i>			
Office Park and Low-Rise Condo/Townhouse			
<b>Total Proposed Zoning Net New A.M. Peak Hour Trips =</b>	104	40	144
<i>North Creek Regional Activity Center – Southwest Hillside'</i>			
Office Park, Low-Rise Condo/Townhouse, and UWB/CCC campus			
<b>Total Proposed Zoning Net New A.M. Peak Hour Trips =</b>	4,612	10	4,622
<b>Total Net New A.M. Peak Hour Trips for Proposed Zoning in 2022 =</b>	<b>9,485</b>	<b>1,091</b>	<b>10,576</b>

**Table 25  
Plan Amendment CPA-2001-5  
Proposed Designation  
2022 P.M. Peak Trip Generation**

	<b>Peak-Hour Trips</b>		
	<b>In</b>	<b>Out</b>	<b>Total</b>
<i>Thrasher's Corner Community Activity Center</i>			
Office Park and Shopping Center			
<b>Total Proposed Zoning Net New P.M. Peak Hour Trips =</b>	32	108	140
<i>Canyon Park Community Activity Center</i>			
Office Park and Shopping Center			
<b>Total Proposed Zoning Net New P.M. Peak Hour Trips =</b>	211	413	1624
<i>Downtown Community Activity Center</i>			
Office Park and Shopping Center			
<b>Total Proposed Zoning Net New P.M. Peak Hour Trips =</b>	211	399	610
<i>Canyon Park Regional Activity Center</i>			
Office Park, Shopping Center, Low-Rise Condo/Townhouse, Light Industrial			
<b>Total Proposed Zoning Net New P.M. Peak Hour Trips =</b>	719	2,763	3,482
<i>North Creek Regional Activity Center – Valley Floor</i>			
Office Park, Shopping Center, Low-Rise Condo/Townhouse, Light Industrial			
<b>Total Proposed Zoning Net New P.M. Peak Hour Trips =</b>	300	1,127	1,427
<i>North Creek Regional Activity Center – Part of East Hillside</i>			
Office Park and Low-Rise Condo/Townhouse			
<b>Total Proposed Zoning Net New P.M. Peak Hour Trips =</b>	38	99	137
<i>North Creek Regional Activity Center – Southwest Hillside<sup>1</sup></i>			
Office Park, Low-Rise Condo/Townhouse, and UWB/CCC campus			
<b>Total Proposed Zoning Net New P.M. Peak Hour Trips =</b>	3,133	1,649	4,782
<b>Total Net New P.M. Peak Hour Trips for Proposed Zoning in 2022 =</b>	<b>4,644</b>	<b>6,558</b>	<b>11,202</b>

**Table 26  
2022 Screenline Analysis  
Comprehensive Plan Amendment 5**

Screenline <sup>1</sup>	Direction	Number of Travel Lanes		
		2022 Existing Zoning		2022 Proposed Zoning
		Capacity <sup>2</sup>	Demand <sup>3</sup>	Demand <sup>3</sup>
A	Eastbound	6	4	4
	Westbound	6	6	6
B	Eastbound	9	6	6
	Westbound	9	8	9
C	Eastbound	8	5	5
	Westbound	8	6	6
D	Eastbound	5	3	3
	Westbound	5	3	3
1	Northbound	8	7	8
	Southbound	8	4	4
2	Northbound	7	5	6
	Southbound	7	3	3
3	Northbound	7	5	6
	Southbound	7	4	5
4	Northbound	10	7	7
	Southbound	10	5	5

Notes:

1. A screenline is an imaginary line drawn across horizontally or vertically across the City. At locations where the screenline crosses an arterial street, the capacity and demand of the road are totaled and recorded in this table. For illustration of screenlines, see **figure 4**.
2. The capacity refers to the number of travel lanes, excluding center turn lanes, in one direction that are anticipated to exist by 2022 on the screenline identified based on the City's Comprehensive Plan, current planning studies underway, and city staff judgment.
3. The demand refers to the number of travel lanes, excluding center turn lanes, in one direction that are needed to support the traffic demand generated by the zoning along the screenline identified. One lane of road in this urban setting is assumed to accommodate 1,000 vehicles per hour (vph) at capacity. In cases where the lane is adjacent to a center turn lane, the lane is assumed to accommodate 1,200 vph at capacity.

## **Conclusion**

The land use associated with CPA-2001-5 involves increasing the existing building height limitations in Thrasher's Corner, Canyon Park, and Downtown Community Activity Centers, and the Canyon Park and North Creek Regional Activity Centers, with the exception of the North Creek Valley Floor where the building height limits will be decreased. This amendment also includes increasing residential density land use designations to provide more multi-family residential dwelling units throughout the city. The existing and proposed designations generate 2,560 and 5,041 new trips in 2007, respectively, or an increase of 2,481 p.m. peak-hour trips. As a result, CPA-2001-5 will affect 35 concurrency intersections with three or more project trips under both existing and proposed zoning designations.

The results of the 2007 LOS analysis show that the control delay did not vary greatly at the majority of concurrency intersections between the existing and proposed plan designations. However, the LOS worsened at 13 intersections with the proposed designation compared to the existing designation. With the existing designation, five intersections will operate at LOS E or worse, compared to eight intersections with the proposed plan designation. The mitigation proposed to improve the operations to LOS D or better at the five failing intersections in the existing plan designation is the same mitigation as the proposed plan designation. There are three additional intersections that need mitigation as a result of the proposed plan designation.

By 2022, the proposed designation for CPA-2001-5 during the p.m. peak hour would generate 11,202 trips, which is an increase of 2,998 trips compared to the existing designation. A screenline analysis was performed to determine the capacity needs throughout the City. Results indicated that no additional capacity in any direction would be needed to accommodate the change in land use designation between existing and proposed CPA-2001-5 in 2022. However, there would be an increase in the travel lane demand with the proposed plan designation by one lane in the north and westbound directions and three lanes in the southbound direction.

## **Cumulative Impacts of All Plan Amendments**

The cumulative plan amendment analysis considers CPA-2001-2, CPA-2001-3, and CPA-2001-5, collectively, to measure the cumulative impacts on the City of Bothell's transportation system. CPA-2001-4 and CPA-2001-6 are not included in the cumulative impacts because no additional impact to the roadway network is anticipated with these amendments in place. The geographical locations of all plan amendments are described in different sections of this report.

## **2007 Land Use Description**

### *Existing Plan Designation*

The existing designation of the cumulative plan amendment analysis includes the development of CPA-2001-2, CPA-2001-3, and CPA-2001-5 under their respective existing designation classifications. Detailed descriptions of these existing land uses are provided in earlier sections of this report.

### *Proposed Plan Designation*

The proposed designations of the cumulative plan amendment analysis includes the development of CPA-2001-2, CPA-2001-3, and CPA-2001-5 under their respective proposed designation classifications. Detailed descriptions of these proposed land uses are provided in other sections of this report.

## **2007 Trip Generation**

### *Existing Plan Designation*

**Table 27** presents the 2007 a.m. and p.m. peak-hour trip generation comparison for the cumulative plan amendment analysis under the existing designations. A total of 1,066 new trips are generated from the cumulative plan amendment analysis in the a.m. peak as compared to 2,566 new trips in the p.m. peak. The p.m. peak generates 1,500 more trips than the a.m. peak, and the background traffic levels in Bothell are projected to be higher in the p.m. peak than in the a.m. peak. Therefore, the p.m. peak represents a worst-case scenario for traffic analysis purposes.

The east hillside of the North Creek Regional Activity Center, as identified in the City of Bothell's Comprehensive Plan, will be affected by Plan Amendments CPA-2001-2 and CPA-2001-5. The intensity of development for the east hillside under CPA-2001 assumes full capacity for population and employment by 2002 which is much more aggressive than what PSRC projects for the region. For CPA-2001-5, the City of Bothell provided population and employment forecasts for 2007 and 2022 which are more consistent with PSRC projections for the region. Therefore, the land use intensity from CPA-2001-5 was used for the east hillside of the North Creek Regional Activity Center in the cumulative existing plan designation. The number of trips reported for CPA-2001-2 in **table 28** are the a.m. and p.m. peak numbers from the North Creek Regional Activity Center-East Hillside for CPA-2001-5, existing land use designation.

### *Proposed Plan Designation*

**Table 28** presents the a.m. and p.m. peak-hour trip generation comparison for the cumulative plan amendment analysis under the proposed designations. A total of 3,529 new trips are generated from the cumulative plan amendment analysis in the a.m. peak as

compared to 4,655 new trips in the p.m. peak. The p.m. peak generates 1,126 more trips than the a.m. peak, and the background traffic levels in Bothell are projected to be higher in the p.m. peak than in the a.m. peak. Therefore, the p.m. peak represents a worst-case scenario for traffic analysis purposes.

The east hillside of the North Creek Regional Activity Center will be affected by Plan Amendments CPA-2001-2 and CPA-2001-5 under the cumulative proposed plan designation. Therefore, the combined effects of the two plan amendments need to be considered. As with the existing plan designation, the land use intensity from CPA-2001-5 for the east hillside was developed by the City of Bothell. This was used as the base to account for the proposed plan designation effects of CPA-2001-5, which increase building height and residential density. To account for the effects of CPA-2001-2, which allows for multifamily residential and commercial office development on steep slopes, the land use intensity was increased by the proportion of new developable land made available on steep slopes. If CPA-2001-2 were implemented, then 86.5 percent more land would be developable in the east hillside; therefore, the land use intensity from CPA-2001-5 was increased by the same proportion.

**Table 27**  
**2007 Cumulative Plan Amendments Existing Designation**  
**Trip Generation**

Land Use	Peak-Hour Trips		
	In	Out	Total
<b>A.M. Peak Hour</b>			
CPA-2001-2 (Office Park, Low-Rise Condominium/Townhome) <sup>1</sup>	12	7	19
CPA-2001-3 (Single-Family Detached Housing)	1	3	4
CPA-2001-5 (Office Park, Shopping Center, General Light Industrial, Low-Rise Condominium/Townhome) <sup>2</sup>	874	170	1,043
<b>Net New Trips =</b>	<b>887</b>	<b>180</b>	<b>1,066</b>
<b>P.M. Peak Hour</b>			
CPA-2001-2 (Office Park, Low-Rise Condominium/Townhome) <sup>1</sup>	6	13	19
CPA-2001-3 (Single-Family Detached Housing)	4	2	6
CPA-2001-5 (Office Park, Shopping Center, General Light Industrial, Low-Rise Condominium/Townhome) <sup>2</sup>	1,168	1,373	2,541
<b>Net New Trips =</b>	<b>1,178</b>	<b>1,388</b>	<b>2,566</b>
<p>1. The land area identified in the City of Bothell Comprehensive Plan as the North Creek Regional Activity Center – East Hillside is affected by both CPA-2001-2 and CPA-2001-5 under the cumulative scenario. Therefore, the number of net trips includes the effects of both plan amendments.</p> <p>2. Total net trips for CPA-2001-5 do not include the North Creek Regional Activity Center – East Hillside area. The net trips from the East Hillside area are included in CPA-2001-2.</p>			

**Table 28**  
**2007 Cumulative Plan Amendments Proposed Designation**  
**Trip Generation**

Land Use	Peak-Hour Trips		
	In	Out	Total
<b>A.M. Peak Hour</b>			
CPA-2001-2 (Office Park, Low-Rise Condominium/Townhome) <sup>1</sup>	121	47	167
CPA-2001-3 (Single-Family Detached Housing)	2	5	7
CPA-2001-5 (Office Park, Shopping Center, General Light Industrial, Low-Rise Condominium/Townhome) <sup>2</sup>	2,768	590	3,355
	<b>Net New Trips = 2,891</b>	<b>642</b>	<b>3,529</b>
<b>P.M. Peak Hour</b>			
CPA-2001-2 (Office Park, Low-Rise Condominium/Townhome) <sup>1</sup>	45	117	162
CPA-2001-3 (Single-Family Detached Housing)	5	4	9
CPA-2001-5 (Office Park, Shopping Center, General Light Industrial, Low-Rise Condominium/Townhome) <sup>2</sup>	1,618	2,866	4,484
	<b>Net New Trips = 1,668</b>	<b>2,987</b>	<b>4,655</b>
<p>1. The land area identified in the City of Bothell Comprehensive Plan as the North Creek Regional Activity Center – East Hillside is affected by both CPA-2001-2 and CPA-2001-5 under the cumulative plan designation. Therefore, the number of net trips includes the effects of both plan amendments.</p> <p>2. Total net trips for CPA-2001-5 do not include the North Creek Regional Activity Center – East Hillside area. The net trips from the East Hillside area are included in CPA-2001-2.</p>			

### **2007 Trip Distribution**

#### *Existing Plan Designation*

**Figure 9** presents the existing designations trip distribution for the cumulative plan amendment analysis. Based on the methodology described in this report, the cumulative plan amendment analysis affects 35 concurrency intersections.

#### *Proposed Plan Designation*

**Figure 9** presents the proposed designations trip distribution for the cumulative plan amendment analysis. Based on the methodology described in this report, the cumulative plan amendment analysis affects the same 35 concurrency intersections as the existing designation of the cumulative plan amendments.

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## **2007 Level-of-Service Analysis**

### *Existing Plan Designation*

**Table 29** presents the 2007 LOS analysis for the existing designation of the cumulative plan amendment analysis; calculations are provided in **Appendix J**. The results of the 2007 cumulative plan amendments existing designation reflect the same results as that of CPA-2001-5 existing designation alone. This means that of the 35 concurrency intersections analyzed, the same five intersections will operate at or below LOS E in 2007. The remaining 30 intersections analyzed will operate at LOS D or better. The intersections of SR 527/SR 522 and 102nd Avenue NE/Main Street is in the 1.5-hour analysis zone and is at or below LOS E. Operations at this intersection did not improve to LOS D outside the 1.5-hour time period.

### *Proposed Plan Designation*

Results of the 2007 LOS analysis for the proposed designations of the cumulative plan amendment analysis is presented in **table 29**. Calculations are provided in **Appendix J**. Similar to the existing designation, results of the 2007 cumulative plan amendments proposed designation reflect the same results as that of CPA-2001-5 proposed designation alone. This means that of the 35 concurrency intersections analyzed, the same eight intersections will operate at or below LOS E in 2007. The eight intersections operating below LOS D are as follows: SR 527 and 220th Street SE, SR 527 and 228th Street SE, Meridian Avenue S and 240th Street SE, 120th Avenue NE and North Creek Parkway, 100th Avenue NE and NE 190th Street, SR 527 and SR 522, 102nd Avenue NE and Main Street, and 228th Street SE and 39th Avenue SE. The remaining 27 intersections will operate at LOS D or better.

The intersections of SR 527 and 220th Street SE, SR 527 and 228th Street SE, SR 522/SR 527, and 102nd Avenue NE and Main Street are in the 1.5-hour analysis zone and are at or below LOS E. Operations at these intersections did not improve to LOS D outside the 1.5-hour time period.

## **2007 Mitigation**

### *Existing Plan Designation*

The mitigation LOS analysis for the existing designation with the cumulative plan amendments calculations are provided in **Appendix K**. Five intersections need mitigation to bring them to LOS D or above under the existing plan designation. **Table 30** shows the number of lanes that would be present on each leg of the intersection with the suggested mitigation in place. This mitigation improves operations to LOS D or better at these five intersections. For all of the intersections, the existing zoning mitigation is the same as or less than the proposed zoning mitigation.

**Table 29  
Cumulative Plan Amendments, 2007 P.M. Peak-Hour Level of Service Summary**

INT No. <sup>1</sup>	Concurrency Intersection Description	Control Type <sup>2</sup>	at LOS E/F and in 1.5-Hour Zone? <sup>3</sup>	Existing Designation			Proposed Designation		
				Control Delay/Veh <sup>4</sup>	LOS <sup>5</sup>	1.5-Hour Analysis Satisfied? <sup>6</sup>	Control Delay/Veh <sup>4</sup>	LOS <sup>5</sup>	1.5-Hour Analysis Satisfied? <sup>6</sup>
1	9th Ave SE/SR 524	Signal	No	18.0	B	N/A <sup>8</sup>	19.6	B	N/A
2	SR 527/SR 524	Signal	No	41.8	D	N/A	49.0	D	N/A
3	SR 527/214th St SE	Signal	No	37.3	D	N/A	50.7	D	N/A
4	SR 527/220th St SE	Signal	Yes	36.7	D	N/A	70.3	E	No
5	4th Ave W/ 228th St SE	Signal	No	14.7	B	N/A	25.8	C	N/A
6	Meridian Ave S/ 228th St SE	Signal	No	27.5	C	N/A	23.2	C	N/A
7	9th Ave SE/ 228th St SE	Signal	Yes	26.0	C	N/A	33.9	C	No
8	SR 527/228th St SE	Signal	Yes	53.7	D	N/A	69.7	E	N/A
9	15th Ave St/ 228th St SE	Signal	Yes	41.5	D	N/A	45.6	D	N/A
10	19th Ave SE/ 228th St SE	Signal	Yes	35.7	D	N/A	39.6	D	No
11	Fitzgerald Rd/ 228th St SE	Signal	No	21.1	C	N/A	44.5	D	N/A
12	29th Ave SE/ 228th St SE	TWSC	No	17.0	B	N/A	134.4	F	N/A
13	31st Ave SE/ 228th St SE	TWSC	No	16.6	B	N/A	26.8	C	N/A
14	35th Ave SE/ 228th St SE	Signal	No	9.7	A	N/A	14.7	B	N/A
15	Meridian Ave S/ 240th St SE	AWSC	No	50.9	F	N/A	59.4	F	N/A
16	SR 527/240th St SE	Signal	No	9.2	A	N/A	12.2	B	N/A
17	35th Ave SE/ 240th St SE	TWSC	No	19.4	C	N/A	28.3	D	N/A
18	39th Ave SE/ 240th St SE	Signal	No	27.0	C	N/A <sup>8</sup>	39.0	D	N/A
19	120th Ave NE/North Creek Pkwy	TWSC	No	26.8	C	N/A	59.6	E	N/A

1. INT No. refers to intersection number shown in **figure 9**.
2. AWSC = All way stop controlled intersection, TWSC = Two-way stop-controlled intersection, Signal = Signalized intersection
3. All intersections designated as concurrency intersections must operate at LOS D or better with the exception of these intersections which are permitted to operate at LOS E of F for no more than 1.5 hours during the peak period. These intersections must also return to LOS D operations before and after the 1.5-hour period.
4. Control delay, measured in seconds per vehicle, is a measure of all the delay contributable to traffic control measures, such as traffic signals or stop signs. At signalized intersections, the delay reported is the average of all the control delay experienced for all the movements. At unsignalized intersections, the reported delay is for only one movement, the movement experiencing the worst control delay, which is typically one of the stop-controlled side street approaches. The control delay reported at unsignalized intersections is not a valid indication of the operations at the entire intersection.
5. LOS is the level of service, a concept based on the 1997 Highway Capacity Manual for unsignalized and signalized intersections.
6. Yes = LOS D or better
7. >180 = Control delay exceeds 180 sec/veh. When control delay value becomes large, the intersection is over capacity and the estimated delay becomes unreliable.
8. N/A: This does not apply to intersections outside of the 1.5-hour zone, or those intersections in the 1.5-hour zone which are operating at LOS D or better.

**Table 29 (continued)**  
**Cumulative Plan Amendments, 2007 P.M. Peak-Hour Level of Service Summary**

Concurrency Intersection	at LOS E/F and in 1.5-Hour Zone? <sup>3</sup>	Existing Designation				Proposed Designation			
		Control Type <sup>2</sup>	Control Delay/Veh <sup>4</sup>	LOS <sup>5</sup>	1.5-Hour Analysis Satisfied? <sup>6</sup>	Control Delay/Veh <sup>4</sup>	LOS <sup>5</sup>	1.5-Hour Analysis Satisfied? <sup>6</sup>	
INT No. <sup>1</sup>	Description								
20	SR 527/NE 191st St	Signal	Yes	21.7	C	N/A	27.8	C	No
21	100th Ave NE/NE 190th St	TWSC	No	107.6	F	N/A	150.0	F	N/A
22	104th Ave SE/NE 190th Street	AWSC	No	17.4	C	N/A	19.0	C	N/A
23	Beardslee Blvd./UW N. Campus Access	Signal	No	15.4	B	N/A	17.8	B	N/A
24	North Creek Pkwy/NE 195th St	Signal	No	29.5	C	N/A	36.3	D	N/A
25	120th Ave NE/NE 195th St	Signal	No	43.2	D	N/A	49.0	D	N/A
26	SR 522/NE 180th St	Signal	Yes	27.2	C	Yes	27.0	C	Yes
27	SR 527/SR 522	Signal	Yes	71.4	E	No	75.5	E	No
28	102nd Ave NE/Main St	AWSC	Yes	170.8	F	No	>180 <sup>7</sup>	ECL	No
29	104th Ave NE/Kaysner Way	Signal	Yes	15.5	B	No	19.4	B	No
30	NE 185th St / Beardslee Blvd.	Signal	No	12.4	B	N/A	18.8	B	N/A
31	96th Ave NE/SR 522	Signal	No	19.2	B	N/A	21.6	C	N/A
33	132nd Ave NE/NE 180th St	Signal	No	13.4	B	N/A	15.5	B	N/A
34	100th Ave NE/NE 145th St	Signal	No	22.1	C	N/A	22.6	C	N/A
35	SR 522 / Kaysner Way	Signal	No	29.9	C	N/A	31.4	C	N/A
36	228th Street SE/39th Avenue SE	Signal	No	101.5	F	N/A	134.4	F	N/A

1. INT No. refers to intersection number shown in figure 9.
2. AWSC = All way stop controlled intersection, TWSC = Two-way stop-controlled intersection, Signal = Signalized intersection
3. All intersections designated as concurrency intersections must operate at LOS D or better with the exception of these intersections which are permitted to operate at LOS E or F for no more than 1.5 hours during the peak period. These intersections must also return to LOS D operations before and after the 1.5-hour period.
4. Control delay, measured in seconds per vehicle, is a measure of all the delay contributable to traffic control measures, such as traffic signals or stop signs. At signalized intersections, the delay reported is the average of all the control delay experienced for all the movements. At unsignalized intersections, the reported delay is for only one movement, the movement experiencing the worst control delay, which is typically one of the stop-controlled side street approaches. The control delay reported at unsignalized intersections is not a valid indication of the operations at the entire intersection.
5. LOS is the level of service, a concept based on the 1997 Highway Capacity Manual for unsignalized and signalized intersections.
6. Yes = LOS D or better
7. >180 = Control delay exceeds 180 sec/veh. When control delay value becomes large, the intersection is over capacity and the estimated delay becomes unreliable.
8. N/A: This does not apply to intersections outside of the 1.5-hour zone, or those intersections in the 1.5-hour zone which are operating at LOS D or better.

### *Proposed Plan Designation*

**Table 30** presents the mitigation LOS analysis for the proposed designations with the cumulative plan amendments. Calculations are provided in **Appendix K**. Mitigation at the intersections of SR 527 and 220th Street SE, SR 527 and 228th Street SE, 120th Avenue NE and North Creek Parkway involved more widening than needed for the existing zoning designation to improve operations to LOS D or better.

### **2022 Trip Generation**

#### *Existing Plan Designation*

**Table 31** presents the 2022 a.m. and p.m. peak-hour trip generation comparison for the cumulative plan amendment analysis under the existing designations. A total of 7,639 new trips are generated from the cumulative plan amendment analysis in the a.m. peak as compared to 8,210 new trips in the p.m. peak. The p.m. peak generates 571 more trips than the a.m. peak, and the background traffic levels in Bothell are projected to be higher in the p.m. peak. Therefore, the p.m. peak was analyzed.

The East Hillside of the North Creek Regional Activity Center, as identified in the City of Bothell's Comprehensive Plan, will be affected by Plan Amendments CPA-2001-2 and CPA-2001-5. For the cumulative existing plan designation, as described earlier in the 2007 Trip Generation section, the methodology described for CPA-2001-5 was used to determine the net new trips for the East Hillside. The number of trips reported for CPA-2001-2 in **table 28** are the a.m. and p.m. peak numbers from the North Creek Regional Activity Center-East Hillside for CPA-2001-5, existing land use designation.

#### *Proposed Plan Designation*

**Table 32** presents the a.m. and p.m. peak-hour trip generation comparison for the cumulative plan amendment analysis under the proposed designations. A total of 10,708 new trips are generated from the cumulative plan amendment analysis in the a.m. peak as compared to 11,330 new trips in the p.m. peak. Because the p.m. peak generates 622 more trips than the a.m. peak, the p.m. peak was analyzed.

The East Hillside of the North Creek Regional Activity Center will be affected by Plan Amendments CPA-2001-2 and CPA-2001-5 under the cumulative proposed plan designation. Therefore, the combined effects of the two plan amendments need to be considered. As described earlier in the 2007 Trip Generation section, the land use intensity from CPA-2001-5 was measured by 86.5 percent to account for the proportion of new developable land made available by CPA-2001-2. This combines the effects of both proposed plan designations.

**Table 30  
2007 Mitigation Analysis Summary for Cumulative Amendments**

Int ID <sup>1</sup>	Intersection	Leg	No. of lanes on intersection leg with Suggested Mitigation			Existing Zoning Delay <sup>2</sup> /LOS		Proposed Zoning Delay <sup>2</sup> /LOS	
			2007 Base	Existing Zoning	Proposed Zoning	Before Mit.	After Mit.	Before Mit.	After Mit.
4	SR 527/ 220th St SE	North	7	7	7	36.7/D <sup>3</sup>	-	70.3/E	48.0/D
		South	9	9	9				
		East	5	5	6				
		West	4	4	5				
8	SR 527/ 228th St SE	North	9	9	10	53.7/D <sup>3</sup>	-	69.7/E	54.3/D
		South	7	7	8				
		East	6	6	6				
		West	6	6	6				
15	Meridian Ave S/ 240th St SE	North	2	2	2	50.9/F	26.5/D	59.4/F	31.9/D
		South	2	3	3				
		East	3	3	3				
		West	2	2	2				
19	120th Ave NE/ North Creek Pkwy	North	4	4	4	26.8/C <sup>3</sup>	-	59.6/E	8.4/A <sup>5</sup>
		South	4	4	4				
		West	3	3	3				
21	100th Ave SE/ NE 190th St	North	2	2	2	107.6/F	8.3/A <sup>5</sup>	150.0/F	10.4/B <sup>5</sup>
		East	2	2	2				
		West	2	2	2				
27	SR 527/SR 522	North	4	5	5	71.4/E	46.2/D	75.5/E	54.3/D
		South	5	6	6				
		East	4	4	4				
		West	6	6	6				
28	102nd Ave NE/ Main St	North	2	2	2	170.8/F	11.7/B <sup>5</sup>	>180 <sup>4</sup>	13.5/B <sup>5</sup>
		South	3	3	3				
		East	3	3	3				
		West	2	2	2				
36	228th St SE/ 39th Avenue SE	North	5	5	5	101.5/F	52.3/D	132.4/F	52.6/D
		South	5	7	7				
		East	3	4	4				
		West	3	5	5				

1. Intersection ID refers to the location on **figure 8**.
2. Delay refers to control delay, which is measured in seconds per vehicle.
3. No mitigation is needed at this intersection under existing designations because it is operating at or above the City's LOS D standard. The LOS shown here is the LOS in 2007 without any mitigation.
4. At intersections with delay values greater than 180 sec/veh, the operational output becomes unreliable.
5. The proposed mitigation is adding a traffic signal and keeping the channelization the same.

**Table 31**  
**2022 Cumulative Plan Amendments Existing Designation**  
**Trip Generation**

Land Use	Peak-Hour Trips		
	In	Out	Total
<b>A.M. Peak Hour</b>			
CPA-2001-2 (Office Park, Low-Rise Condominium/Townhome) <sup>1</sup>	40	20	61
CPA-2001-3 (Single-Family Detached Housing)	1	3	4
CPA-2001-5 (Office Park, Shopping Center, General Light Industrial, Low-Rise Condominium/Townhome) <sup>2</sup>	7,125	490	7,574
	<b>Net New Trips = 7,166</b>	<b>513</b>	<b>7,639</b>
<b>P.M. Peak Hour</b>			
CPA-2001-2 (Office Park, Low-Rise Condominium/Townhome) <sup>1</sup>	18	41	59
CPA-2001-3 (Single-Family Detached Housing)	4	2	6
CPA-2001-5 (Office Park, Shopping Center, General Light Industrial, Low-Rise Condominium/Townhome) <sup>2</sup>	3,910	4,235	8,145
	<b>Net New Trips = 3,932</b>	<b>4,278</b>	<b>8,210</b>

1. The land area identified in the City of Bothell Comprehensive Plan as the North Creek Regional Activity Center – East Hillside is affected by both CPA-2001-2 and CPA-2001-5 under the cumulative scenario. Therefore, the number of net trips includes the effects of both plan amendments.
2. Total net trips for CPA-2001-5 do not include the North Creek Regional Activity Center – East Hillside area. The net trips from the East Hillside area are included in CPA-2001-2.

**Table 32**  
**2022 Cumulative Plan Amendments Proposed Designation**  
**Trip Generation**

Land Use	Peak-Hour Trips		
	In	Out	Total
<b>A.M. Peak Hour</b>			
CPA-2001-2 (Office Park, Low-Rise Condominium/Townhome) <sup>1</sup>	194	75	269
CPA-2001-3 (Single-Family Detached Housing)	2	5	7
CPA-2001-5 (Office Park, Shopping Center, General Light Industrial, Low-Rise Condominium/Townhome) <sup>2</sup>	<b>9,381</b>	<b>1,051</b>	<b>10,432</b>
	<b>Net New Trips =</b>	<b>9,577</b>	<b>1,131</b>
			<b>10,708</b>
<b>P.M. Peak Hour</b>			
CPA-2001-2 (Office Park, Low-Rise Condominium/Townhome) <sup>1</sup>	71	185	256
CPA-2001-3 (Single-Family Detached Housing)	5	4	9
CPA-2001-5 (Office Park, Shopping Center, General Light Industrial, Low-Rise Condominium/Townhome) <sup>2</sup>	<b>4,606</b>	<b>6,459</b>	<b>11,065</b>
	<b>Net New Trips =</b>	<b>4,682</b>	<b>6,648</b>
			<b>11,330</b>

1. The land area identified in the City of Bothell Comprehensive Plan as the North Creek Regional Activity Center – East Hillside is affected by both CPA-2001-2 and CPA-2001-5 under the cumulative scenario. Therefore, the number of net trips includes the effects of both plan amendments.
2. Total net trips for CPA-2001-5 do not include the North Creek Regional Activity Center – East Hillside area. The net trips from the East Hillside area are included in CPA-2001-2.

### **2022 Capacity Needs**

#### *Existing Plan Designation*

**Table 33** presents the results of the 2022 screenline analysis for the cumulative existing plan zoning designation. Results indicate that the total lane demand may meet, but does not exceed, the lane capacity in any given direction.

#### *Proposed Plan Designation*

**Table 33** presents the results of the 2022 screenline analysis for the cumulative proposed zoning plan designation. Results are similar to those for the existing plan zoning designation in that the total lane demand may meet, but does not exceed, the given lane capacity in any direction. However, the proposed plan designation increased the travel

lane demand over the existing plan designation by one lane in the eastbound direction, two lanes in the west and southbound directions, and four lanes in the northbound direction.

**Table 33  
2022 Screenline Analysis  
All Comprehensive Plan Amendments**

Screenline <sup>1</sup>	Direction	Number of Travel Lanes		
		2022 Existing Zoning		2022 Proposed Zoning
		Capacity <sup>2</sup>	Demand <sup>3</sup>	Demand <sup>3</sup>
A	Eastbound	6	4	4
	Westbound	6	6	6
B	Eastbound	9	6	6
	Westbound	9	8	9
C	Eastbound	8	5	6
	Westbound	8	6	6
D	Eastbound	5	3	3
	Westbound	5	3	4
1	Northbound	8	7	8
	Southbound	8	4	4
2	Northbound	7	5	6
	Southbound	7	3	3
3	Northbound	7	5	6
	Southbound	7	4	5
4	Northbound	10	7	8
	Southbound	10	5	6

Notes:

1. A screenline is an imaginary line drawn across horizontally or vertically across the City. At locations where the screenline crosses an arterial street, the capacity and demand of the road are totaled and recorded in this table. For illustration of screenlines, see **figure 4**.
2. The capacity refers to the number of travel lanes, excluding center turn lanes, in one direction that are anticipated to exist by 2022 on the screenline identified based on the City's Comprehensive Plan, current planning studies underway, and city staff judgment.
3. The demand refers to the number of travel lanes, excluding center turn lanes, in one direction that are needed to support the traffic demand generated by the zoning along the screenline identified. One lane of road in this urban setting is assumed to accommodate 1,000 vehicles per hour (vph) at capacity. In cases where the lane is adjacent to a center turn lane, the lane is assumed to accommodate 1,200 vph at capacity.

## **Conclusion**

The cumulative plan amendment scenario compares the combination of CPA-2001-2, CPA-2001-3 and CPA-2001-5 existing designation land uses with the proposed designations land uses on the Bothell transportation system. CPA-2001-4 and CPA-2001-6 are not included in the cumulative impacts because no additional impact to the roadway network is anticipated with these amendments in place. Consequently, the proposed designations for the cumulative plan amendment analysis generate more trips than the existing designations, with the existing and proposed designations generating 2,566 and 4,655 new trips in 2007, respectively, or an increase of 2,089 p.m. peak-hour trips. Both the existing designations and proposed designations of the cumulative plan amendment analysis will affect 35 concurrency intersections with three or more project trips.

The results of the LOS analysis show that under both the existing and proposed designations of CPA-2001-2, CPA-2001-3, CPA-2001-5, five intersections for existing designations and eight intersections for proposed designations will operate at LOS E or worse in 2007. For the majority of concurrency intersections, the control delay did not vary greatly between proposed and existing designations. LOS results for existing and proposed designations reflect the CPA-2001-5 results, meaning that the same intersections are failing in both scenarios, i.e., five under cumulative amendments, existing designation; and eight under cumulative amendments, proposed designation.

The mitigation proposed to improve the operations to LOS D or better at these intersections is the same for both existing and proposed designations, with the exception of the following three intersections: SR 527 and 220th Street SE, SR 527 and 228th Street SE, 120th Avenue NE and North Creek Parkway.

By 2022, the proposed designation for the cumulative amendments during the p.m. peak hour would generate 11,330 trips, which is an increase of 3,120 trips compared to the existing designation. A screenline analysis was performed to determine the capacity needs in 2022 throughout the City. Results indicate that no demand will exceed the given capacity in any direction under both the existing and proposed designations. However, there would be an increase in travel lane demand with the proposed plan designation by one lane in the eastbound direction, two lanes in the west and southbound directions, and four lanes in the northbound direction.

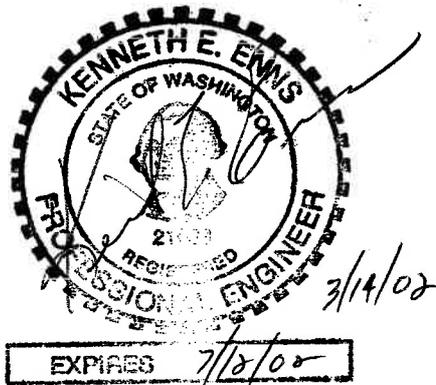
**CITY OF BOTHELL**

**COMPREHENSIVE LAND USE  
AMENDMENTS**

**WATER/SEWER ENVIRONMENTAL  
IMPACT STUDY**

**CITY OF BOTHELL**

**COMPREHENSIVE LAND USE AMENDMENTS**  
**WATER/SEWER ENVIRONMENTAL IMPACT STUDY**



**NOVEMBER 2001**  
**G&O #01812**

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# EXECUTIVE SUMMARY

## INTRODUCTION

As part of its *Imagine Bothell... City of Bothell Comprehensive Plan* 2001 update, the City of Bothell is considering five land use amendments that would increase the potential overall intensity of land use within the City. -The purpose of this report is to analyze the comprehensive land use amendments and determine their impact, if any, on the water and wastewater utilities in the City.

As building heights increase, population densities, both employment and residential, increase. An increase in density creates larger water demands, wastewater flows, and larger fire flow requirements. This report addresses the effects these Plan and Code amendments could have on the water and wastewater utilities serving the study areas in question. The analysis reached the following conclusions:

## CONCLUSIONS

The following four land use amendments will have little or no impact on the City's and Alderwood Water and Wastewater District's ability to provide water and sewer service:

- **Amend the Canyon Park Subarea Land Use Policy 11 and the Plan map to redesignate a single subject property from R6-10 to R11-15.** The single property will have negligible impact on the water and wastewater systems.
- **Extend the Motor Vehicle Sales Overlay designation to include the R11-15, OP, CB, LI designated property located at 12542 NE 180<sup>th</sup> Street.** This is not a utility intensive land use designation and will have minimal impact on either the water or wastewater systems.
- **Repeal the Plan and Bothell Municipal Code language that discourages net loss of wetland acreage and establish specific requirements for wetland mitigation proposals that would protect critical area functions and values, but not acreage.** This amendment would allow developers to develop on larger areas of sites containing wetlands. Construction of utilities on peat or other wetland hydric soils is difficult and expensive. Sewer pipes are prone to sagging, differential settlement and subsequent infiltration and inflow. Water pipes are prone to differential settlement and subsequent leakage and rupture. It is recommended that the standards for each utility be reviewed, and amended if necessary, for construction in hydric soils. Additional costs for constructing utilities near wetlands, such as added dewatering costs,

access, establishing adequate foundations, and backfill material will be paid by developers.

- **Eliminate the prohibition of office and multi-family residential uses on slopes greater than 15% on certain properties within the North Creek Valley Subarea.** This area is included in the analysis of land use amendment number three. The impact to the water and wastewater systems in this area will be offset by the building height change from unlimited height to 150 feet in the North Creek Regional Activity Area.

The land use amendment that changes the building height requirements and the allowable residential density in the Thrasher's Corner, Canyon Park and downtown Community Centers, and the Canyon Park and North Creek Regional Activity Centers may have impacts on the ability to provide water and sewer service. In summary, the conclusions of the analysis are as follows:

- Since the City and Alderwood Water and Wastewater District (AWD) are supplied through wholesale purchase, the ability to provide domestic water supply will not be significantly affected. Agreements with wholesale purveyors should be reviewed to ensure that there are no negative impacts, such as increased rates or demand charges, due to the increased water use.
- Service pressure will be an issue at some elevations within the service areas. Building booster pumps will be required to provide pressure to higher floors.
- Increased fire flow requirements due to the increase in building heights will have the largest impact on water service in the study areas. Increased fire flow requirements may require off-site distribution and transmission improvements at the expense of the developer or the utility and/or fire pumps within the building to pump water to the upper levels. Coordinating with transportation improvements can minimize the restoration expense for utility improvements.
- The proposed amendments at buildout capacity would increase the annual average sewage flow in the Bothell/Alderwood sewer system by approximately 0.9 million gallons per day, and increase the peak flow by approximately 2.6 million gallons per day.
- The proposed amendments will have no impacts on the gravity sewers in the Thrasher's Corner Community Activity Center, Canyon Park Regional Activity Center, Canyon Park Community Activity Center, or North Creek Regional Activity Center (study areas 1 through 4).

- Approximately 4,000 feet of sewers in the Canyon Park Community Activity Center (Study Area 3) appear to be undersized. These sewers would be undersized regardless of whether or not the rezoning occurs.
- The proposed amendments may cause some local surcharging of the sewer system during storms in the Downtown Community Activity Center (Study Area 5). (Is it possible to say at what point surcharging might occur? Tomorrow? 50% of buildout? 75%?) If sewers in the downtown area are properly designed, then the surcharge should not be problematic. However, if surcharging is already occurring downtown, then a field survey and hydraulic model of downtown sewers is recommended to predict the extent of potential sewer surcharges and/or overflows.

Both the City of Bothell and the Alderwood Water and Wastewater District utilities will continue to analyze system needs through updates of their Water and Wastewater System Comprehensive Plans.

# CHAPTER 1

## WATER SYSTEM IMPACTS

### INTRODUCTION

As part of its *Imagine Bothell... City of Bothell Comprehensive Plan* 2001 update, the City of Bothell is considering five land use amendments, which would, overall, increase potential intensity of land use within the City. The purpose of this report is to analyze the comprehensive land use amendments and determine their impact, if any, on the water and wastewater utilities in the City. The five land use amendments include the following:

- 1) **Amend the Canyon Park Subarea Land Use Policy 11 and the Plan map to redesignate a single subject property from R6-10 to R11-15.** The single property will have negligible impact on the water and wastewater systems.
- 2) **Extend the Motor Vehicle Sales Overlay designation to include the R11-15, OP, CB, LI designated property located at 12542 NE 180<sup>th</sup> Street.** This is not a utility intensive land use designation and will have minimal impact on either the water or wastewater systems.
- 3) **Repeal the Plan and Bothell Municipal Code language that discourages net loss of wetland acreage and establish specific requirements for wetland mitigation proposals that would protect critical area functions and values, but not acreage.** This amendment would allow developers to develop on larger areas of sites containing wetlands. Construction of utilities on peat or other wetland hydric soils is difficult and expensive. Sewer pipes are prone to sagging, differential settlement and subsequent infiltration and inflow. Water pipes are prone to differential settlement and subsequent leakage and rupture. It is recommended that the standards for each utility be reviewed, and amended if necessary, for construction in hydric soils. Additional costs for constructing utilities in wetlands, such as added dewatering costs, access, establishing adequate foundation, and backfill material will be paid by developers.
- 4) **Eliminate the prohibition of office and multi-family residential uses on slopes greater than 15% on certain properties within the North Creek Valley Subarea.** This area is included in the analysis of land use amendment number five. The impact to the utilities in this area will be

offset by the building height change from unlimited to 150 feet in the North Creek Regional Activity Area.

**5) Amend the maximum allowable building heights and residential density zoning in *designated activity centers within the City.***

The first four amendments have little, if any impact on the utilities located within the City because they do not have a significant impact on growth and additional water use. However, the additional employees and residential population created by the additional building heights may have a significant impact. The remainder of this report will deal exclusively with the issue of the maximum allowable building height and residential density amendments. The City is proposing to modify the maximum allowable height of buildings in the following five defined areas of the City:

- 1) Thrasher's Corner Community Activity Center– The building height requirement shall be increased from 35 feet to 65 feet.
- 2) Canyon Park Regional Activity Center – The building height requirement shall be increased from 48 feet to 150 feet.
- 3) Canyon Park Community Activity Center– The building height requirement shall be increased from 35 feet to 65 feet.
- 4) North Creek Regional Activity Center – The building height requirement shall be decreased from unlimited to 150 feet in the valley floor, decreased from unlimited to 65 feet on the southwest slope, and increased from 35 feet to 65 feet in the east slope.
- 5) Downtown Community Activity Center – The building height requirement shall be increased from 35 feet to 65 feet.

Building heights in these areas will be limited to 65 feet with the proposed amendments, except for the Canyon Park Regional Activity Center and the valley floor portion of the North Creek Regional Activity Center where buildings will be limited to 150 feet. The proposed changes for the valley floor of the North Creek Regional Activity Center will actually reduce the current maximum building height for the area from an effective maximum height of 195 feet when required setbacks are taken into account.

As building heights increase, population densities, both employment and residential, increase. An increase in density creates larger water demands and larger fire flow requirements. This report addresses the effects these code amendments could have on the water and wastewater utilities serving the study areas in question.

## POPULATION AND WATER USE ASSUMPTIONS

The City of Bothell prepared an analysis titled *Building Height and Residential Density Plan and Code Amendments – Analysis of Population and Employment Capacities and Projected Growth* to develop the anticipated population changes that may occur as a result of the code amendments. The employment and population changes the City anticipates for the 20-year planning period are summarized in Table 1-1. The employment and population changes the City anticipates for the buildout planning period are summarized in Table 1-2.

**TABLE 1-1**

### Projected 2022 Amended Building Height and Residential Density Area Characteristics<sup>(1)</sup>

Area No.	Area Name	Area (acre)	Existing Building Height		Amended Building Height	
			Employment Capacity	Population Capacity	Employment Capacity	Population Capacity
1	Thrasher's Corner Community Activity Center	48	432	0	518	0
2	Canyon Park Regional Activity Center	637	10,170	998	12,204	1,198
3	Canyon Park Community Activity Center	98	1,544	0	1,853	240
4	North Creek Regional Activity Center	828	17,634	1,123	19,283	1,275
5	Downtown Community Activity Center	111	2,180	208	2,616	628
<b>Study Area Totals</b>		<b>1,722</b>	<b>31,960</b>	<b>2,329</b>	<b>36,474</b>	<b>3,341</b>

(1) Source: City of Bothell Planning Department

**TABLE 1-2**

**Projected Buildout Amended Building Height and Residential Density Area Characteristics<sup>(1)</sup>**

Area No.	Area Name	Area (acre)	Existing Building Height		Amended Building Height	
			Employment Capacity	Population Capacity	Employment Capacity	Population Capacity
1	Thrasher's Corner Community Activity Center	48	1,085	0	2,084	0
2	Canyon Park Regional Activity Center	637	13,662	1,422	32,796	3,255
3	Canyon Park Community Activity Center	98	2,214	0	2,337	1,342
4	North Creek Regional Activity Center	828	51,448	6,483	50,081	6,312
5	Downtown Community Activity Center	111	2,507	208	2,646	1,520
<b>Study Area Totals</b>		<b>1,722</b>	<b>70,916</b>	<b>8,113</b>	<b>89,944</b>	<b>12,429</b>

(1) Source: City of Bothell Planning Department

**FLOW IMPACTS**

For the purpose of this report, it is assumed a residential customer in both the City of Bothell and the Alderwood Water and Wastewater District's (the District) water service areas uses 67 gallons per day (gpd) and a non-residential customer uses 45 gpd. These values were developed in the City's *Draft 2001 Water System Comprehensive Plan*. Based on the assumed average demands per person and the population projections shown in Tables 1-1 and 1-2, Tables 1-3 and 1-4 develop the water demands for both the employee and residential population bases.

TABLE 1-3

Projected 2022 and Buildout Water Demand in Study Areas Under Existing Land Use

Area No.	Area Name	2022 Employment Demand (gpd)	2022 Residential Population Demand (gpd)	2022 Total Demand (gpd)	Buildout Employment Demand (gpd)	Residential Population Demand (gpd)	Total Demand (gpd)
1	Thrasher's Corner Community Activity Center	19,400	0	19,400	48,800	0	48,800
2	Canyon Park Regional Activity Center	457,700	66,900	524,600	614,800	95,300	710,100
3	Canyon Park Community Activity Center	69,500	0	69,500	99,600	0	99,600
4	North Creek Regional Activity Center	793,500	75,200	868,700	2,315,200	434,400	2,749,600
5	Downtown Community Activity Center	98,100	13,900	112,000	112,800	13,900	126,700
<b>Study Area Totals</b>		<b>1,438,200</b>	<b>156,000</b>	<b>1,594,200</b>	<b>3,191,200</b>	<b>543,600</b>	<b>3,734,800</b>

TABLE 1-4

Projected 2022 and Buildout Water Demand in Study Areas Under Proposed Land Use

Area No.	Area Name	2022 Employment Demand (gpd)	2022 Residential Population Demand (gpd)	2022 Total Demand (gpd)	Buildout Employment Demand (gpd)	Residential Population Demand (gpd)	Total Demand (gpd)
1	Thrasher's Corner Community Activity Center	23,300	0	23,300	93,800	0	93,800
2	Canyon Park Regional Activity Center	549,200	80,300	629,500	1,475,800	218,100	1,693,900
3	Canyon Park Community Activity Center	83,400	16,100	99,500	105,200	89,900	195,100
4	North Creek Regional Activity Center	867,700	85,400	953,100	2,253,600	422,900	2,676,500
5	Downtown Community Activity Center	117,700	42,100	159,800	119,100	101,800	220,900
<b>Study Area Totals</b>		<b>1,641,300</b>	<b>223,900</b>	<b>1,865,200</b>	<b>4,047,500</b>	<b>832,740</b>	<b>4,880,200</b>
Total Existing (From Table 1-3)		1,438,200	156,000	1,594,200	3,191,200	543,600	3,734,800
<b>Total Increase</b>		<b>203,100</b>	<b>67,900</b>	<b>271,000</b>	<b>856,300</b>	<b>289,100</b>	<b>1,145,400</b>

The 20-year total water demand increase to the City of Bothell is approximately 271,000 gpd. The buildout total water demand increase to the City is approximately 1,145,400 gpd. Figure 1-1 illustrates the flow impacts to each study area.

## **WATER SUPPLY**

The maximum water demand that is anticipated is from the increased permanent population, the increased employee population, and the increased employees living within Bothell city limits. This increased water demand is 1,145,400 gpd or approximately 800 gpm. This water demand, when distributed over the Bothell city limits area of approximately 7,700 acres, equals an increase of approximately 0.1 gpm per acre. This increased demand is not anticipated to significantly impact Bothell's water distribution system. Further, because both the City and the District are wholesale customers, it is anticipated that the code amendments will only impact the amount of water purchased and not require any significant facility upgrades. Storage and other facility needs will continue to be addressed every six years as a part of each purveyor's Water System Comprehensive Plan updates.

## **LOCALIZED WATER PRESSURES**

Proposed modifications to the building height ordinances range from a maximum height of 65 feet for Thrasher's Corner Community Activity Center, Canyon Park Community Activity Center, Downtown Community Activity Center, and portions of North Creek Regional Activity Center. The amendments would also set maximum building heights of 150 feet for the Canyon Park Regional Activity Center and the valley floor of the North Creek Regional Activity Center. All of these code amendments would contain certain design conditions to be determined by the City.

In order to evaluate the effects of these new construction height allowances on water service to new buildings, generalized surface elevations are compared to the hydraulic grade line (HGL) of the water system in the area. Table 1-5 summarizes these factors.

**TABLE 1-5**

**Elevations in Amended Building Height Areas**

Area Name	Building Height Limits (feet)	Surface Elevations (feet)	HGL (feet)	Pressure (psi)
Thrasher's Corner Community Activity Center	65	130 – 150	520	168-160
Canyon Park Community Activity Center	65	100 – 200	520	181-138
Canyon Park Regional Activity Center	150	100 – 330 <sup>(1)</sup>	520	181-0
Downtown Community Activity Center	65	30 – 150	284	110-58
North Creek Regional Activity Center – Valley Floor	150	30 – 100	284	110-80
North Creek Regional Activity Center – Southwest Hillside	65	50 – 150	284	101-58
North Creek Regional Activity Center – East Hillside	65	100 – 300 <sup>(1)</sup>	284	80-0

(1) Some of the upper elevations of these areas are steep sloped critical areas.

Although it is generally standard practice to attempt to maintain a minimum pressure of 40 psi, WAC 246-290 requires a water system maintain a minimum pressure of 30 psi in the distribution system under peak hour demand conditions. In the City's 284 Zone, 30 psi could be expected to be available up to elevations of 200 feet, accounting for approximately 15 feet of draw down in the reservoirs and headloss through the system. Building elevations built above this elevation would likely require service booster pumps to supply the entire building with adequate water service. Surface elevations of the two study areas in the 284 Zone, except for the east hillside of the North Creek Regional Activity Center, are below 150 feet. Therefore, it is anticipated the 30 psi minimum required by the WAC is easily served to all properties in these areas. The east hillside of the North Creek Regional Activity Center however, contains surface elevations well above 200 feet. Many of these areas are designated steep slopes that may be developable under the proposed land use amendments, and the City will need to work with the developer to ensure the 30 psi minimum.

The other three study areas are served by the District in their 520 Zone. Pressures in these areas are high enough to accommodate all but the tallest buildings built on the

upper elevations in the Canyon Park Regional Activity Center. In this pressure zone, 30 psi could be expected to be available up to elevations of 435 feet, accounting for approximately 15 feet of draw down in the reservoirs and headloss through the system, which is well above ground elevations in the areas. Due to the proposed height limit of 150 feet, tall buildings built on the upper elevations of the Canyon Park Regional Activity Center could require service booster pumps to maintain water service pressure throughout the building.

WAC 246-290 requires that a water system must maintain a minimum pressure of 30 psi at the service meter. A water purveyor, such as the City or the District, may change their system at any time provided they meet the criteria defined by the Department of Health. For example, a discussion with the District has indicated that the District is considering lowering pressures in the Canyon Park area as a part of its update to its Water System Comprehensive Plan. Mechanical systems should be designed with these factors in mind, and should not be constructed without the approval of the appropriate utility provider.

## **FIRE FLOW REQUIREMENTS**

The City of Bothell currently has a minimum residential and commercial fire flow requirement of 1,500 gpm. The City follows the Uniform Fire Code (UFC) for all other buildings, which is based upon building square footage, with potential reductions for sprinkling, fire walls, etc. The City of Bothell currently meets all fire flow requirements in the study area. The *Draft 2001 Water System Comprehensive Plan* indicates that the City can provide 5,000 gpm to the North Creek and Downtown areas at the ground level. The available fire flow in the District's portion of the study area is unidentified and it is assumed that the District can meet current requirements of 1,500 gpm. The additional building height may raise the required fire flow in the study areas. It is not possible, or appropriate, in this report to identify what the future fire flow requirements will be, and what the impact to the two water systems will be. This should be done on a project by project basis with the understanding that off-site distribution and transmission improvements may be required at the expense of the developer to meet fire flow requirements. Also, it may be necessary to install fire pumps within the buildings to meet fire system sprinkler demands at the upper levels of the building.

## **CONCLUSIONS**

The following four land use amendments will have little or no impact on the City's and Alderwood Water and Wastewater District's ability to provide water and sewer service:

- **Amend the Canyon Park Subarea Land Use Policy 11 and the Plan map to redesignate a single subject property from R6-10 to R11-15.** The single property will have negligible impact on the water and wastewater systems.

- **Extend the Motor Vehicle Sales Overlay designation to include the R11-15, OP, CB, LI designated property located at 12542 NE 180<sup>th</sup> Street.** This is not a utility intensive land use designation and will have minimal impact on either the water or wastewater systems.
- **Repeal the Plan and Bothell Municipal Code language that discourages net loss of wetland acreage and establish specific requirements for wetland mitigation proposals that would protect critical area functions and values, but not acreage.** This amendment would allow developers to develop on larger areas of sites containing wetlands. Construction of utilities on peat or other wetland hydric soils is difficult and expensive. Sewer pipes are prone to sagging, differential settlement and subsequent infiltration and inflow. Water pipes are prone to differential settlement and subsequent leakage and rupture. It is recommended that the standards for each utility be reviewed, and amended if necessary, for construction in hydric soils. Additional costs for constructing utilities near wetlands, such as added dewatering costs, access, establishing adequate foundations, and backfill material will be paid by developers.
- **Eliminate the prohibition of office and multi-family residential uses on slopes greater than 15% on certain properties within the North Creek Valley Subarea.** This area is included in the analysis of land use amendment number three. The impact to the water and wastewater systems in this area will be offset by the building height change from unlimited height to 150 feet in the North Creek Regional Activity Area.

The land use amendment that changes the building height requirements and the allowable residential density in the Thrasher's Corner, Canyon Park and downtown Community Centers, and the Canyon Park and North Creek Regional Activity Centers may have impacts on the ability to provide water and sewer service. In summary, the conclusions of the analysis are as follows:

- Since the City and Alderwood Water and Wastewater District (AWD) are supplied through wholesale purchase, the ability to provide domestic water supply will not be significantly affected. Agreements with wholesale purveyors should be reviewed to ensure that there are no negative impacts, such as increased rates or demand charges, due to the increased water use.
- Service pressure will be an issue at some elevations within the service areas. Building booster pumps will be required to provide pressure to higher floors.

- Increased fire flow requirements due to the increase in building heights will have the largest impact on water service in the study areas. Increased fire flow requirements may require off-site distribution and transmission improvements at the expense of the developer or the utility and/or fire pumps within the building to pump water to the upper levels. Coordinating with transportation improvements can minimize the restoration expense for utility improvements.

Both the City of Bothell and the Alderwood Water and Wastewater District will continue to analyze system needs through updates of their Water and Wastewater Comprehensive Plans.

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**AREA 3:  
 CANYON PARK COMMUNITY ACTIVITY CENTER**

	BUILDOUT AVERAGE FLOW (MGD)	BUILDOUT PEAK FLOW (MGD)
WITHOUT AMENDMENT	0.100	0.216
WITH AMENDMENT	0.195	0.423
PERCENT INCREASE	96%	96%

**AREA 1:  
 THRASHERS CORNER COMMUNITY ACTIVITY CENTER**

	BUILDOUT AVERAGE FLOW (MGD)	BUILDOUT PEAK FLOW (MGD)
WITHOUT AMENDMENT	0.049	0.106
WITH AMENDMENT	0.094	0.204
PERCENT INCREASE	92%	92%

**AREA 2:  
 CANYON PARK REGIONAL ACTIVITY CENTER**

	BUILDOUT AVERAGE FLOW (MGD)	BUILDOUT PEAK FLOW (MGD)
WITHOUT AMENDMENT	0.710	1.541
WITH AMENDMENT	1.694	3.676
PERCENT INCREASE	139%	139%

**AREA 4:  
 NORTH CREEK REGIONAL ACTIVITY CENTER**

	BUILDOUT AVERAGE FLOW (MGD)	BUILDOUT PEAK FLOW (MGD)
WITHOUT AMENDMENT	2.750	5.967
WITH AMENDMENT	2.677	5.808
PERCENT DECREASE	3%	3%

**AREA 5:  
 DOWNTOWN COMMUNITY ACTIVITY CENTER**

	BUILDOUT AVERAGE FLOW (MGD)	BUILDOUT PEAK FLOW (MGD)
WITHOUT AMENDMENT	0.127	0.275
WITH AMENDMENT	0.221	0.479
PERCENT INCREASE	74%	74%

Snohomish County  
 King County

\* PEAK DAY FLOWS BASED ON PEAK  
 DAY FACTOR OF 2.17 AS DEFINED BY  
 THE 2001 DRAFT WATER SYSTEM  
 COMPREHENSIVE PLAN

SCALE 1" = 3000'

**CITY OF BOTHELL**  
 FIGURE 1-1  
 AMENDED BUILDING HEIGHT AREAS  
 WATER FLOWS



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## WASTEWATER PRODUCTION ASSUMPTIONS

Municipal wastewater consists of two main components: sanitary wastewater and infiltration and inflow (I&I). Sanitary wastewater is the discharge from residences and from commercial, institutional and similar facilities. I&I is water that unintentionally enters the sewer system, such as groundwater seepage through defective pipes and flow through manhole lids.

Sanitary wastewater flow can be estimated by winter water consumption, because irrigation is minimal during the winter. During the years 1997 and 1998, the ratio of winter water consumption to annual average water consumption was 80% and 70%, respectively. For the analysis that follows, it is assumed that wastewater production equals 75% of average annual water consumption. The City's *Draft 2001 Water System Comprehensive Plan* lists average annual water consumption rates of 67 gallons per resident per day and 45 gallons per employee per day. Therefore, the sanitary wastewater production rate is estimated at 51 gallons per resident per day and 34 gallons per employee per day. The peak sanitary flow was assumed to be 3.0 times the average flow due to diurnal variations.

Peak infiltration and inflow was estimated in the City's *1992 Wastewater Comprehensive Plan* at 1,100 gallons per acre per day.

### FLOW IMPACTS

Based on the average and peak wastewater production rates outlined above, Tables 2-2 and 2-3 develop the overall wastewater production rates in the study areas.

TABLE 2-2

Wastewater Flows Under Existing Building Height and Residential Density Within the Study Area

No.	Area Name	Empl. Sanitary Flow at Buildout (MGD) <sup>(1)</sup>	Pop. Sanitary Flow at Buildout (MGD) <sup>(2)</sup>	Peak I&I at Buildout (MGD) <sup>(3)</sup>	Average Flow at Buildout (MGD) <sup>(4)</sup>	Peak Flow at Buildout (MGD) <sup>(5)</sup>	Peak Flow at Buildout (gpad) <sup>(6)</sup>
1	Thrasher's Corner Community Activity Center	0.04	0.00	0.05	0.04	0.16	3,406
	Area Contributing Sewage to 1	0.00	0.16	0.26	0.18	0.73	3,150
2	Canyon Park Regional Activity Center	0.46	0.07	0.70	0.61	2.3	3,629
	Area Contributing Sewage to 2	0.00	0.49	0.79	0.57	2.2	3,150
3	Canyon Park Community Activity Center	0.08	0.00	0.11	0.09	0.33	3,404
	Area Contributing Sewage to 3	0.00	0.50	0.80	0.58	2.3	3,150
4	North Creek Regional Activity Center	1.7	0.33	0.91	2.2	7.2	8,636
	Area Contributing Sewage to 4	0.00	0.32	0.51	0.37	1.5	3,150
5	Downtown Community Activity Center	0.09	0.01	0.12	0.11	0.41	3,690
	Area Contributing Sewage to 5	0.00	0.46	0.74	0.53	2.1	3,150
<b>Total Flows at Existing Building Height</b>		<b>2.4</b>	<b>2.3</b>	<b>5.0</b>	<b>5.2</b>	<b>19.2</b>	<b>-</b>

(1) Based on 34 gallons/employee/day

(2) Based on 51 gallons/capita/day

(3) Based on 1,100 gallons/acre/day

(4) Sanitary Flow + 10% of peak I&I

(5) Sanitary Flow \* 3.0 peaking factor + 100% of peak I&I

(6) Gallons per acre per day

TABLE 2-3

Wastewater Flows Under Amended Building Height and Residential Density Within the Study Area

No.	Area Name	Empl. Sanitary Flow at Buildout (MGD) <sup>(1)</sup>	Pop. Sanitary Flow at Buildout (MGD) <sup>(2)</sup>	Peak I&I at Buildout (MGD) <sup>(3)</sup>	Average Flow at Buildout (MGD) <sup>(4)</sup>	Peak Flow at Buildout (MGD) <sup>(5)</sup>	Peak Flow at Buildout (gpad) <sup>(6)</sup>
1	Thrasher's Corner Community Activity Center	0.07	0.00	0.05	0.08	0.27	5,529
	Area Contributing Sewage to 1	0.00	0.16	0.26	0.18	0.73	3,150
2	Canyon Park Regional Activity Center	1.1	0.17	0.70	1.4	4.5	7,133
	Area Contributing Sewage to 2	0.00	0.49	0.79	0.57	2.2	3,150
3	Canyon Park Community Activity Center	0.08	0.07	0.11	0.16	0.55	5,628
	Area Contributing Sewage to 3	0.00	0.50	0.80	0.58	2.3	3,150
4	North Creek Regional Activity Center	1.7	0.32	0.91	2.1	7.0	8,436
	Area Contributing Sewage to 4	0.00	0.32	0.51	0.37	1.5	3,150
5	Downtown Community Activity Center	0.09	0.08	0.12	0.18	0.62	5,627
	Area Contributing Sewage to 5	0.00	0.46	0.74	0.53	2.1	3,150
	<b>Total Flows at Amended Building Height</b>	<b>3.1</b>	<b>2.6</b>	<b>5.0</b>	<b>6.1</b>	<b>21.8</b>	--
	Total Flows at Existing Building Height (Table 2-2)	2.4	2.3	5.0	5.2	19.2	--
	<b>Flow Increase (MGD)</b>	<b>0.6</b>	<b>0.2</b>	<b>0.0</b>	<b>0.9</b>	<b>2.6</b>	<b>--</b>

(1) Based on 34 gallons/employee/day

(2) Based on 51 gallons/capita/day

(3) Based on 1,100 gallons/acre/day

(4) Sanitary Flow + 10% of peak I&I

(5) Sanitary Flow \* 3.0 peaking factor + 100% of peak I&I

(6) Gallons per acre per day

The proposed building height amendments will result in an employment capacity increase of 19,028 employees and a residential capacity of 4,316 persons. As outlined in Table 2-3, this will result in a 0.9-mgd increase in the average wastewater flow, and a 2.6-mgd increase in the peak wastewater flow.

## IMPACTS TO COLLECTION SYSTEM

Much of the proposed rezoning lies on relatively flat land, with sewers at or near the minimum allowable slopes allowed by the Department of Ecology. Minimum allowable sewer slopes are summarized below in Table 2-4, along with the full pipe capacity for each pipe diameter.

**TABLE 2-4**

**Minimum Sewer Slopes and Allowable Capacity**

Gravity Sewer Diameter	Minimum Allowable Slope	Capacity at Minimum Slope (MGD)
8	0.40%	0.50
10	0.28%	0.75
12	0.22%	1.1
15	0.15%	1.6
18	0.12%	2.4
21	0.10%	3.2
24	0.08%	4.1
27	0.07%	5.3
30	0.06%	6.5
36	0.05%	9.7

Impacts of the proposed building height amendments to sewers in each of the study areas are discussed below.

### AREA 1: THRASHER'S CORNER COMMUNITY ACTIVITY CENTER

With the proposed building height amendments, Area 1 will generate a peak flow of 0.27 mgd within the study area. All of the pipes within Area 1 are 8" diameter, which would have peak capacities of 0.50 mgd if laid at minimum slope. Therefore, the existing gravity sewers inside Area 1 will be adequate with the increased building heights.

The gravity sewer on the north edge of Area 1 has a diameter of 10 inches. This pipe would carry a peak flow of 0.27 mgd generated in Area 1 plus 0.73 mgd from upstream areas, for a total peak flow of 1.0 mgd. The flattest pipe in this reach has a slope of 0.49%. A 10" gravity pipe at a slope of 0.49% can handle a peak flow of 1.6 mgd.

Therefore, all gravity sewers in Area 1 are adequate to handle peak flows with the amended building heights.

### **AREA 2: CANYON PARK REGIONAL ACTIVITY CENTER**

With the proposed building height amendments, Area 2 will generate a peak flow of 4.5 mgd within the study area. A large basin to the west of Area 2 adds another 2.2 mgd.

The 12" pipe that flows through Area 2 from the west has a minimum slope of 1.0%, which is adequate to handle peak flows from that basin. All other pipes within Area 2 only convey flows generated in Area 2, which was calculated in Table 2-3 to be 7,133 gallons/acre/day. In other terms, assuming uniform density, an 8" pipe at minimum slope could handle peak flows from up to 70 acres; a 10" pipe at minimum slope could handle peak flows from up to 105 acres; and a 12" pipe at minimum slope could handle peak flows from up to 154 acres. By inspection of the basemap (Figure 2-2), the only pipes that exceed these criteria are in the northeast part of the area. The slopes of these 8" pipes are steep, ranging from 2.03 percent to 4.77 percent, so the pipe capacity is more than adequate for peak flows with the building height amendment.

### **AREA 3: CANYON PARK COMMUNITY ACTIVITY CENTER**

With the proposed building height amendments, Area 3 will generate a peak flow of 0.55 mgd within the study area. Basins to the west and south of Area 3 add another 2.3 mgd, for a total peak flow of 2.8 mgd at the discharge to the Alderwood Water and Wastewater District trunk.

Gravity sewers within Area 3 are either 8" or 12" in diameter. The 8" diameter pipes all have small (< 60 acre) drainage basins, and are therefore not in need of replacement. The 12" pipe runs from west to east through Area 3, and picks up flows from both contributing areas outside of Area 3. The 12" sewer expands to a 15" sewer downstream of Area 3, and then discharges to the District's main trunk line.

The 12" sewer running through area 3 has slopes ranging from 0.34 to 3.94 percent, and the 15" pipe downstream has slopes from 0.18 to 0.22 percent. A spreadsheet analysis of peak flow and pipe capacity is presented in Table 2-5. For the spreadsheet analysis, flows were distributed proportionately along the length of the pipe.

**TABLE 2-5**  
**Spreadsheet Analysis of Pipe Capacity in Area 3**

From MH	To MH	Length (ft)	Diam. (in)	Slope (ft/ft)	Capacity (mgd)	Peak Flow Without Amendment	Peak Flow With Amendment	Replace?
30SW-65	30SE-35	251	12	2.31%	3.51	2.28	2.28	N
30SE-35	30SE-36	88	12	1.55%	2.87	2.30	2.32	N
30SE-36	30SE-37	350	12	1.33%	2.66	2.33	2.35	N
30SE-37	30SE-38	190	12	0.38%	1.42	2.34	2.37	Y
30SE-38	30SE-39	68	12	0.34%	1.35	2.34	2.38	Y
30SE-39	30SE-34	390	12	0.56%	1.73	2.37	2.42	Y
30SE-34	30SE-33	345	12	2.48%	3.63	2.39	2.46	N
30SE-33	30SE-40	400	12	0.73%	1.97	2.41	2.50	Y
30SE-40	30SE-41	381	12	0.76%	2.01	2.44	2.53	Y
30SE-41	30SE-42	409	12	3.94%	4.58	2.46	2.58	N
30SE-42	29SW-59	410	12	1.00%	2.31	2.49	2.62	Y
29SW-59	29SW-57	220	12	1.10%	2.42	2.50	2.64	Y
29SW-57	29SW-56	240	12	0.80%	2.06	2.51	2.67	Y
29SW-56	29SW-55	195	15	0.20%	1.87	2.53	2.69	Y
29SW-55	29SW-53	170	15	0.20%	1.87	2.54	2.70	Y
29SW-53	29SW-52	125	15	0.20%	1.87	2.54	2.72	Y
29SW-52	29SW-51	125	15	0.20%	1.87	2.55	2.73	Y
29SW-51	30SE-25	105	15	0.20%	1.87	2.56	2.74	Y
30SE-25	30SE-45	142	15	0.19%	1.82	2.57	2.75	Y
30SE-45	30SE-5	245	15	0.18%	1.78	2.58	2.78	Y
30SE-5	30SW-48	220	15	0.22%	1.96	2.60	2.80	Y
30SW-48	30SW-49	72	15	0.20%	1.87	2.60	2.81	Y
30SW-49	30SW-47	270	15	0.20%	1.87	2.62	2.84	Y
<b>Total Length</b>		<b>5,411</b>						
<b>Replacement Length</b>		<b>3,968</b>						

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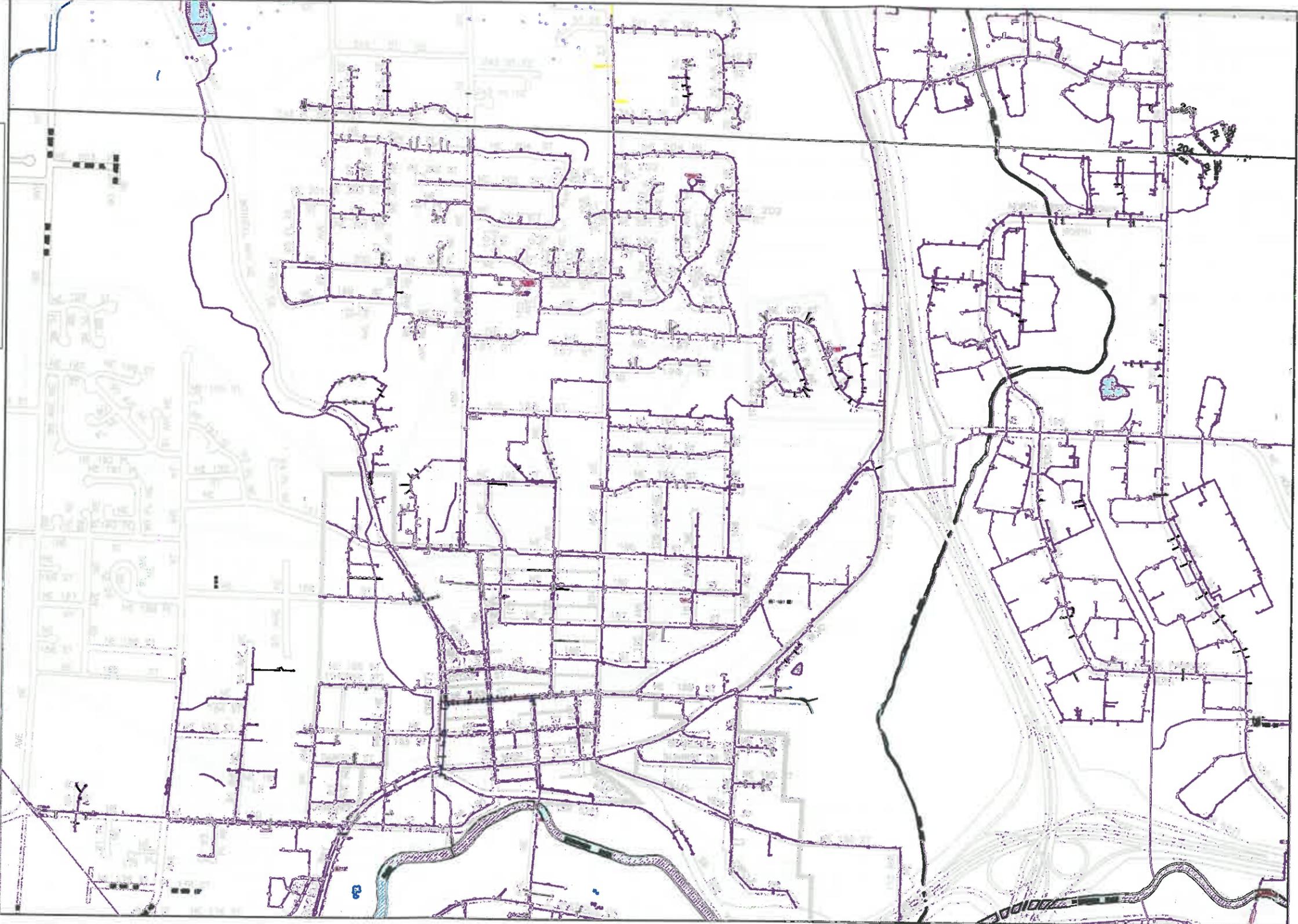
GRAVITY SEWER, DIAMETER UNKNOWN

STUDY AREA

BASINS CONTRIBUTING SEWAGE TO STUDY AREA

133 ACRES =  
MAX. AREA SERVED BY  
10" SEWER AT 0.28%

89 ACRES =  
MAX. AREA SERVED BY  
8" SEWER AT 0.40%

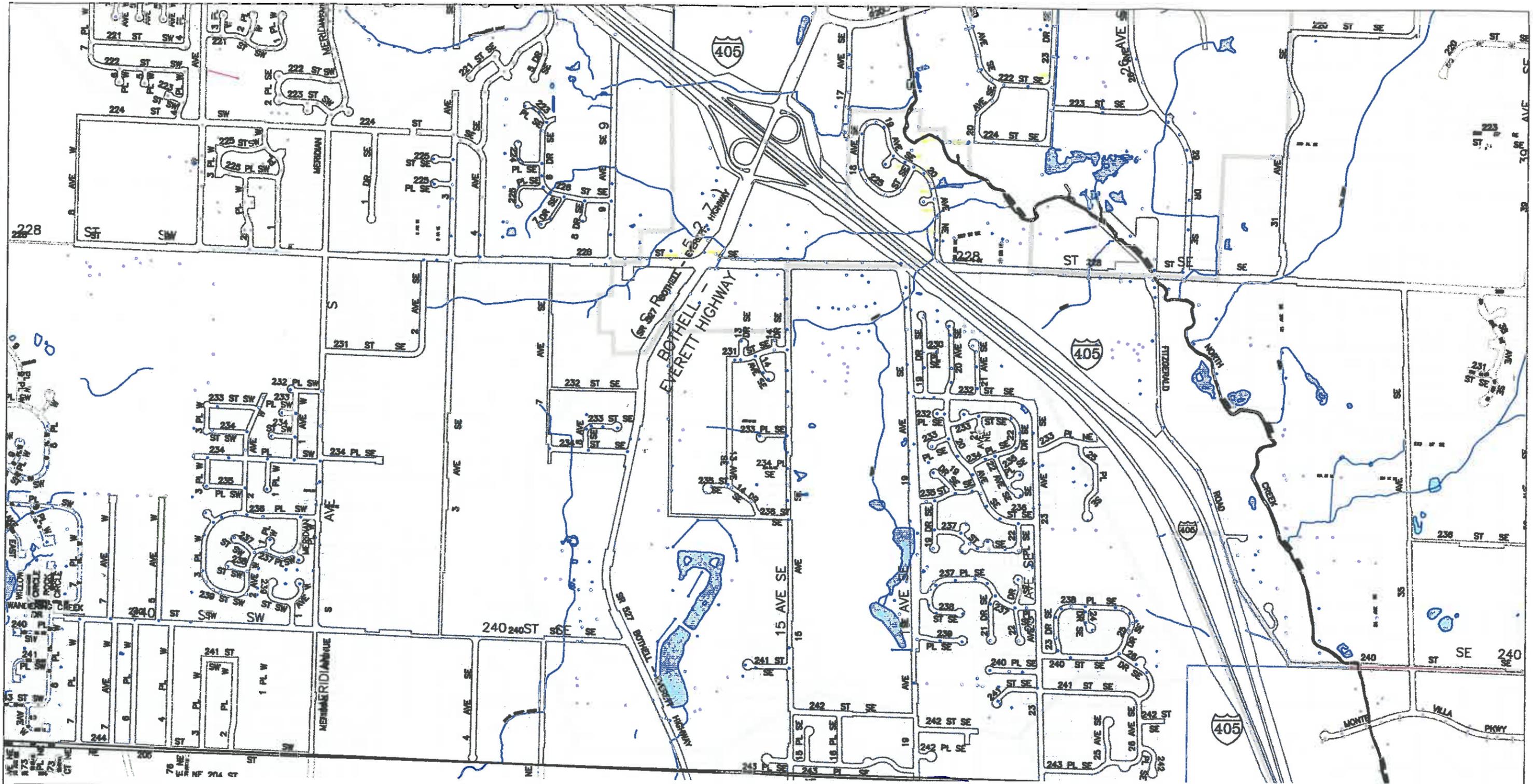


SCALE 1" = 1000'

**CITY OF BOTHELL**  
FIGURE 2-5  
AREA NO. 5

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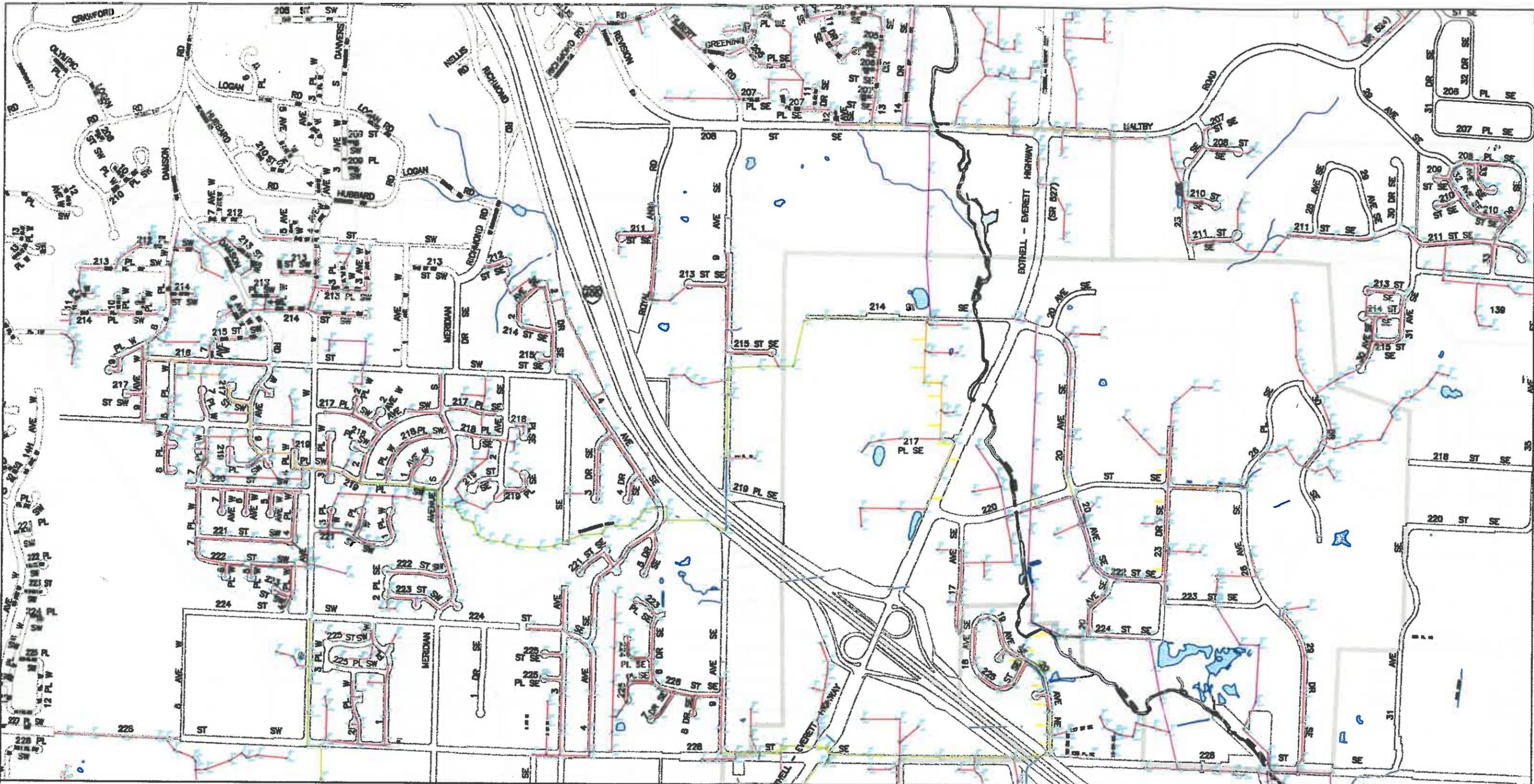
8" GRAVITY SEWER			STUDY AREA
10" GRAVITY SEWER			BASINS CONTRIBUTING SEWAGE TO STUDY AREA
12" GRAVITY SEWER			
15" GRAVITY SEWER			
21" AND LARGER			

**CITY OF BOTHELL**  
 FIGURE 2-4  
 AREA NO. 3

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SCALE 1" = 500'

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**LEGEND**

- 8" GRAVITY SEWER
- 10" GRAVITY SEWER
- 12" GRAVITY SEWER
- 15" GRAVITY SEWER
- 21" AND LARGER



STUDY AREA

BASINS CONTRIBUTING  
SEWAGE TO STUDY AREA

70 ACRES =  
MAX. AREA SERVED BY  
8" SEWER AT 0.40%

105 ACRES =  
MAX. AREA SERVED BY  
10" SEWER AT 0.28%

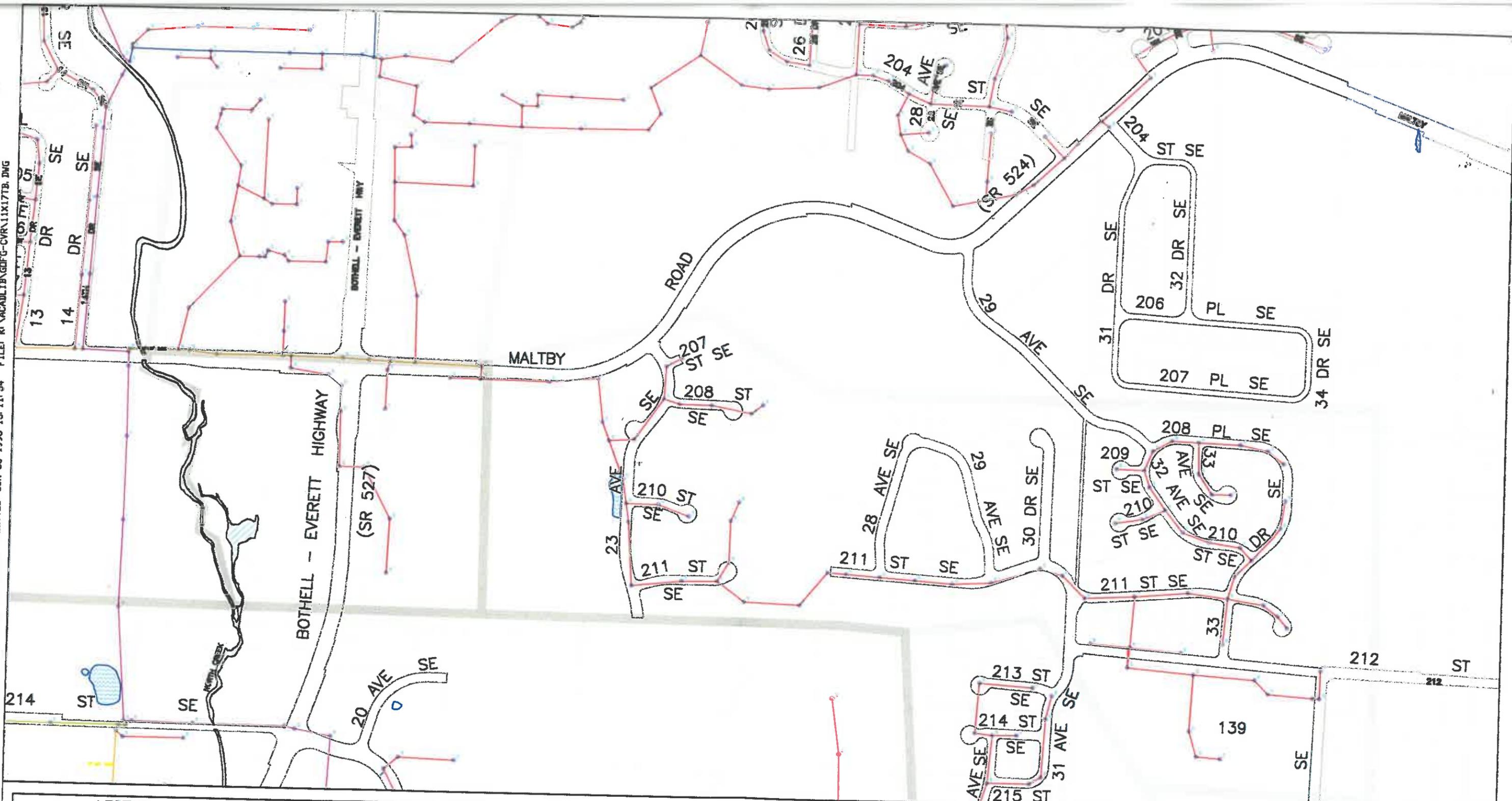
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**CITY OF BOTHELL**  
FIGURE 2-3  
AREA NO. 2



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**LEGEND**

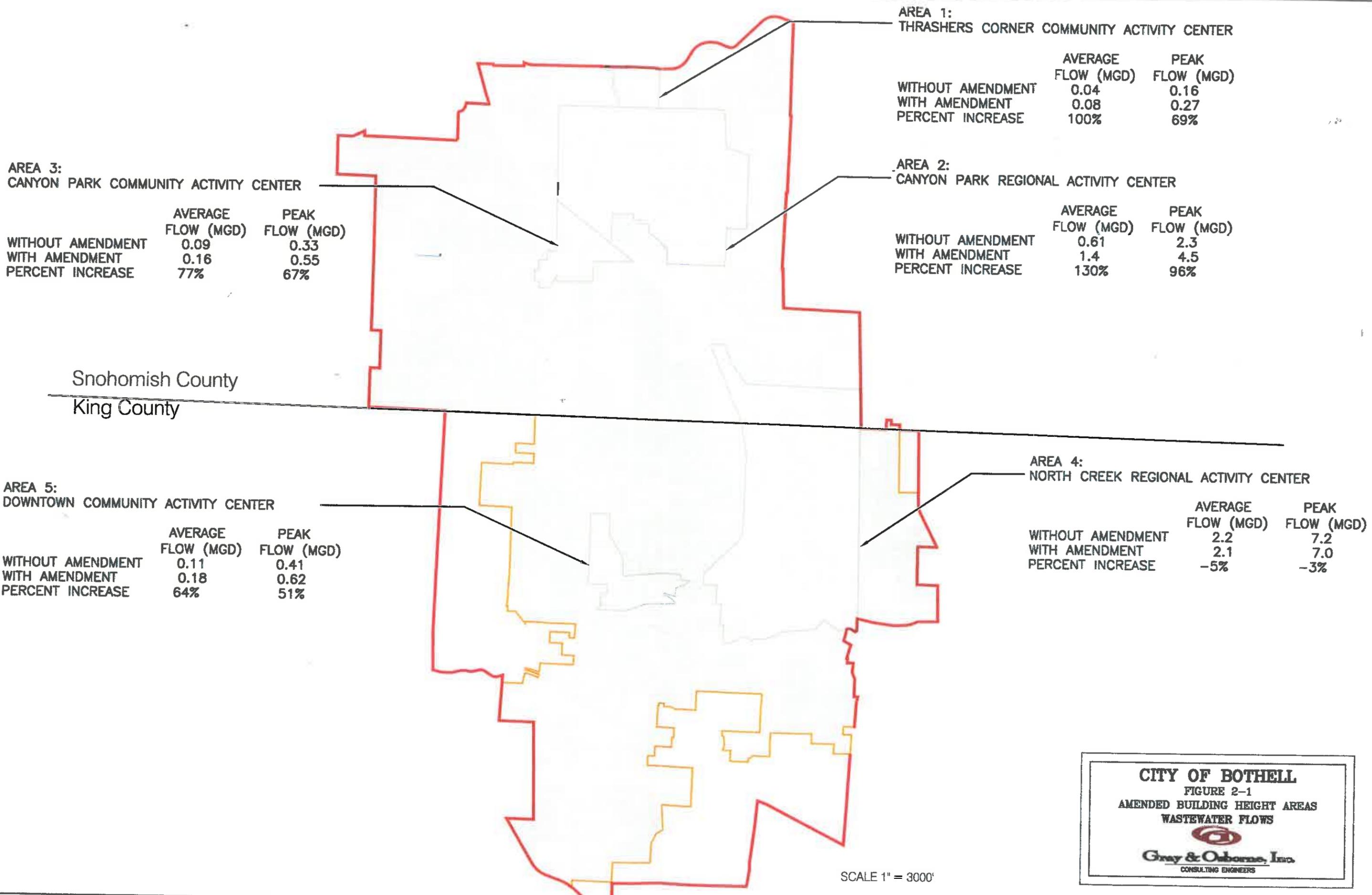
	8" GRAVITY SEWER		STUDY AREA
	10" GRAVITY SEWER		BASINS CONTRIBUTING SEWAGE TO STUDY AREA
	12" GRAVITY SEWER		
	15" GRAVITY SEWER		
	21" AND LARGER		

**CITY OF BOTHELL**  
FIGURE 2-2  
AREA NO. 1

**Gray & Osborne, Inc.**  
CONSULTING ENGINEERS

SCALE 1" = 500'

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**AREA 3:**  
 CANYON PARK COMMUNITY ACTIVITY CENTER

	AVERAGE FLOW (MGD)	PEAK FLOW (MGD)
WITHOUT AMENDMENT	0.09	0.33
WITH AMENDMENT	0.16	0.55
PERCENT INCREASE	77%	67%

**AREA 1:**  
 THRASHERS CORNER COMMUNITY ACTIVITY CENTER

	AVERAGE FLOW (MGD)	PEAK FLOW (MGD)
WITHOUT AMENDMENT	0.04	0.16
WITH AMENDMENT	0.08	0.27
PERCENT INCREASE	100%	69%

**AREA 2:**  
 CANYON PARK REGIONAL ACTIVITY CENTER

	AVERAGE FLOW (MGD)	PEAK FLOW (MGD)
WITHOUT AMENDMENT	0.61	2.3
WITH AMENDMENT	1.4	4.5
PERCENT INCREASE	130%	96%

Snohomish County  
 King County

**AREA 5:**  
 DOWNTOWN COMMUNITY ACTIVITY CENTER

	AVERAGE FLOW (MGD)	PEAK FLOW (MGD)
WITHOUT AMENDMENT	0.11	0.41
WITH AMENDMENT	0.18	0.62
PERCENT INCREASE	64%	51%

**AREA 4:**  
 NORTH CREEK REGIONAL ACTIVITY CENTER

	AVERAGE FLOW (MGD)	PEAK FLOW (MGD)
WITHOUT AMENDMENT	2.2	7.2
WITH AMENDMENT	2.1	7.0
PERCENT INCREASE	-5%	-3%

SCALE 1" = 3000'

**CITY OF BOTHELL**  
 FIGURE 2-1  
 AMENDED BUILDING HEIGHT AREAS  
 WASTEWATER FLOWS

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 CONSULTING ENGINEERS