



MEMORANDUM

To: Houghton Community Council

From: Deb Powers, Urban Forester
Jeremy McMahan, Planning and Building Deputy Director

Date: November 25, 2019

Subject: Draft Code Amendments, Kirkland Zoning Code Chapter 95
Tree Management and Required Landscaping, File Number CAM18-00408
Houghton Community Council Deliberations

Note: please bring your November 5, 2019 packet to the November 25, 2019 meeting

Staff Recommendation

Continue deliberations from the November 5, 2019 joint public hearing with the Planning Commission (PC) on amendments to [Kirkland Zoning Code Chapter 95](#) (KZC 95). To facilitate that discussion, staff will sequentially walk through draft code sections, seeking the Houghton Community Council's (HCC) recommendation to the PC per KZC 160.25.

Background

The PC, HCC and City Council have met 19 times over the past 18 months to provide staff with direction on code changes to KZC 95. A detailed chronology of the code amendment process to-date was provided in the staff memo for the [November 5, 2019](#) joint public hearing with the PC. In addition to a section-by-section explanation of the major code amendments; the history of KZC 95, its basic requirements and key objectives of the code amendments are outlined in the same memo. The purpose of the joint public hearing was to take public comments on the proposed code.

Following public testimony, the PC closed the hearing for oral comments yet continued the hearing for written public testimony. So that substantive issues would be the emphasis of the joint meeting, it was agreed that editorial changes be forwarded to staff for integration into the draft code. HCC member Neal Black has reviewed the draft code in detail and provided numerous edits that will aid in clarity and administration of the code. None of these edits would change the intent of the draft code and staff generally concurs with Councilmember Black's suggestions. However, some of the more technical edits may warrant additional staff review. Attachment 1 includes those suggestions. In summary, Attachment 1 represents:

- A clean copy of draft code reviewed at the November 5th public hearing, with track changes turned off.
- Councilmember Black's suggested edits to this clean version shown in red text.
- Staff's additional suggested edits to this clean version shown in red text and highlighted in yellow.

If the HCC is amendable, staff will use this version of the code as the baseline for deliberations.

At the close of public testimony on November 5th, HCC Chairperson Whitney opened deliberations with the Planning Commission with the stated desire to highlight “areas that are known significant disagreements that could result in a veto from us,” based on the concern that these are key issues that lack consistency with HCC’s guiding principles. The specific areas of disagreement were identified as:

- An objection to not allowing landmark tree removal on sites not being development
- The desire to establish tree removal quotas on development sites rather than the proposed Tier 2 trees in setbacks approach

Although not formally adopted, the HCC’s guiding principles were developed by the HCC to help clarify code amendment priorities and are described as:

1. Strive to achieve a healthy, resilient urban forest with a 40% tree canopy cover.
2. Strive for an objective process with predictable outcomes.
3. Consider homeowner preferences for sunlight to generate solar energy and/or photosynthesis, as well as views.
4. Allow modifications to proposed building plans to retain trees that would not result in unreasonably negative consequences to property owners.
5. Promote simplicity and make the code easier to implement.

The PC has endeavored to balance the Purpose and Intent of KZC 95 with a property owners’ right to reasonably develop their property (consistent with established zoning) and incorporate a greater level of code predictability, while streamlining the code and making it more user-friendly.

Requests for Additional Information

The PC/HCC-initiated questions or requests for additional information at the public hearing warranting staff response are addressed below.

1. *What are the tree removal rules for condominium properties with Home Owners Associations (HOA)?* The City currently accepts tree removal applications from HOAs that include common areas and tracts. A condominium property is considered one property for purposes of the tree code and any tree removal requests are required to come from the HOA board/association rather than individual owners of units within the complex. The proposed increase in allowed tree removals and lowered square footage requirements for Forest Management Plans are intended to provide more equitable tree removals on larger properties.
2. *Can Kirkland ban cottonwood trees in KZC 95?* As discussed, undesired tree species will be addressed in an administrative, not regulatory manner using Kirkland’s Prohibited Plant List. A codified ban is too broad because native tree species, while unsuitable for some properties, are appropriate in critical areas, stormwater detention facilities, park open spaces, steep slopes, etc. For these purposes, the intent of the Prohibited Plant List is to not credit planting of trees like alders and cottonwoods as replacement trees and to not require retention of such trees on private property outside of critical areas and their buffers.
3. *Why do public tree replacement standards in KZC 95.23.8b use a “minimum” one-for-one requirement?* Public tree replacement standards and their application vary between the Public Works and Parks departments; therefore, the minimum standard is codified.

Because these requests involve the removal of a public asset, the administering department reserves the right to potentially require greater replacement.

4. *Would lowering the 30" dbh (trunk diameter) landmark tree size make a difference?* See page 5 in the November 5, 2019 PC/HCC memo. Within development scenarios, lowering the 30" dbh threshold was shown to have little consequence with tree retention on average-sized lots. As previously discussed, retaining a large tree with a large critical root zone on an average lot with 50 percent minimum lot coverage will continue to be a challenge. A lower threshold could result in more retention on short plats and subdivisions if lots are clustered in a manner that preserves trees. Outside of development, lowering the landmark threshold may help to avoid preemptive removals of mid-size/aged trees within 18-28" dbh.
5. *Should the nuisance tree definition include below-ground structures?* The statement "includes but is not limited to...building foundation," in addition to the "root pruning" section implies below-ground structures; however, "underground utilities" have been added to the list. Note that the current KZC definition of structure is "Anything which is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner", so would include above and below ground structures.
6. *Why is landmark tree pruning prohibited?* To encourage proper care of landmark trees, this section was reorganized for clarity with ANSI standards as the basis for landmark tree and grove pruning. Staff has removed the inadvertent prohibition on pruning.
7. *Why should a homeowner's desire for sunlight, gardens, and views be "trumped" by the City's 40 percent canopy cover goal?* As discussed, the public benefits of trees are the basis for Kirkland's canopy cover goal and tree code. How KZC 95 supports or detracts getting to that goal are decisions for the HCC/PC to consider, not whether to change the policy goals in the Comprehensive Plan.
8. *Should Kirkland regulate trees using (fill in the blank) like other cities?* Although the majority of KZC 95 code changes were informed by the MBAKS-FHNA stakeholders, the PC considered other municipal tree codes in regards to specific code issues, many of which are noted in the [November 8, 2018](#) PC meeting memo. In most cases, the objective to streamline the code was a higher priority than to increase flexibility or take a customized approach that increased code complexity.
9. *Should replacement tree planting requirements specify appropriate distances from property lines so tree branches do not grow to encroach on a neighboring property?* The discussion at the hearing included the City "has an interest to reduce litigation between neighbors" by not "excessively regulating civil matters." Currently, the draft code requires replacement trees be planted 3 feet from property lines. Establishing a canopy setback is problematic for a number of reasons.
 - Trees do not grow in predictable manners and an overview of aerial photos makes it clear that canopy does not typically respect property lines.
 - Developing standards for what trees may be planted where in the property would be challenging to codify, to administer with permits, and to enforce.
 - Final tree planting locations and species are often made by builders in the field.
 - Based on determination of tree credit requirements, trying to plant all new trees toward the center of a lot will not result in ideal planting locations for long term viability.

Future tree growth over impervious surfaces and property and city boundary lines collectively contributes to overall canopy cover; whether the growth supports or detracts

reaching the canopy goal are decisions for the HCC/PC to consider. Note: conversely, neighbors may welcome an adjacent property's tree growing over the property line.

10. *Are there circumstances where "topping" trees is okay?* Topping can result in branch or whole tree failure and so many other issues, it's not considered an acceptable practice (Attachment 2).
11. *Without a credit quota provision, the draft code lacks an acceptable level of predictability and is necessary so "staff can't make developers require more tree retention."* Staff shares the same interest in less subjectivity with the development permit process. See page 4 in the [November 5, 2019 PC/HCC](#) memo for 7 specific code changes that the PC has included in the draft code to increase code certainty and consistency.

Draft Code Amendments

As previously noted, editorial changes to the code were forwarded to staff following the hearing with the exception of two requests made during the meeting: Commissioner Singhal's edits on KZC 95.23.8e, replacing "for the last of" number of trees with "any of" language and Councilmember Black's input on replacing "encourage" with "may require" in KZC 95.23.8a to reflect the requirements set forth in sections b-f. These and the remaining editorial changes from Councilmember Black are shown in red text in Attachment 1. Any staff changes made to the draft code since November 5 are noted in yellow highlights.

The 37 major code revisions below correspond to the same number code revision in the same order as they appear on pages 7-12 in the November 5, 2019 PC/HCC joint hearing memo. Readers may find it easier to reference the code changes enumerated below, using Attachment 1 and the November 5 memo to understand whether the code change is new, revised, moved, etc.; the issues related to the code change and the PC's direction to staff. A clean copy version of the draft code (Attachment 1) is provided in Attachment 3.

To facilitate a discussion on substantive code revisions, the HCC may want to consider whether proposed amendments meet the key objectives for the code changes and the Purpose and Intent of KZC 95.05.2 to:

- Support the Comprehensive Plan and Urban Forestry Strategic Management Plan goals
- Address issues and challenges that have arisen from the public, staff and developer point of view
- Provide greater consistency and certainty of the development review process
- Clarify and streamline the code for all users
- Identify appropriate numerical thresholds
- Result in acceptable effects

Resulting effects of code changes are discussed on page 4 and in Attachment 3 of the November 5 memo. Related policy issues are discussed on pages 13-14 in the Nov 5, 2019 memo. Data, graphs, further analysis and background information providing the context for the PC's direction are detailed in the May 23, 2019 PC meeting [memo](#).

Staff is now seeking an overall recommendation from the HCC to be considered by the PC in developing their recommendation to the City Council. The following outline provides a table of contents overview of the draft code for use in deliberations. Staff recommends that the HCC

consider if they accept or oppose each of the proposed changes and if they have recommendations that might improve proposed changes.

95.05 Purpose and Intent – no major changes

95.10 Definitions

1. Revised industry standards
2. New 30" landmark tree definition
3. Revised grove definition
4. Replace "significant" tree with "regulated" tree
5. New hedge definition for removal allowances
6. New language to address girdled tree removal
7. New Tier 1/Tier 2 tree definitions

95.20 Tree Removal Permit Exemptions – no major changes

95.21 Public Tree Removal and Pruning – no major changes, distinguishes public trees/allows minor pruning

95.23 Tree Pruning and Removal on Private Property – Not Associated with Development Activity

8. Prohibit landmark tree removal
9. Revised increased tree removals by property size
10. Prevent girdling/preemptive tree removal prior to development
11. New City authority to remove severely diseased trees
12. [Eliminated] draft tree risk ratings

95.25 Sustainable Site Development

13. Consolidate/move to other sections

95.30 Tree Retention Associated with Development Activity

14. Consolidate/move tree density credits for greater clarity
15. Clarify tree retention plan submittal requirements
16. New tree condition ratings
17. Eliminate Tree Retention Plan chart
18. New Tier 1 tree retention standards
19. New building envelope dimensions for Tier 1/Tier 2 tree retention
20. Specify site plan alterations required to retain Tier 1/Tier 2 trees
21. Specify tree protection practices/methods/materials required to retain Tier 1/Tier 2 trees
22. Specify variations to development standards to retain Tier 1/Tier 2 trees
23. Require clustering or lots in short plats/subdivisions in order to retain Tier 1 trees and allow clustering to retain Tier 2 trees
24. Expand development standards to retain trees on multifamily, commercial & mixed-use developments
25. New - Tier 1/Tier 2 tree retention/removal order of priorities
26. Eliminate option for phased tree retention with short plat/subdivision developments (IDP)

95.32 Incentives and Variations to Development Standards

- 27. New – prohibit tree removal prior to development permit submittal
- 28. New – display site plans indicating tree protection fence locations on job sites

95.34 Tree and Soil Protection during Development Activity

- 29. Clarify the priority and application of tree credits
- 30. Revise – “cap” the maximum amount of tree credits awarded to individual existing trees
- 31. Revise - eliminate counting arborvitae and other slow-growing conifers for tree credits
- 32. New - consider higher protection for trees planted offsite to satisfy credit requirements
- 33. Revise – use a standard value for payment into City Forestry Account

95.40 Required Landscaping Based on Zoning District – no significant changes

95.41 Supplemental Plantings - no significant changes

95.42 Land Use Buffer Requirements – minor change to tree spacing requirement

95.43 Outdoor Use, Activity, and Storage – no change

95.44 Internal Parking Lot Landscaping Requirements – no change

95.45 Perimeter Landscape Buffering for Driving and Parking Areas – no change

95.46 Modifications to Landscaping Standards 95.47 Nonconforming Landscaping and Buffers – no change

95.47 Nonconforming Landscaping and Buffers – no change

95.50 Installation Standards for Required Plantings

- 34. New – appropriate plant location specifications and best management practices
- 35. New - require irrigation for supplemental trees planted in the summer
- 36. Revise - list resources, species diversity objective, tree establishment and hedge definition
- 37. Codify final inspection procedure

95.51 Tree and Landscape Maintenance Requirements – minor changes

95.52 Prohibited Vegetation 95.55 Enforcement and Penalties – minor change

95.57 City Forestry Account add fees in lieu of planting text

Next Steps

Following the Houghton Community Council’s deliberations on November 25, 2019, staff will prepare the HCC recommendations for the Planning Commission’s consideration on December 12, 2019. On consideration of all information submitted, including the HCC recommendation, the PC will consider all public comments and deliberate in preparation of providing their recommendation to City Council for adoption. January 21, 2020 has been tentatively scheduled for a City Council Study Session for additional consideration of changes to KZC 95.

Attachments

1. Draft Kirkland Zoning Code Chapter 95
2. Topping Information
3. Draft Clean Copy Kirkland Zoning Code Chapter 95

cc: File Number CAM18-00408

KIRKLAND ZONING CODE CHAPTER 95 – TREE MANAGEMENT AND REQUIRED LANDSCAPING

Sections:

- 95.05 Purpose and Intent
- 95.10 Definitions
- 95.20 Tree Removal Permit Exemptions
- 95.21 Public Tree Removal and Pruning
- 95.23 Tree Pruning and Removal on Private Property ~~with No~~in the Absence of Development Activity
- 95.30 Tree Retention Associated with Development Activity
- 95.32 Tree and Soil Protection during Development Activity
- 95.34 ~~Supplemental~~ Tree Planting Requirements Related to Development Activity
- 95.40 Required Landscaping Based on Zoning District
- ~~95.41 Supplemental Plantings~~
- 95.42 Land Use Buffer Requirements
- 95.43 Outdoor Use, Activity, and Storage
- 95.44 Internal Parking Lot Landscaping Requirements
- 95.45 Perimeter Landscape Buffering for Driving and Parking Areas
- 95.46 Modifications to Required Landscaping and Buffer Standards
- 95.47 Nonconforming Landscaping and Buffers
- 95.50 Installation Standards for Required Plantings
- 95.51 Tree and Landscape Maintenance Requirements
- 95.52 Prohibited Vegetation
- 95.55 Enforcement and Penalties
- 95.57 City Forestry Account

95.05 Purpose and Intent

1. Trees and other vegetation are important elements of the physical environment. They are integral to Kirkland's community character and protect public health, safety and general welfare. Protecting, enhancing, and maintaining healthy trees and vegetation are key community values. Comprehensive Plan Policy NE-3.1 describes working towards achieving a healthy, resilient urban forest with a City-wide tree canopy coverage of 40 percent. The many benefits of healthy trees and vegetation contribute to Kirkland's quality of life by:

- a. Minimizing the adverse impacts of land disturbing activities and impervious surfaces such as runoff, soil erosion, land instability, sedimentation and pollution of waterways, thus reducing the public and private costs for storm water control/treatment and utility maintenance;
- b. Improving the air quality by absorbing air pollutants, mitigating the urban heat island effect, assimilating carbon dioxide and generating oxygen, and decreasing the impacts of climate change;
- c. Reducing the effects of excessive noise pollution;
- d. Providing cost-effective protection from severe weather conditions with cooling effects in the summer months and insulating effects in winter;
- e. Providing visual relief and screening buffers;
- f. Providing recreational benefits;
- g. Providing habitat, cover, food supply and corridors for a diversity of fish and wildlife; and
- h. Providing economic benefit by enhancing local property values and contributing to the region's natural beauty, aesthetic character, and livability of the community.

2. Tree and vegetation removal in urban areas has resulted in the loss to the public of these beneficial functions. The purpose of this chapter is to establish a process and standards to provide for the protection, preservation, replacement, proper maintenance, and use of significant trees, associated vegetation, and woodlands located in the City of Kirkland.

The intent of this chapter is to:

- a. Maintain and enhance canopy coverage provided by trees for their functions as identified in KZC 95.05(1);
- b. Preserve and enhance the City of Kirkland's environmental, economic, and community character with mature landscapes;

- c. Promote site planning, building, and development practices that work to avoid removal or destruction of trees and vegetation, that avoid unnecessary disturbance to the City's natural vegetation, and that provide landscaping to buffer the effects of built and paved areas;
- d. Mitigate the consequences of required tree removal in land development through on- and off-site tree replacement with the goals of halting net loss and enhancing Kirkland's tree canopy to achieve an overall healthy tree canopy cover of 40 percent City-wide over time;
- e. Encourage tree retention efforts by providing flexibility with respect to certain other development requirements;
- f. Implement the goals and objectives of the City's Comprehensive Plan;
- g. Implement the goals and objectives of the State Environmental Policy Act (SEPA); and
- h. Manage trees and other vegetation in a manner consistent with the City's Urban Forest Strategic Management Plan; industry standards; and best management practices established by the International Society of Arboriculture (ISA) and the American National Standards Institute (ANSI) for Management of Trees During Site Planning, Development and Construction, Pruning, and Tree Risk Assessment.
- i. Preserve and protect street trees, trees in public parks and trees on other City property.

95.10 Definitions

The following definitions shall apply throughout this chapter unless the context clearly indicates otherwise. Definitions that apply throughout this code are also located in Chapter 5 KZC.

1. Caliper – The industry standard for trunk measurement of nursery stock, applicable to ~~supplemental~~ required replacement trees. Caliper shall be measured six (6) inches above the ground, ~~for up to and including 4-inch caliper trunk sizes.~~
2. Critical Root Zone (CRZ) – The area encircling the trunk of a tree equal to one (1) foot radius for every inch of ~~trunk diameter (DBH).~~ Example: a 24-inch DBH tree has a 24-foot radius ~~Critical Root Zone~~ measured from the face of the trunk.
3. Crown – The area of a tree containing leaf- or needle-bearing branches.
4. Diameter at Breast Height (DBH) – The diameter or thickness of a tree trunk measured at 4.5 feet above average grade. For trees with multiple leaders at 4.5 feet height, the DBH shall be the combined cumulative total of branches greater than six (6) inches diameter at 4.5 feet above average grade. If a tree has been removed and only the stump remains that is below 4.5 feet tall, the size of the tree shall be the diameter of the top of the stump.
5. Dripline – The distance from the tree trunk, that is equal to the furthest extent of the tree's ~~erown~~ Crown.
- ~~6. Hedge – 5 or more trees of the same species planted in linear formation, typically to function as a screen or barrier.~~
- ~~7. Inner Critical Root Zone – an area half the distance of the Critical Root Zone that, when impacted, may compromise the structural integrity of a the applicable tree. Example: a 24-inch DBH tree has a 12-foot radius Inner Critical Root Zone measured from the face of the trunk.~~
- ~~ISA – International Society of Arboriculture~~
8. Impact – A condition or activity that adversely affects any part of a tree, including, but not limited to, the trunk, branches, ~~and or Critical Root Zone~~.
- ~~9. Public Works Official – Designee of the Public Works Director.~~
- ~~109.~~ Qualified Professional – An individual with relevant education and training in arboriculture or urban forestry, having two (2) or more of the following credentials:
 - International Society of Arboriculture (ISA) Certified Arborist;
 - Tree Risk Assessor Qualification (TRAQ) as established by the ISA (or equivalent);
 - American Society of Consulting Arborists (ASCA) registered Consulting Arborist;
 - Society of American Foresters (SAF) Certified Forester for Forest Management Plans;
 - Board Certified Master Arborist as established by the ISA.

For tree retention associated with a development permit, a ~~q~~Qualified ~~p~~Professional must have, in addition to the above credentials, a minimum of three (3) years' experience working directly with the protection of trees during construction and have experience with the likelihood of tree survival after construction. A ~~q~~Qualified ~~p~~Professional must also be able to prescribe appropriate measures for the preservation of trees during land development.

~~4410. Prohibited Plant List – The Planning and Building Department shall make available a list of trees and, which may include other vegetation, that are invasive, noxious, or inappropriate species for replacement trees or for retention.~~

~~11. Significantly Wooded Site – A subject property that has trees with crowns~~ Crowns that, ~~in the aggregate when outlined in aerial imagery,~~ cover at least 40 percent of the ~~total area of the~~ property.

~~126. Site Disturbance – Any development, construction, or related operation that could alter the subject property, including, but not limited to, soil compaction, tree or tree stump removal, road, driveway, or building construction, installation of utilities, or grading.~~

~~132. Topping – The reduction of a tree's size using indiscriminate heading cuts made between branches that leave a stub, used to reduce the height or crown size of an established tree, shorten limbs or branches back to a predetermined crown limit. Topping is not an acceptable pruning practice pursuant to best management practices established in the ANSI A300 Pruning Standards, and is not appropriate on established trees. Topping or pruning that results in the removal of more than 25 percent of the live crown will be considered tree removal and subject to the provisions in KMC 1.12.100, Special Provisions Related to Enforcement of Tree Regulations.~~

~~143. Tree Protection Zone (TPZ) – The outer boundary of a tree's protected area, as determined by a Q~~qualified ~~P~~professional, intended to protect individual trees, groups of trees' ~~vegetation, trunks, roots and soil from construction-related impacts. TPZ is measured in feet from the face of the trunk and may be determined using Critical Root Zone, D~~drilline, ~~or root plate diameter methodologies or exploratory root excavations or other methodologies. The TPZ is variable depending on species, age and health of the tree, soil conditions and proposed construction. TPZ denotes the location of tree protection fencing.~~

~~154. Tree Removal – The removal of a tree, through either direct or indirect actions, including but not limited to: (1) clearing, damaging, girdling, or poisoning, in each case, resulting in an unhealthy or dead tree; (2) Topping that results in removal of more than 25% of the live crown; or (3) damage to roots or trunk that is likely to destroy the tree's structural integrity. Trees that have been girdled at or prior to the time of development permit submittal will be treated as unauthorized tree removal subject to code enforcement.~~

~~165. Trees – A tree or a group of trees may fall under one of the following definitions for purposes of this chapter:~~

~~a. Grove – A group of three (3) or more R~~regulated ~~T~~trees with overlapping or touching ~~e~~crowns, one of which is a minimum 30-inch DBH ~~tree in excellent or good condition per KZC.95.30.3,~~ or a group of five (5) or more ~~R~~regulated ~~T~~trees, one of which is a minimum 24-inch DBH ~~tree in excellent or good condition per KZC.95.30.3; provided, that Groves will not be deemed Hedge Trees.~~

~~b. Hazard Trees – A tree assessed by a Q~~qualified ~~Professional arborist~~ as having an ~~h~~imminent or ~~H~~high-risk rating using the ISA Tree Risk Assessment Qualification (TRAQ) method in its most current form, ~~as applied in KZC 95.23.109.~~

~~c. Hedge Trees – Five (5) or more trees of the same species with overlapping or touching Crowns that have been planted by a current or former owner of a subject property in a linear formation, typically to function as a screen or barrier. A Hedge will not be deemed a Grove.~~

~~d. Landmark Tree – a R~~regulated ~~T~~tree with a minimum 30-inch DBH in excellent ~~or~~ good condition per KZC.95.30.3.

~~d.e. Nuisance Tree – A tree that meets either of the following criteria:~~

- ~~1) Is causing obvious physical damage to private or public structures, including, but not limited to: a sidewalk, curb, road, driveway, parking lot, building foundation, or roof; or~~
- ~~2) Has sustained damage from past maintenance practices.~~

~~The problems associated with the a Nuisance tree Tree must be such that they cannot be corrected by reasonable practices, including, but not limited to: pruning of the e~~Crown or roots of the tree, bracing, ~~and/or~~ cabling to reconstruct a healthy ~~e~~Crown.

~~e.f. Public Tree – a A tree located in parks, along within maintained and/or unmaintained public rights-of-way, in a S~~stormwater facility ~~and, or on City facility property or other property owned by the City.~~

~~f.g.~~ Regulated Tree – A tree that is at least six (6) inches DBH that is not listed on the Prohibited Plant List.

~~g.h.~~ Street Tree – A ~~tree~~ Public Tree located within the public right-of-way; provided, that, if the trunk of the tree straddles the boundary line of the public right-of-way and the abutting property, it shall be considered to be on the abutting property and subject to the provisions of this chapter.

~~h.i.~~ Tier 1 Tree(s) – Landmark Trees and Groves ~~in Excellent or Good condition per KZC 9.30.3.~~

~~h.j.~~ Tier 2 Tree – A ~~R~~regulated ~~T~~tree with any portion of the trunk located in a ~~R~~required ~~Y~~yard or a required landscaping area in excellent ~~or~~ good condition per KZC 95.30.3, subsection (c).

~~176.~~ Wildlife Snag – The remaining trunk of a tree that is intentionally reduced in height and usually stripped of its live branches.

~~187.~~ Windfirm – A condition of a tree in which it withstands average peak local wind speeds and gusts.

95.20 Tree Removal Permit Exemptions

The following activities are exempt from the provisions of this chapter:

1. Emergency Tree Removal. Any tree that poses an imminent threat to life or property may be removed. The City must be notified within seven (7) days ~~of~~ after the emergency tree removal with evidence of the threat for removing the tree to be considered exempt from this chapter. If the Planning Official determines that the emergency tree removal was not warranted or if the removed tree was required to be retained or planted by pursuant to a development permit, then the removal will be subject to code enforcement, including fines and restoration. The Planning Official may require that the party obtain a tree removal permit.
2. Utility Maintenance. Trees may be removed by the City or utility provider in situations involving interruption of services provided by a utility only if pruning cannot solve utility service problems. Utility maintenance shall conform to a City-approved Utility Vegetation Management Plan.
3. Commercial Nurseries or Tree Farms. A nursery or tree farm owner may remove trees that are being grown to be sold as Christmas or landscape trees.

95.21 Public Tree Removal and Pruning

1. Public Tree Removal. ~~Other than City crews, no person, directly or indirectly, shall remove any Public Ttree (including any Tree Removal as defined in KZC 95.10.15) on any City property, or any tree in the public right-of-way, without first obtaining a tree removal permit as provided in this chapter, unless the activity is exempted in per KZC 95.203.2, Tree Removal Permit Exemptions. The City will not authorize removal of any Ppublic Ttree by any private party unless the tree is determined to be a Hhazard Tree or Nnuisance Tree.~~
2. Public Tree Pruning. The pruning of Public Trees, including Street Trees, shall conform to the following:
 - ~~a. Any Ppublic Ttree pruning shall conform to the most recent version of the American National Standards Institute (ANSI) A300 – Part 1 Ppruning Sstandards or as outlined in an approved Utility Vegetation Management Plan.~~
 - ~~b.a. Parks, Unmaintained City Right of Way, Stormwater and Other City Facilities.~~ Other than City crews, no person, directly or indirectly, shall prune, trim, modify, alter, or damage any Public ~~t~~Ttree ~~in a public park or on any other City property~~ without first obtaining a Public Tree ~~P~~pruning permit as provided in this chapter, unless the activity is exempt per KZC 95.20 or falls within one of the exceptions set forth in subsection (b) below related to Street Trees.
 - ~~b. Street Trees.~~ It is the responsibility of the adjacent property owner to maintain ~~s~~Street ~~t~~Trees abutting their property, which may include minor pruning of up to one-inch diameter branches for sidewalk clearance, watering, and mulching. A Public Tree ~~P~~pruning permit is required to trim, modify, alter, or substantially prune branches of a Street Tree more than one-inch in diameter ~~or~~. The City reserves the right to have City or utility crews perform routine pruning and maintenance of ~~S~~street ~~t~~Trees.
 - c. The pruning of Public Trees, including Street Trees, shall conform to the most recent version of the American National Standards Institute (ANSI) A300 Pruning Standards or as outlined in a City-approved Utility Vegetation Management Plan.

95.23 Tree Pruning and Removal on Private Property ~~with No~~ in the Absence of Development Activity

Tree and vegetation removal in urban areas has resulted in the loss of beneficial functions provided by trees to the public. The majority of tree canopy within the City of Kirkland is on private property. The purpose of this section is to establish a process and standards to slow the loss of tree canopy on private property resulting from tree removal, contributing towards the City's canopy goals and a more sustainable urban forest.

1. Tree Removal on Private Property. No person, directly or indirectly, shall remove any Regulated Tree (including any Tree Removal as defined in KZC 95.10.15) from private property without first obtaining a tree removal permit as provided in this chapter, unless the activity is exempt per KZC 95.20 or is subject to the tree removal allowances set forth in KZC 95.23.5.

4.2. Tree Pruning on Private Property. Any private property owner may prune trees on their property without a permit, subject to the following. ~~Tree topping is not an acceptable form of pruning and is not allowed. Otherwise:~~

a. Any pruning of Landmark Trees or Groves preserved pursuant to KZC 95.51.3 by Private property owners shall prune Any Landmark Trees and preserved Groves shall be pruned pursuant to in conformance with conform to the most recent version of the ANSI A300 Pruning Standards.

b.- Any Private property owners may prune trees on their property without a permit with the exception of shall not prune trees located in wetlands, streams, or their buffers the following:

~~— a. Trees located in wetlands, streams or their buffers.~~

~~— b. Landmark trees or dedicated grove trees.~~

3. Tree Removal Notification Form. The Planning and Building Department shall make available a tree removal notification form. The tree removal notification form may be used by property owners to request review by the Planning and Building Department for compliance with applicable City regulations.

4. Tree Removal Permit Application Form. The applicable City department shall make available a tree removal permit application form. Property owners required by this chapter to obtain a tree removal permit shall submit a completed permit application for City review for compliance with applicable City regulations. The tree removal permit application form shall require, at a minimum, submittal of the following:

a. A site plan showing the approximate location of all Regulated Trees on the subject property, their DBH, and their species, along with the location of structures, driveways, access ways, and easements on the subject property.

b. For required replacement trees, a planting plan showing the location, size, and species of each replacement tree to be planted on the subject property, in accordance with the tree replacement requirements set forth in KZC 95.23.8.

2.5. Tree Removal Allowances. Any private property owner of developed property may remove a specified number of Regulated Trees from their property based on the table below within a 12-month period without having to apply for a tree removal permit; provided, that:

a. The trees are not located in wetlands, streams, or their buffers; are not located on properties in the Holmes Point Overlay area; ~~or are not located~~ within the City's shoreline jurisdiction; or any are not a Landmark Tree; or preserved and do not consist of a preserved Groves pursuant to Chapter KZC 95.51.3 KZC. Trees within shoreline jurisdiction are subject to additional tree removal and replacement standards if the tree(s) to be removed are located within the required shoreline setback. See Chapter 83 KZC for additional standards;

~~b. The trees are not Landmark trees or dedicated grove trees~~

~~b. — c. —~~ There is no active application for development activity for the site/subject property;

c. The trees were not required to be retained or planted as a condition of previous development activity per KZC 95.40, 95.42-45;

~~e. The trees are not protected under a Voluntary Tree Conservation Easement;~~

~~d. f. —~~ All the additional standards for tree removal and tree removal permits as replacement described in subsection (4) of this section KZC 95.23.38 are met.

Table x

Lot Size	Maximum number of allowed Regulated Tree removal every 12 months with notification
Lots up to 10,000 sq. ft.	2
Lots 10,000 to 20,000 sq. ft.	4
Lots 20,000 sq. ft. or greater	6
<u>Lots greater than 35,000 sq. ft</u>	<u>May remove 6 or more than 6 trees with a Forest Management Plan</u>

6. Tree Removal Permit. A Tree Removal Permit is required if a property owner is requesting to exceed the allowances in subsection (5) of this section, or to remove Hazard Trees or Nuisance Trees pursuant to subsection 10 of this section.

~~3.7. Tree Removal on Private Property Prior to Development Permits. The City will not accept any application for a short plat or subdivision for a property with a pending tree removal permit or tree removal notification. Further, with the exception of approved removals of Hazard Trees or Nuisance Trees per KZC 95.23.9, for a period of 12 months following the most recent removal of a Regulated Tree on a subject property (including girdling), the City will not accept any application for a short plat or subdivision for the subject propertyies where Rregulated Ttrees have been removed (including girdling) for a period of 12 months following the most recent tree removal of a Regulated Tree, with the exception of approved Hhazard Ttree or Nnuisance Ttree removals.~~

~~4. Tree Removal Notification Form. The Planning and Building Department shall providemake available a tree removal notification form. The form may be used by property owners to request Department review of tree removal for compliance with applicable City regulations.~~

~~5. Tree Removal on Private Property. A Tree Removal Permit is required if a property owner is requesting to exceed the allowances in subsection (2) of this section, or to remove Hazard Trees or Nuisance Trees in subsection 9 of this section.~~

~~4. Tree Removal Permit Application Form. The applicable City s department shall make available provide a tree removal permit application form. Property owners required by this chapter to obtain a Tree Removal Permit requesting to remove trees shall submit a completed permit application for City review for compliance with applicable City regulations. The tree removal permit application form shall include at a minimum the following:~~

- ~~a. A site plan showing the approximate location of Rregulated Ttrees, their size (DBH) and their species, along with the location of structures, driveways, access ways and easements.~~
- ~~b. For required replacement trees, a planting plan showing location, size and species of the new trees in accordance to standards set forth in KZC 95. 23.8, Tree Replacement Requirements.~~

5.8. Tree Removal Permit Decision and Appeals.

- a. The City shall review ~~each Ttree Rremoval Ppermit the~~ application within 21 calendar days and either approve, approve with conditions or modifications, deny, ~~the application~~ or request additional information. Any decision to deny the application shall be in writing along with the reasons for the denial and the appeal process.
- b. The decision of the Planning Official is appealable using the applicable appeal provisions of Chapter 145 KZC.
- c. Time Limit. Tree removal by felling shall be completed within one (1) year from the date of permit approval or the permit is void.

6.9. Tree Replacement Requirements.

- a. Tree Replacement. For every Rregulated Itree that is removed, the City encourages the planting of a replacement tree that is appropriate to the site.

- b. Public Trees.— For every Public Tree that is removed, the City shall require a minimum one-for-one replacement in a suitable location.
- c. Holmes Point Overlay Zone. The removal of any tree in the Holmes Point Overlay Zone requires the planting of a native tree of a minimum of six (6) feet in height in close proximity to where the removed tree was located. Selection of native species and timing of installation shall be approved by the Planning Official.
- d. Hedge Trees. For the approved removal of overgrown Hhedge Trees comprised of regulated trees, the City shall require a one-for-one replacement in a suitable location.~~trees are required at a 4:1 ratio.~~
- e. The Last Regulated Trees on Certain Lots. ~~If a tree~~For the removal ~~request is for of~~ one (1) or both of the last ~~two (2) Rregulated Ttrees~~ on lots containing single-family homes, cottages, carriage units, or two/three-unit homes ~~sites~~ under 10,000 square feet, approval of a tree removal permit is required and the City is authorized to require the planting of replacement trees, on a one-for-one basis~~replacement is required, that are appropriate to the subject property and in locations on the subject property that are suitable. If the For the removal of request is for one (12) or more of the last four (4) Rregulated Ttrees on any lots between 10,000 to under 20,000 square feet but at least 10,000 square feet, approval of a tree removal permit is required and the City is authorized to require the planting of replacement trees, on a one-for-one basis replacement is required, that are appropriate to the subject property and in locations on the subject property that are suitable. If the request is for 3~~For the removal of (1) or more of the last six (6) Rregulated Ttrees on any lots greater than 20,000 square feet or greater, approval of a tree removal permit is required and the City is authorized to require the planting of replacement trees, on a one-for-one replacement is required basis, that are appropriate to the subject property and in locations on the subject property that are suitable. The replacement trees required by this subsection shall be at least six (6) feet tall for a-conifers and at least 2-inch eCaliper for deciduous or broad-leaf evergreen trees.
- f. Other Circumstances. For all other circumstances, the required tree replacement will be based on the required landscaping standards in KZC 95.40 through 95.50.

10. Removal of Hazard Trees or Nuisance Trees. Any private property owner seeking to remove any number of Rregulated Ttrees ~~or the public right of way which that~~ are a-Hhazard Trees or Nnuisance Trees from their developed or undeveloped property shall first obtain approval of a tree removal permit and meet the requirements of this subsection. Removal of a Hazard Tree or Nuisance Tree by the applicable property owner does not count toward the tree removal limit ~~allowed number of tree removals set forth in KZC 95.23.5, if:~~

— a. T the conditions giving rise to the nuisance or hazard condition is not are evident based oin a photograph; or, in the case of a Hazard Tree,

7. ~~b. T the conditions giving rise to the nuisance or hazard is are~~ supported by a report Tree Risk Assessment prepared by a Qqualified Pprofessional in accordance with KZC 95.23.10 and approved by the City.

11. The City may order diseased trees removed from private property as Hhazard Ttrees to prevent the spread of a disease/pest that would cause catastrophic decline in tree health and failure, except as otherwise allowed under subsection 2.

12. Tree Risk Assessments for Hazard Trees.

- a. If the conditions giving rise to a nuisance or Hhazard condition is are not obvious-evident in a photograph, a ~~Ttree Rrisk aAssessment~~ report prepared by a Qqualified Pprofessional explaining how the tree, or tree(s), meet the definition of a nuisance or Hhazard TTree is required. Hazard-Ttree Rrisk Assessments shall follow the categorization methods for developing a tree risk rating set forth pursuant to steps in the ISA Tree Risk Assessment Manual. TRAQ method for developing a tree risk rating, as follows:

1) ~~Identify possible targets and estimate occupancy rate;~~

2) ~~Inspect tree and identify tree parts that could fail and strike targets (referred to as failure mode);~~

3) ~~For each significant failure mode identified:~~

i. ~~The likelihood of failure is assessed;~~

ii. ~~The likelihood of a tree part impacting a target is assessed;~~

iii. ~~The likelihood of a tree failure impacting a target is assessed;~~

iv. ~~Consequences of failure are estimated;~~

v. ~~The risk is designated pursuant to the matrix in Table xx;~~

- vi. Possible mitigation treatments to reduce the risk are identified;
- vii. The risk is again designated pursuant to the matrix in Table xx after mitigation treatment is completed.
- b. When assessing the risk of a tree, the Planning Official shall evaluate the tree based on existing conditions and shall exclude possible impacts caused by new development, any land alteration activity, or other similar such activities that might otherwise unnaturally cause the risk rating to increase.
- c. The following table is from the ISA TRAQ method and denotes the risk rating matrix used to assess levels of tree risk as a combination of likelihood of a tree failing and impacting a specified target, and the severity of the associated consequences should the tree or any part of the tree fail:

Table xx Tree Risk Rating Matrix

Likelihood of Failure and Impact	Consequences			
	Negligible	Minor	Significant	Severe
Very likely	Low risk	Moderate risk	High Risk	Extreme Risk
Likely	Low risk	Moderate risk	High risk	High risk
Somewhat Likely	Low risk	Low risk	Moderate risk	Moderate risk
Unlikely	Low risk	Low risk	Low risk	Low risk

- d. The consequences listed in Table xx have meanings as follows:
- Extreme Risk. This category applies to trees in which failure is "imminent" and there is a high likelihood of impacting a target, and the consequences of the failure are "severe."
 - High Risk. This category applies to situations in which consequences are significant and likelihood is "very likely" or "likely," or when consequences are "severe" and likelihood is "likely."
 - Moderate Risk. This category applies to trees in which consequences are "minor" and likelihood is "very likely" or "likely" or when likelihood is "somewhat likely" and the consequences are "significant" or "severe."
 - Low Risk. This category applies to trees in which consequences are "negligible" and likelihood is "unlikely"; or when consequences are "minor" and likelihood is "somewhat likely."
- b. The method for developing a tree risk rating set forth in the ISA Tree Risk Assessment Manual involves assessing levels of tree risk as a combination of the likelihood of a tree failing and impacting a specified target and the severity of the associated consequences should the tree or any part of the tree fail. Potential targets are permanent structures or an area of moderate to high use. Where a potential target does not exist, applicants should consider routine pruning and maintenance ~~to mitigate hazards~~.
- c. Where a tree is found to have a high risk or extreme risk rating, the Planning Official may approve authorize hazard-pruning-to-mitigatione measures to reduce the risk rather than approving the removaling of the entire tree.
- d. ~~Where If the Planning Official assesses~~ a tree is found to have a high risk or extreme risk rating and mitigation of the risk through pruning or moving of potential targets is not feasible, the Planning Official shall approve the removal of-designate the tree as a Hhazard Ttree.

12-13. Trees in ~~Critical Areas or Critical Areas~~ Wetlands, Streams, or their Buffers. See Chapters 85 and 90 KZC.

- Hazard Trees or ~~N~~ nuisance T trees in wetlands, streams, orand their buffers shall be removed in a manner that creates a wWildlife sSnag, or;
- If creation of a Wildlife sSnag is not feasible, then the felled tree shall be left in place unless the Planning Official approves tree removal in writing; and

- c. The removal of any tree in a wetland, stream, ~~or~~ and their buffers shall be replaced with one (1) to three (3) native tree species at a minimum height of six (6) feet depending on the size, quality, and species of removed tree. The Planning Official shall determine the location and required number of replacement trees.
- d. No trees shall be removed from a wetland, stream, or their buffers unless determine to be ~~Nuisance~~ Trees or ~~Hazardous~~ Trees. Any tree removal shall be authorized in advance through a tree removal permit unless emergency tree removal is warranted per KZC 95.20.1.

13-14. Forest Management Plan.

- a. ~~Traditional forest management may require selective tree removal to meet objectives for sustainable growth, composition, health, and quality.~~ A Forest Management Plan may be submitted for developed, ~~heavily~~ Significantly ~~w~~Wooded ~~s~~Sites of at least 35,000 square feet in size where tree removal exceeds the allowances of KZC 95.23.2-5 and is not exempt under KZC 95.20, ~~Tree Removal Permit Exemptions~~. A Forest Management Plan must be developed by a ~~Q~~qualified ~~P~~professional and shall include the following:
 - i. A site plan depicting the location of all ~~R~~regulated Trees (a survey identifying tree locations is not required) with a numbering system of the trees (with corresponding tags on trees in the field). The site plan shall include ~~size-the~~ DBH, species, and condition of each tree;
 - ii. Identification of trees proposed to be removed, including reasons for their removal and a description of low impact removal techniques pursuant to subsection (~~4412~~)(b) of this section.
 - iii. A reforestation plan that includes location, size, species, and timing of installation;
- b. The following Forest Management Plan standards shall apply:
 - i. Trees to remain should be dominant or co-dominant in the stand, healthy and ~~W~~windfirm.
 - ii. No removal of trees from wetlands, streams, or critical areas and their buffers, unless otherwise permitted by this chapter.
 - iii. No removal of Landmark Trees or ~~dedicated-preserved-g~~ Groves trees, unless otherwise permitted by this chapter.
 - iv. No removal of trees that would cause trees on adjacent properties to become hazardous.
 - v. The reforestation plan ensures perpetuity of the wooded areas. The size of planted trees for reforestation shall be a minimum of three (3) feet tall.
 - vi. Logging operations shall be conducted so as to expose the smallest practical area of soil to erosion for the least possible time. To control erosion, native shrubs, ground cover, and stumps shall be retained where feasible. Where not feasible, appropriate erosion control measures to be approved by the City shall be implemented.
 - vii. Removal of tree debris shall be done pursuant to Kirkland Fire Department standards.
 - viii. Recommended maintenance prescription for retained trees with a specific timeline.
- c. ~~T~~he Planning Official may require a performance security pursuant to KZC 175 in order to ensure that the ~~assurance~~ reforestation requirements of the approved ~~F~~forest ~~M~~management ~~P~~lan are met.

95.30 Tree Retention Associated with Development Activity

The City's objective is to mitigate the impacts of incremental canopy loss due to development by establishing clear standards for the retention of existing trees and standards for planting and maintenance of new trees.

Applicants for a development permit are encouraged to confer with City staff as early in the design process as possible so that the ~~applicable~~ tree planting and retention principles found in this chapter ~~concepts~~ can be incorporated into the design of the subject property. The Planning Official and the applicant shall work in good faith to find reasonable solutions.

1. Tree Retention Plan General Requirements. An applicant for a development permit must submit a Tree Retention Plan that complies with this section. A ~~Q~~qualified ~~P~~professional may be required to prepare certain submittal elements at the applicant's expense. If proposed development activities call for more than one Tree Retention Plan element, the Planning Official may require the more stringent of, or a combination of, the elements based on the nature of the proposed

development activities. If the proposed activity is not clearly identified in this chapter, the Planning Official shall determine the appropriate Tree Retention Plan requirements.

2. Tree Retention Plan Applicability. Unless otherwise exempt pursuant to KZC 95.20 or subject to the exception in subsection (a) of this section below, any proposed development of the subject property requiring approval through a building permit, land surface modification permit, ~~and/or~~ demolition permit, ~~and~~ or Design Review, Process I, IIA, or IIB, described in Chapters 142, 145, 150 and 152 KZC, respectively, shall include a Tree Retention Plan. Arborist Tree Retention Plans containing Reports of one or more Qualified Professionals in which the field work was completed occurred over 3 years ago may need to be updated with current data.

- a. Exception. A Tree Retention Plan is not required for additions to and remodels of existing improvements in which the total square footage of the proposed improvements is less than 50 percent of the total square footage of the existing improvements on the subject property and no development activity is proposed within the CRZ of Tier 1 Trees or Tier 2 ~~trees~~ Trees.
- b. Additional tree retention and protection regulations apply to:
 - 1) Properties within jurisdiction of the Shoreline Management Act as set forth in Chapter 83 KZC;
 - 2) Properties with Critical Areas or ~~related-Critical Area~~ buffers as set forth in Chapters 85 and 90 KZC; and
 - 3) Properties within the Holmes Point Overlay zone as set forth in Chapter 70 KZC.

3. Tree Retention Plan Submittal Requirements. Tree Retention Plans shall contain the following information unless waived by the Planning Official:

- a. Inventory. The inventory may be noted on the site plan or in the ~~arborist~~ report of a Qualified Professional, listing the following:
 - 1) All existing ~~regulated~~ Trees on the subject property identified by a consistent numbering system in the ~~arborist~~ report of a Qualified Professional or, site plan and onsite tree tags or flagging. The inventory must also include ~~regulated~~ Trees that are on adjacent properties that appear to have ~~Critical Root Zones (CRZs)~~ extending onto the subject property;
 - 2) The ~~Critical Root Zone (CRZ)~~ and the proposed ~~Tree Protection Zone (TPZ)~~ distances of all existing ~~regulated~~ Trees specified in feet from the face of ~~the each~~ tree trunk. The inventory must also include the approximate CRZ and proposed TPZ of ~~regulated~~ Trees that appear to have ~~Critical Root Zones (CRZs)~~ extending onto the subject property;
 - 3) ~~Existing Regulated Tree~~ Trunk-DBH;
 - 4) Proposed tree removals;
 - 5) Condition rating of ~~regulated~~ Trees (i.e., poor, fair, good, excellent, etc.) per KZC 95.30.3, subsection (c)32.3(e); and
 - 6) Tree species and/or common name.
 - ~~7) Identification of trees that meet the definition of Tier 1 and Tier 2 trees.~~

b. Site plan. The site plan must be drawn to scale showing the following:

- 1) Location of all proposed improvements, including building footprint, access, utilities, applicable ~~Required~~ Yard setbacks, buffers, and required landscaped areas clearly identified.
- 2) Surveyed location of ~~regulated~~ Trees on the subject property. The site plan must also show the approximate trunk location of ~~potentially impacted~~ ~~regulated~~ Trees that are potentially Impacted on adjacent properties;
- ~~3) Trees labeled corresponding to the tree inventory numbering system~~ per subsection (a) of this section;
- 4) ~~Critical Root Zone~~ CRZs drawn to scale around all trees potentially impacted by site disturbances resulting from grading, demolition, or construction activities (including approximate CRZs of all ~~potentially impacted~~ trees that are potentially Impacted on adjacent properties);

- 5) Location of tree protection fences at the proposed ~~TPZ~~Tree Protection Zone, with distances from the applicable trunks to fences noted on the site plan. Specific tree protection standards during construction are described in KZC 95.32 ~~KZC~~. These standards must be adhered to and included on demolition, grading, and building permit plans;
- 6) Trees proposed to be removed, noted by an 'X' or by ghosting out;
- 7) Proposed locations of any replacement supplemental trees to be planted ~~required~~ to meet tree density credits or the minimum number of trees as outlined in KZC 95.34.

c. ~~Arborist~~ Report of a Qualified Professional with the following:

- 1) The condition rating for each ~~R~~regulated T ~~ree's suitability for retention~~ based on its health and structure, including ~~R~~regulated T ~~rees that appear to have Critical Root Zones (CRZs)~~ extending onto the subject property. ~~Suitability for retention~~ The condition rating for each Regulated Tree shall be assessed using the following criteria:

Condition Rating	Tree Structure <i>Root flare, trunk condition, branch assembly</i>	Tree Health <i>Twig and leaf density, size and growth, pest/pathogen issues</i>
Excellent	Trunk and root flare are sound and solid, no visible defects or cavities. Generally symmetric crown. Branch spacing, structure and attachments are normal for species and free of defects.	High vigor with little to no twig dieback, discoloration or defoliation. No apparent pest problems. New growth has normal to exceeding shoot length. Leaf size and color normal. Exceptional life expectancy for the species.
Good	Well-developed structure. Defects are minor and can be corrected. Codominant stem formation may be present. Trees that are part of a designated grove may have major asymmetries/deviations form an open-grown form of the same species.	Vigor is normal for species. No significant damage due to diseases or pests. Any twig dieback, defoliation or discoloration is minor (less than 25% of the crown). Typical life expectancy for the species. Trees that are part of a designated grove may have reduced vigor compared to an open-grown form of the same species.
Fair	A single defect of a significant nature such as a trunk cavity or multiple moderate defects such as large girdling roots, trunk damage, evidence of decay that are not practical to correct or would require multiple treatments over several years.	New growth is stunted or absent. Twig dieback, defoliation, discoloration, and/or dead branches may compromise from 25-50% of the crown. Damage due to insects or diseases may be significant and associated with defoliation but is not likely to be fatal. Below average life expectancy.
Poor	High to imminent risk trees (hazard). Structural problems cannot be corrected. Failure may occur at any time.	Poor vigor, unhealthy and declining. Low foliage density with extensive (more than 50%) twig and/or branch dieback. Smaller-than-normal leaf size and little evidence of new growth. Potentially fatal pest infestation.

- 2) For trees not suitable for retention, a description of the reason(s) for removal must be given based on poor health, ~~r~~ high risk of failure due to poor structure, other defects, or unavoidable isolation (windfirmness), ~~r~~ or unsuitability of species, etc., and for which no reasonable alternative action is possible ~~must be given~~ (pruning, cabling, etc.);
- 3) ~~The Qualified Professional's~~ A description of the method(s) used to determine the ~~TPZ~~Tree Protection Zone (i.e., ~~CRZ~~ritical Root Zone formula, ~~root plate diameter~~, exploratory root excavations, or a case-by-case basis description for individual trees);
- 4) Any special instructions specifically outlining any work proposed within the ~~CRZ~~ritical Root Zone of retained trees (i.e., additional protection from soil compaction, hand-digging, tunneling or boring, root pruning, mitigating any grade changes, monitoring during development activity, and aftercare), including potentially ~~i~~ l impacted trees on adjacent properties;
- 5) A discussion of timing and installation of tree protection measures that must include fencing in accordance with the tree protection standards in KZC 95.32, including any anticipated changes to tree protection fence location or other activity within the ~~CRZ~~ritical Root Zone of retained trees during project construction (i.e. material delivery, equipment access, landscaping, etc.);

- 6) Describe the impact of necessary tree removal to the ~~remaining trees~~ to be retained, including those in a ~~g~~Grove or on adjacent properties;
- 7) The suggested location and species of ~~replacement supplemental~~ trees to be ~~planted used when required~~. The report shall include planting and maintenance specifications pursuant to KZC 95.50, ~~and~~ 95.51, ~~and~~ 95.52.

4. Tree Retention Plan Review Standards for Development of Single-Family Dwellings, Short Plats, Subdivisions, and Two/Three-Unit Homes.

To retain ~~R~~Regulated ~~T~~Trees, the applicant shall modify its proposed design, consistent with the pursue provisions in ~~KZC 95 this chapter~~ that allow development standards to be modified. The authority to make decisions under this ~~C~~Chapter resides with the Planning Official for building permits, land surface modification permits, and/or demolition permits or with the applicable decision authority for Design Review, Process I, IIA, or IIB permits described in Chapters 142, 145, 150 and 152 KZC, respectively.

The City does not require tree retention efforts that would reduce maximum allowed density or number of lots, ~~or~~ maximum allowed Floor Area Ratio (FAR) or Maximum Lot Coverage, or that preclude required access and utility connections.

Tree Retention Plan review and approval shall be based on compliance with the following provisions:

a. Tier 1 Trees located anywhere on the subject property shall be retained using the following standards:

- 1) The applicant is entitled to a maximum building footprint, where consistent with applicable dimensional standards, ~~in~~ a configuration of 40-foot wide by 40-foot deep building footprint, in combination with a contiguous 20-foot wide by 20-foot deep building footprint that may shift location around Tier 1 Trees. An applicant is not required to limit the building footprint pursuant to this section where the limitation is not necessary to retain one or more a Tier 1 Tree(s).
- 2) In order to retain Tier 1 trees, ~~t~~The applicant shall pursue, and the Planning Official is authorized to require, site plan alterations, such as adjustments to the location of building footprints, adjustments to the location of driveways and other access ways, or adjustment to the location of walkways, easements, or utilities, including the following:
 - a) Shift or flip (mirror) the location of building footprints and driveways;
 - b) Selection of the required front yard on corner lots in the RSA and RSX zones and selection of the required side yard to meet the 15-foot total required in ~~the~~ RS zones;
 - c) Adjust deck, patio, and path designs;
 - d) Relocate utilities when gravity and location of existing mains permit;
 - e) Avoid rockery/retaining walls located within CRZs;
 - f) Shore basements and other extensive excavations in order to avoid impact within CRZs;
 - g) Cantilever structures over CRZs; and
 - h) With short plats and subdivisions, clustering per ~~Section KZC 95.30.7, subsection (b),~~ rearrangement of property lines within the applicable short plat or subdivision, relocation of access roads, and relocation of utilities.
- 3) The applicant shall employ arboricultural methods such as air excavations, boring under roots instead of trenching, and using additional CRZ protection per KZC 95.34.
- 4) The applicant may pursue ~~these the following~~ variations prior to restricting/adjusting the building footprint, and the Planning Official (or Public Works Official, where applicable) is authorized to allow these variations to development standards:
 - a) Allow 10-foot front and 5-foot rear ~~R~~Required ~~y~~Yards;
 - b) Allow variations to the Ggarage requirements of KZC 115.43.3;
 - c) Allow variations to the mMaximum lot coverage by not more than 10 percent, where necessary, and the driveway width does not exceed a width of 20 feet to extend access due to building footprint location;
 - ~~d~~e) Allow 18-foot by 18-foot parking pads;

~~ed~~) Modify right-of-way frontage improvement requirements, such as waiving any required landscape strip, etc.;

~~fe~~) Allow up to a ~~five~~5-foot increase in building height where the additional height is clearly related to tree retention (i.e., locating mechanical equipment in the attic, avoiding excavation or fill, etc.);

~~gf~~) With short plats and subdivisions, allow 3-foot required side yards within the proposed short plat or subdivision from internal property lines.

b. Tier 2 Trees shall be retained using the following standards:

1) The applicant is entitled to a maximum building footprint of the following configuration, where consistent with applicable dimensional standards:

a) 50-foot wide by 50-foot deep building footprint, or

~~b) For front building facades wider than 50 feet, the maximum building footprint shall be less 10 percent of the distance between the required side yards. For parcels where an applicant could otherwise construct a Front Façade that is wider than the 50-foot wide building footprint, the allowable width of the Front Façade shall be determined by measuring the distance between the Required Yards parallel to and along the Front Façade and reducing that width by 10% as provided in the formula below:~~

~~$$\text{MAXIMUM FRONT FAÇADE WIDTH} = (\text{DISTANCE BETWEEN REQUIRED YARDS}) - (\text{DISTANCE BETWEEN REQUIRED YARDS} \times 10\%)$$~~

~~For example: a 70-foot wide lot with a 60-foot wide front building facade and two 5-foot side Required Yards results in a 10 percent, or 6-foot reduction, to the building pad width, which totals a 54-foot maximum building envelope width.~~

An applicant is not required to limit the building footprint pursuant to this section where the limitation is not necessary to retain one or more Tier 2 Tree(s).

2) **In order to retain Tier 2 trees,** ~~the~~ applicant shall pursue and the Planning Official is authorized to require site plan alterations, including the following:

a) Shift or flip (mirror) the location of building footprints and driveways;

b) Selection of the required front yard on corner lots in the RSA and RSX zones and selection of the required side yard to meet the 15-foot total required in the RS zones;

c) Reduce required front yard by up to ~~five~~5 feet and reduce any rear yards that are not directly adjacent to another parcel's rear yard but that, instead, are adjacent to an access easement or tract ~~may be reduced~~ by up to ~~five~~5 feet;

d) Shift the building footprint on the lot to take advantage of the modifications/reductions allowed in subsection (4);

e) ~~Redesign~~ Adjust deck, patio, and path designs;

f) Avoid rockery/retaining wall/rockeries located within the CRZs where possible; and

~~g~~) Bore under roots within TPZs for utilities less than 2 inches diameter.

43) The applicant may pursue ~~these the following~~ variations prior to restricting/adjusting the building footprint, and the Planning Official (or Public Works Official, where applicable) is authorized to allow these variations to development standards:

a) Allow 10-foot front and 5-foot rear Required Yards;

b) Allow variations to the Garage requirements of KZC 115.43.3;

c) Allow variations to the Maximum lot coverage by not more than 10 percent, where necessary, and the driveway width does not exceed a width of 20 feet to extend access due to building footprint location;

d) Modify right of way frontage improvement requirements, such as waiving any required (no landscape strip, etc.)

- e) ~~Clustering w~~With short plats and subdivisions, ~~subject clustering pursuant to Section per KZC 95.30.7, subsection -(b).~~

5. Tree Retention Plan Review Standards for Development of Multifamily, Commercial, Mixed Use, and Cottage/Carriage Development.

To retain ~~R~~regulated ~~T~~trees in ~~R~~Required ~~y~~Yards and/or required landscape areas, the applicant shall ~~pursue~~modify its ~~proposed design, consistent with the~~ provisions in ~~KZC 95~~this chapter that allow development standards to be modified. The authority to make decisions under this ~~C~~chapter resides with the Planning Official for building permits, land surface modification permits, and/or demolition permits or with the applicable decision authority for Design Review, Process I, IIA or IIB permits ~~described in~~ Chapters 142, 145, 150 and 152 KZC, respectively.

The City does not require tree retention efforts that would reduce maximum allowed density or ~~L~~ot ~~e~~Coverage or that preclude required access and utility connections.

Tree Retention Plan review and approval shall be based on compliance with the following provisions for ~~R~~regulated ~~T~~trees located in ~~R~~Required ~~y~~Yards and/or required landscape areas. Regulated ~~T~~trees in these areas shall be retained to the maximum extent possible using the following standards:

- a. Adjust deck, patio, and path designs;
- b. Relocate utilities when gravity and location of existing mains permit;
- c. Avoid rockery/retaining walls located within CRZs;
- d. Shore basements and other extensive excavations in order to avoid impact within CRZs;
- e. Cantilever structures over CRZs;
- f. Employ arboricultural methods such as air excavations, boring under roots instead of trenching, and using additional CRZ protection per KZC 95.34;
- g. Modify right-of-way frontage improvement requirements, such as waiving ~~any required~~ landscape strip, ~~etc.~~;
- h. Reduce or ~~v~~vary ~~any required Common Recreational Open Space the~~ area, width, or composition of ~~any~~ required common recreational open space;
- i. Vary parking lot design and/or access driveway requirements when the Public Works ~~Official~~ and Planning Officials both determine the variations to be consistent with the intent of City policies and codes; ~~and~~
- j. Vary requirements pertaining to stormwater if approved by the Public Works Official under KMC 15.52.060.

6. Tier 1 ~~Tree~~ and Tier 2 Tree Retention Priorities. The City may authorize the removal of Tier 1 ~~Trees~~ and Tier 2 ~~T~~Trees ~~otherwise~~ required ~~by this chapter to be retained for retention~~ if:

- a. After utilizing the required site plan alterations and allowed variations to development standards listed in KZC 95.30.4 and 95.30.5, encroachment into the CRZ ~~of one or more Tier 1 Tree or Tier 2 Tree~~ would result in either of the following:
 - 1) ~~One or more Tier 1 Trees or Tier 2 Tree(s)~~ that are unsuitable for retention per the condition ratings in KZC 95.30.3, ~~subsection -(c), in which case the City may authorize the removal of the applicable Tier 1 Trees or Tier 2 Trees; or~~
 - 2) ~~Conditions in which T~~the retention of a Tier 2 ~~T~~tree compromises a Tier 1 ~~T~~tree's suitability for retention, ~~in which case the City may authorize the removal of the applicable Tier 2 Tree.~~
- b. Proposed alternative measures using sustainable site development strategies and qualifying sustainability certifications result in development sites that are equal or superior to the intent of this ~~C~~chapter, such as:
 - 1) Low Impact Development (LID) standards within the Public Works Pre-Approved Plans and Policies and King County Stormwater Manual;
 - 2) International Living Futures Institute (ILFI) Living Building Challenge;
 - 3) Leadership in Energy and Environmental Design (LEED);
 - 4) Built Green Net Zero;
 - 5) Salmon Safe, ILFI Net Zero or Passive House programs ~~that will be equal or superior to the provisions of KZC 95; and~~
 - 6) The installation of renewable energy system hardware, such as solar panels or wind turbines.

Requests to use alternative measures and procedures shall be reviewed by the Planning Official, who may approve, approve with conditions or modifications, or deny the request. The Planning Official and the applicant shall work in good faith to find reasonable solutions.

7. Additional Tree Retention Plan Standards for Short Plats and Subdivisions.

a. Modifications. Modifications to the Tree Retention Plan may be approved by the Planning Director pursuant to the standards of KMC 22.20.025 and the following criteria:

~~1) — Modification Prior to Tree Removal. The Planning Director may approve a modification request to remove Tier 1 Trees or Tier 2 Trees previously identified for retention if:~~

~~a) — Regulated Trees inventoried in the original Tree Retention Plan have not yet been removed; and~~

~~b) — Notice of the modification request is provided consistent with the noticing requirements for the short plat or subdivision.~~

~~2) — Modification after Tree Removal. A modification request is required to remove trees previously identified for retention after which trees inventoried in the original Tree Retention Plan have already been removed. Such a request may be approved by the Planning Director only if the following criteria are met:~~

~~a1) The need for the modification was not known and could not reasonably have been known before the Tree Retention Plan was approved;~~

~~b2) The modification is necessary because of special circumstances that which are not the result of actions by the applicant regarding the size, shape, topography, or other physical limitations of the subject property relative to the location of proposed and/or existing improvements on or adjacent to the subject property; and~~

~~c3) There is no practicable or feasible alternative development proposal that results in fewer additional tree removals.~~

~~b.3) — Public Notice for Modifications. The Planning Director shall not approve or deny a modification pursuant to this subsection without first providing notice of the modification request consistent with the noticing requirements for the short plat or subdivision and providing opportunity for comments for consideration by the Planning Director. and~~

~~4)e) — Said comment period shall not be less than 14 calendar days.~~

~~54)f) — The fee for processing a modification request shall be established by City ordinance.~~

~~b.c. Lot Clustering. Clustering of lots associated with Short Plats and Subdivisions. The Planning Director may approve variations to minimum Lot Size, and maximum Floor Area Ratio and Lot Coverage requirements in order to facilitate retention of Tier 1 Trees and Tier 2 Trees where necessitated by retention of trees in protective tracts or where lot sizes are averaged in order to retain trees. The following standards shall apply:~~

~~1) Lot sizes may be averaged with no minimum lot size specified, provided there is no increase in the allowed density or number of lots otherwise allowed for the subject property;~~

~~2) The maximum Floor Area Ratio (FAR) and/or Lot Coverage requirements may be adjusted proportionate to the Lot Size reduction(s), provided there is no net increase in the aggregate Floor Area Ratio (FAR) and/or aggregate Lot Coverage otherwise allowed for the subject property. The variations and resultant restrictions shall be included in a recorded agreement and binding on future owners of the lots.~~

95.32 Tree and Soil Protection during Development Activity

Prior to development activity or initiating tree removal on the site, vegetated areas, individual trees and soil to be preserved shall be protected from potentially damaging activities during development activity per ISA and ANSI standards for tree protection as follows:

1. Tree Cutting in Advance of Issuance of Land Development Permit. There shall be no tree removal, land surface modifications, or clearing of other vegetation ~~(or of other vegetation clearing)~~ land surface modifications on any site for the sake of preparing that site for future development.

2. Placing Materials near Trees. No person may conduct any activity within the TPZ protected area of any tree designated to remain, including, but not limited to, operating or parking equipment, placing solvents, storing building material or stockpiling any materials, or dumping concrete washout or other chemicals. During construction, no person shall attach any object to any tree designated for protection.
3. Tree Protection Fence. Before development, land clearing, filling, or any land surface modifications alteration, the applicant shall:
- a. Erect and maintain readily visible temporary protective tree fencing at the approved Limits of Disturbance which completely surrounds the protected area of all retained trees, groups of trees, vegetation and native soil. Fences shall be constructed of chain link and be at least six (6) feet high, unless other type of fencing is authorized by the Planning Official.
 - b. Install highly visible signs spaced no further than 15 feet along the entirety of the Tree Protection Fence. Said sign must be approved by the Planning Official and shall state at a minimum "Tree and Soil Protection Area, Entrance Prohibited" and provide the City phone number for code enforcement to report violations.
 - c. Site plans showing approved tree retention/protection shall be displayed on development sites in plain view with the general contractor or other responsible party's phone number.
 - d. Prohibit excavation or compaction of soil or other potentially damaging activities within the fence; provided, that the Planning Official may allow such activities approved by a qualified professional and under the supervision of a qualified professional retained and paid for by the applicant.
 - e. If any disturbance is proposed within the Inner Critical Root Zone of one or more Regulated T significant trees on a neighboring property, the applicant shall provide evidence that the owner of said tree(s) has been notified in writing of the potential impact. The Planning Official may waive this requirement if the applicant's arborist-Qualified Professional can demonstrate, through non-injurious methods such as pneumatic root excavations, that there are no roots within the Inner Critical Root Zone.
 - f. Maintain the Tree Protection Fence in its approved location for the duration of the project until the Planning Official authorizes its removal.
 - g. Ensure that any approved landscaping done in the protected zone subsequent to the removal of the barriers shall be accomplished with machinery from outside the protected zone or by hand.
 - h. In addition to the above, the Planning Official may require the following:
 - 1) If equipment is authorized to operate within the Critical Root Zone CRZ, the soil and critical root zone CRZ of a tree must be covered with mulch to a depth of at least six (6) inches or with plywood, steel plates or similar material in order to protect roots and soil from damage caused by heavy equipment.
 - 2) Minimize root damage by hand-excavating a 2-foot-deep trench, at the edge of Critical Root Zone the CRZ, to cleanly sever the roots of trees to be retained. Never rip or shred roots with heavy equipment.
 - 3) Corrective pruning performed on protected trees in order to avoid damage from machinery or building activity.
 - 4) Maintenance of trees throughout construction period by watering and fertilizing.
4. Grade.
- a. The grade shall not be elevated or reduced within the Critical Root Zone CRZ of trees to be preserved without the Planning Official's authorization based on recommendations from a qualified professional. The Planning Official may allow coverage of up to one-half (1/2) of the area of the tree's Critical Root Zone CRZ with light soils (no clay) to the minimum depth necessary to carry out grading or landscaping plans, if it will not imperil the survival of the tree. Aeration devices may be required to ensure the tree's survival.
 - b. If the grade adjacent to a preserved tree is raised such that it could slough or erode into the tree's Critical Root Zone CRZ, it shall be permanently stabilized to prevent soil erosion and suffocation of the roots.
 - c. The applicant shall not install an impervious surface within the Critical Root Zone CRZ of any tree to be retained without the authorization of the Planning Official. The Planning Official may require specific construction

methods and/or use of aeration devices to ensure the tree’s survival and to minimize the potential for root-induced damage to the impervious surface.

d. To the greatest extent practical, utility trenches shall be located outside of the ~~critical root zone~~CRZ of trees to be retained. The Planning Official may require that utilities be tunneled under the roots of trees to be retained if the Planning Official determines that trenching would significantly reduce the chances of the tree’s survival.

e. Trees and other vegetation to be retained shall be protected from erosion and sedimentation. Clearing operations shall be conducted so as to expose the smallest practical area of soil to erosion for the least possible time. To control erosion, it is encouraged that shrubs, ground cover and stumps be maintained on the individual lots, where feasible.

4. Directional Felling. Directional felling of trees shall be used to avoid damage to trees designated for retention.

5. Additional Requirements. The Planning Official may require additional tree protection measures that are consistent with accepted urban forestry industry practices, including maintenance pursuant to KZC 95.51.

95.34 ~~Supplemental~~ Tree Planting Requirements Related to Development Activity

This section establishes the minimum tree planting requirements for development permits using a tree credit system. This section does not establish a maximum retention standard for existing trees.

1. ~~Supplemental~~ Trees Required to be Planted to Meet Tree Density Requirements. The required tree density for replanting is 30 tree credits per acre for single-family homes, cottages, carriage units, two/three-unit homes, short plats, and/or subdivisions and associated demolition and land surface modification.

2. Applicability of Tree Credits. The tree credit value that corresponds with DBH shall be found in Table 95.34. The maximum number of credits awarded to any one individual tree is 11 credits. Existing native conifers (or other conifer species as approved by the Planning Official shall count 1.5 times credits for retention. For individual lots in a short ~~plat subdivision~~ or subdivision with an approved Tree Retention Plan, the required tree density applies to each lot within the short plat or subdivision. Trees planted in the following locations shall not count towards tree density credit requirements:

a. in the public right of way, areas to be dedicated as public right of way, and vehicular access easements not included as lot area with the approved short plat or subdivision.

b. Existing trees transplanted to an area on the same site unless approved by the Planning Official based on transplant specifications provided by a Qualified Professional that will ensure a good probability for survival

**Table 95.34.
Tree Density for Existing Significant Trees
(Credits per minimum diameter – DBH)**

DBH	Tree Credits	DBH	Tree Credits	DBH	Tree Credits
3 – 5"	0.5				
6 – 10"	1	24"	8		
12"	2	26"	9		
14"	3	28"	10		
16"	4	30"	11		
18"	5				

DBH	Tree Credits	DBH	Tree Credits	DBH	Tree Credits
20"	6				
22"	7				

3. Tree Density Credit Calculation. To calculate required tree density credits, divide the square foot area of the subject lot by 43,560 (the square foot equivalent to one acre). The resulting number is then multiplied by 30, the minimum tree density credit requirement for one acre. In calculating required tree density credits, any fraction of credits shall be rounded up to the next whole number from a 0.5 or greater value.

Example: an 8,500-square-foot lot would need six (6) tree credits ($8,500/43,560 = 0.195 \times 30 = 5.8$, or six (6) credits). The tree density for the lot would be exceeded/met by retaining two (2) existing Landmark ~~30-inch DBH T~~ trees and two (2) existing 12-inch DBH Tier 2 ~~Trees that are conifers trees~~ (tree densities may be exceeded to retain Landmark ~~T~~ trees and existing native conifers count 1.5 times credits). Or, the tree density for the lot would be met by retaining two (2) existing 14-inch DBH deciduous Tier 2 ~~T~~ trees.

4. Minimum Size for ~~Replacement Supplemental~~ Trees. The required minimum size of ~~a replacement the supplemental~~ tree worth one (1) tree credit shall be four (4) feet tall for native or other conifers and 2-inch ~~Cealiper~~ for deciduous or broad-leaf evergreen trees. Additional credits may be awarded for larger ~~supplemental replacement~~ trees. Trees planted to form a clipped or sheared hedge or living wall will not be counted toward tree density credits. Supplemental Thuja/Arborvitae or other slow-growing conifers planted on development sites shall not count towards tree density credits on a lot. The installation and maintenance shall be pursuant to KZC 95.50 and 95.51 respectively.

5. ~~Replacement Supplemental~~ Tree Locations. In designing a development and in meeting the required tree density, the ~~replacements supplemental~~ trees shall be planted pursuant to KZC 95.50 in the following order of priority:

a. On-Site. The preferred locations for new trees are:

- 1) On individual residential building lots
- 2) In preserved ~~G~~groves, ~~e~~Critical ~~A~~reas or ~~their-Critical Area B~~uffers.
- 3) Adjacent to storm water facilities as approved by Public Works under KMC 15.52.060.
- 4) Site perimeter – The area of the subject property that is within 10 feet from the property line.
- 5) Entrance landscaping, traffic islands, and other common areas with~~in~~ the development of residential subdivisions.

b. Off-Site. When room is unavailable for planting the required ~~replacement~~ trees on site, then they may be planted at another approved location in the City. Trees that are planted ~~off~~ site from the subject property may be required to be preserved in perpetuity.

6. Payment in Lieu of Planting.- When the Planning Official determines on-site and off-site locations are unavailable, then the applicant shall pay an amount of money in lieu of planting, utilizing the most recent version of the Pacific Northwest International Society of Arboriculture (PNW ISA) "Species Ratings for Landscape Tree Appraisal" unit costs for conifers and deciduous trees, multiplied by the number of required tree credits into the City Forestry Account pursuant to KZC 95.57.

95.40 Required Landscaping based on Zoning District

1. User Guide. Chapters 15 through 56 KZC containing the use zone or development standards tables assign a landscaping category to each use in each zone. This category is either "A," "B," "C," "D," or "E." If you do not know which landscaping category applies to the subject property, you should consult the appropriate use zone or development standards tables.

Requirements pertaining to each landscaping category are located throughout this chapter, except that Landscaping Category E is not subject to this section.

Landscape Categories A, B, C, D, and E may be subject to additional related requirements in the following other chapters:

- a. Various use zone charts or development standards tables, in Chapters 15 through 56 KZC, establish additional or special buffering requirements for some uses in some zones.
 - d. Chapter 110 KZC and Chapter 19.36 KMC address vegetation within rights-of-way, except for the I-405 and SR-520 rights-of-way, and the Cross Kirkland Corridor railbanked rail corridor or the Eastside Rail Corridor.
 - e. KZC 115.135, Sight Distance at Intersections, which may limit the placement of landscaping in some areas.
 - f. Chapter 22 KMC addresses trees in subdivisions.
2. Use of Significant Existing Vegetation.
- a. General. The applicant shall apply subsection KZC 95.30, Tree Retention Plan Procedure to retain existing native trees, vegetation and soil in areas subject to the landscaping standards of this section. The Planning Official shall give substantial weight to the retained native trees and vegetation when determining the applicant's compliance with this section.
 - b. ~~Replacements~~^{Supplement}. The City may require the applicant to plant trees, shrubs, and groundcover according to the requirements of this section to supplement the existing vegetation in order to provide a buffer at least as effective as the required buffer.
 - c. Protection Techniques. The applicant shall use the protection techniques described in KZC 95.32 to ensure the protection of significant existing vegetation and soil.
- 34.** General. The applicant shall provide the ~~replacements~~^{supplemental} landscaping specified in subsection (2) of this section in any area of the subject property that:
- a. Is not covered with a building, vehicle circulation area or other improvement; and
 - b. Is not in an area to be planted with required landscaping; and
 - c. Is not committed to and being used for some specific purpose.
- 42.** Standards. The applicant shall provide the following at a minimum:
- a. Living plant material which will cover 80 percent of the area to be landscaped within two (2) years. If the material to be used does not spread over time, the applicant shall re-plant the entire area involved immediately. Any area that will not be covered with living plant material must be covered with nonliving groundcover, i.e.: mulch. Preference is given to using native plant species. See Kirkland Native Tree/Plant Lists.
 - b. One (1) tree for each 1,000 square feet of area to be landscaped. At the time of planting, deciduous trees must be at least two (2) inches in caliper and coniferous trees must be at least five (5) feet in height.
 - c. If a development requires approval through Process I, IIA or IIB as described in Chapters 145, 150 and 152 KZC, respectively, the City may require additional vegetation to be planted along a building facade if:
 - 1) The building facade is more than 25 feet high or more than 50 feet long; or
 - 2) Additional landscaping is necessary to provide a visual break in the facade.
 - d. In RHBD varieties of rose shrubs or ground cover along with other plant materials shall be included in the on-site landscaping.
 - e. If development is subject to Design Review as described in Chapter 142 KZC, the City will review plant choice and specific plant location as part of the Design Review approval. The City may also require or permit modification to the required plant size as part of Design Review approval.
- 53.** Landscape Plan Required. In addition to the Tree Retention Plan required pursuant to KZC 95.30, application materials shall clearly depict the quantity, location, species, and size of plant materials proposed to comply with the requirements of this section and shall address the plant installation and maintenance requirements set forth in KZC 95.50 and 95.51. Plant materials shall be identified with both their scientific and common names. Any required irrigation system must also be shown.

95.41 Supplemental Plantings**95.42 Land Use Buffer Requirements**

The applicant shall comply with the provisions specified in the following chart and with all other applicable provisions of this chapter. Land use buffer requirements may apply to the subject property, depending on what permitted use exists on the adjoining property or, if no permitted use exists, depending on the zone that the adjoining property is in.

LANDSCAPING CATEGORY	ADJOINING PROPERTY	*Public park or low density residential use or if no permitted use exists on the adjoining property then a low density zone.	Medium or high density residential use or if no permitted use exists on the adjoining property then a medium density or high density zone.	Institutional or office use or if no permitted use exists on the adjoining property then an institutional or office zone.	A commercial use or an industrial use or if no permitted use exists on the adjoining property then a commercial or industrial zone.
A		Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (2) (Buffering Standard 2)	
B		Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)		
C		Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (2) (Buffering Standard 2)		
D		Must comply with subsection (2) (Buffering Standard 2)			
E					
Footnotes:	*If the adjoining property is zoned Central Business District, Juanita Business District, North Rose Hill Business District, Rose Hill Business District, Finn Hill Neighborhood Center, Houghton/Everest Neighborhood Center, Business District Core or is located in TL 5, this section KZC 95.42 does not apply.				

This chart establishes which buffering standard applies in a particular case. The following subsections establish the specific requirement for each standard:

1. For standard 1, the applicant shall provide a 15-foot-wide landscaped strip with a 6-foot-high solid screening fence or wall. Except for public utilities, the fence or wall must be placed on the outside edge of the land use buffer or on the property line when adjacent to private property. For public utilities, the fence or wall may be placed either on the outside or inside edge of the landscaping strip. A fence or wall is not required when the land use buffer is adjacent and parallel to a public right-of-way that is improved for vehicular use. See KZC 115.40 for additional fence standards. The land use buffer must be planted as follows:

- a. Trees planted at the rate of one (1) tree per 20 linear feet of land use buffer, with deciduous trees of two and one-half (2-1/2) inch caliper, minimum, and/or coniferous trees eight (8) feet in height, minimum. At least 70 percent of trees shall be evergreen. The trees shall be distributed evenly throughout the buffer, spaced no more than 20 feet apart on center.
- b. Large shrubs or a mix of shrubs planted to attain coverage of at least 60 percent of the land use buffer area within two (2) years, planted at the following sizes and spacing, depending on type:
 - 1) Low shrub – (mature size under three (3) feet tall), 1- or 2-gallon pot or balled and burlapped equivalent;
 - 2) Medium shrub – (mature size from three (3) to six (6) feet tall), 2- or 3-gallon pot or balled and burlapped equivalent;

- 3) Large shrub – (mature size over six (6) feet tall), 5-gallon pot or balled and burlapped equivalent.
 - c. Living ground covers planted from either 4-inch pot with 12-inch spacing or 1-gallon pot with 18-inch spacing to cover within two (2) years 60 percent of the land use buffer not needed for viability of the shrubs or trees.
2. For standard 2, the applicant shall provide a 5-foot-wide landscaped strip with a 6-foot-high solid screening fence or wall. Except for public utilities, the fence or wall must be placed on the outside edge of the land use buffer or on the property line when adjacent to private property. For public utilities, the fence or wall may be placed either on the outside or inside edge of the landscaping strip. A fence or wall is not required when the land use buffer is adjacent and parallel to a public right-of-way that is improved for vehicular use. See KZC 115.40 for additional fence standards. The landscaped strip must be planted as follows:
 - a. One (1) row of trees planted no more than 10 feet apart on center along the entire length of the buffer, with deciduous trees of 2-inch caliper, minimum, and/or coniferous trees at least six (6) feet in height, minimum. The spacing may be increased to 15 feet to accommodate larger species and avoid long-term crowding. At least 50 percent of the required trees shall be evergreen.
 - b. Living ground covers planted from either 4-inch pot with 12-inch spacing or 1-gallon pot with 18-inch spacing to cover within two (2) years 60 percent of the land use buffer not needed for viability of the trees.
3. Plant Standards. All plant materials used shall meet the most recent American Association of Nurserymen Standards for nursery stock: ANSI Z60.1.
4. Location of the Land Use Buffer. The applicant shall provide the required buffer along the entire common border between the subject property and the adjoining property.
5. Multiple Buffering Requirement. If the subject property borders more than one (1) adjoining property along the same property line, the applicant shall provide a gradual transition between different land use buffers. This transition must occur totally within the area which has the less stringent buffering requirement. The specific design of the transition must be approved by the City.
6. Adjoining Property Containing Several Uses. If the adjoining property contains several permitted uses, the applicant may provide the least stringent land use buffer required for any of these uses.
7. Subject Property Containing Several Uses. If the subject property contains more than one (1) use, the applicant shall comply with the land use buffering requirement that pertains to the use within the most stringent landscaping category that abuts the property to be buffered.
8. Subject Property Containing School. If the subject property is occupied by a school, land use buffers are not required along property lines adjacent to a street.
9. Encroachment into Land Use Buffer. Typical incidental extensions of structures such as chimneys, bay windows, greenhouse windows, cornices, eaves, awnings, and canopies may be permitted in land use buffers as set forth in KZC 115.115(3)(d); provided, that:
 - a. Buffer planting standards are met; and
 - b. Required plantings will be able to attain full size and form typical to their species.

95.43 Outdoor Use, Activity, and Storage

Outdoor use, activity, and storage (KZC 115.105(2)) must comply with required land use buffers for the primary use, except that the following outdoor uses and activities, when located in commercial or industrial zones, are exempt from KZC 115.105(2)(c)(1) and (2)(c)(2) as stated below:

1. That portion of an outdoor use, activity, or storage area which abuts another outdoor use, activity, or storage area which is located on property zoned for commercial or industrial use.
2. Outdoor use, activity, and storage areas which are located adjacent to a fence or structure which is a minimum of six (6) feet above finished grade, and do not extend outward from the fence or structure more than five (5) feet; provided, that the total horizontal dimensions of these areas shall not exceed 50 percent of the length of the facade or fence (see Plate 11).
3. If there is an improved path or sidewalk in front of the outdoor storage area, the outdoor use, activity or storage area may extend beyond five (5) feet if a clearly defined walking path at least three (3) feet in width is maintained and there is adequate pedestrian access to and from the primary use. The total horizontal dimension of these areas shall not exceed 50 percent of the length of the facade of the structure or fence (see Plate 11).

4. Outdoor dining areas.
5. That portion of an outdoor display of vehicles for sale or lease which is adjacent to a public right-of-way that is improved for vehicular use; provided, that it meets the buffering standards for driving and parking areas in KZC 95.45(1); and provided further, that the exemptions of KZC 95.45(2) do not apply unless it is fully enclosed within or under a building, or is on top of a building and is at least one (1) story above finished grade.
6. Outdoor Christmas tree lots and fireworks stands if these uses will not exceed 30 days, and outdoor amusement rides, carnivals and circuses, and parking lot sales which are ancillary to the indoor sale of the same goods and services, if these uses will not exceed seven (7) days.

95.44 Internal Parking Lot Landscaping Requirements

The following internal parking lot landscape standards apply to each parking lot or portion thereof containing more than eight (8) parking stalls.

1. The parking lot must contain 25 square feet of landscaped area per parking stall planted as follows:
 - a. The applicant shall arrange the required landscaping throughout the parking lot to provide landscape islands or peninsulas to separate groups of parking spaces (generally every eight (8) stalls) from one another and each row of spaces from any adjacent driveway that runs perpendicular to the row. This island or peninsula must be surrounded by a 6-inch-high vertical curb and be of similar dimensions as the adjacent parking stalls. Gaps in curbs are allowed for stormwater runoff to enter landscape island.
 - b. Landscaping shall be installed pursuant to the following standards:
 - 1) At least one (1) deciduous tree, two (2) inches in caliper, or a coniferous tree five (5) feet in height.
 - 2) Groundcover shall be selected and planted to achieve 60 percent coverage within two (2) years.
 - 3) Natural drainage landscapes (such as rain gardens, bio-infiltration swales and bioretention planters) are allowed when designed in compliance with the stormwater design manual adopted in KMC 15.52.060. Internal parking lot landscaping requirements for trees still apply. Refer to Public Works Pre-Approved Plans.
 - c. Exception. The requirements of this subsection do not apply to any area that is fully enclosed within or under a building.
2. Rooftop Parking Landscaping. For a driving or parking area on the top level of a structure that is not within the CBD zone or within any zone that requires design regulation compliance, one (1) planter that is 30 inches deep and five (5) feet square must be provided for every eight (8) stalls on the top level of the structure. Each planter must contain a small tree or large shrub suited to the size of the container and the specific site conditions, including desiccating winds, and is clustered with other planters near driving ramps or stairways to maximize visual effect.
3. If development is subject to Design Review as described in Chapter 142 KZC, the City will review the parking area design, plant choice and specific plant location as part of the Design Review approval. The City may also require or permit modification to the required landscaping and design of the parking area as part of Design Review approval.

95.45 Perimeter Landscape Buffering for Driving and Parking Areas

1. Perimeter Buffering – General. Except as specified in subsection (2) of this section, the applicant shall buffer all parking areas and driveways from abutting rights-of-way and from adjacent property with a 5-foot-wide strip along the perimeter of the parking areas and driveways planted as follows (see Figure 95.45.A):
 - a. One (1) row of trees, two (2) inches in caliper and planted 30 feet on center along the entire length of the strip.
 - b. Living groundcover planted to attain coverage of at least 60 percent of the strip area within two (2) years.
 - c. Natural drainage landscapes (such as rain gardens, bio-infiltration swales and bioretention planters) are allowed when designed in compliance with the stormwater design manual adopted in KMC 15.52.060. Perimeter landscape buffering requirements for trees in driving and parking areas still apply. Refer to Public Works Pre-Approved Plans.
2. Exception. The requirements of this section do not apply to any parking area that:
 - a. Is fully enclosed within or under a building; or
 - b. Is on top of a building and is at least one (1) story above finished grade; or

- c. Serves detached dwelling units exclusively; or
 - d. Is within any zone that requires design regulation compliance. See below for Design District requirements.
3. Design Districts. If subject to Design Review, each side of a parking lot that abuts a street, through-block pathway or public park must be screened from that street, through-block pathway or public park by using one (1) or a combination of the following methods (see Figures 95.45.A, B, and C):
- a. By providing a landscape strip at least five (5) feet wide planted consistent with subsection (1) of this section, or in combination with the following. In the RHBD Regional Center (see KZC Figure 92.05.A) a 10-foot perimeter landscape strip along NE 85th Street is required planted consistent with subsection (1) of this section.
 - b. The hedge or wall must extend at least two (2) feet, six (6) inches, and not more than three (3) feet above the ground directly below it.
 - c. The wall may be constructed of masonry or concrete, if consistent with the provisions of KZC 92.35(1)(g), in building material, color and detail, or of wood if the design and materials match the building on the subject property.
 - d. In JBD zones:
 - 1) If the street is a pedestrian-oriented street, the wall may also include a continuous trellis or grillwork, at least five (5) feet in height above the ground, placed on top of or in front of the wall and planted with climbing vines. The trellis or grillwork may be constructed of masonry, steel, cast iron and/or wood.
 - 2) If the wall abuts a pedestrian-oriented street, the requirements of this subsection may be fulfilled by providing pedestrian weather protection along at least 80 percent of the frontage of the subject property.
 - e. If development is subject to Design Review as described in Chapter 142 KZC, the City will review plant choice and specific plant location as part of the Design Review approval. The City may also require or permit modification to the required plant size as part of Design Review approval.
4. Overlapping Requirements. If buffering is required in KZC 95.42, Land Use Buffering Standards, and by this subsection, the applicant shall utilize the more stringent buffering requirement.

Perimeter Parking Lot Landscaping

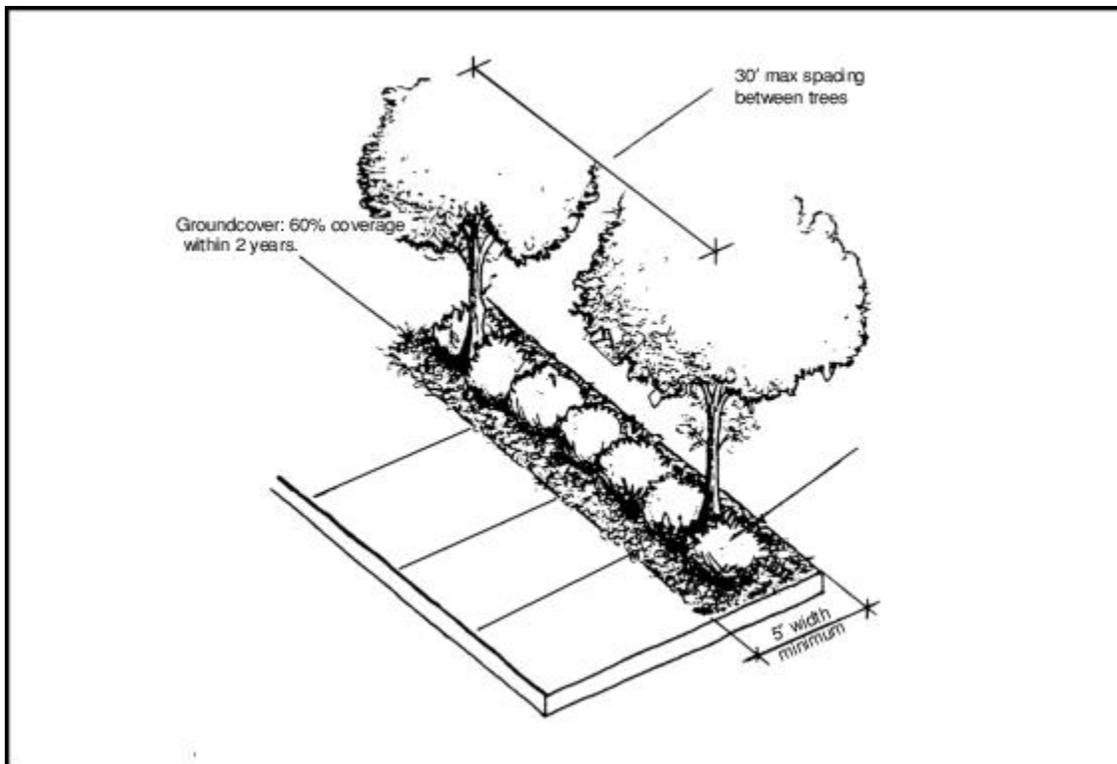


FIGURE 95.45.A

Perimeter Parking – Examples of Various Screen Wall Designs

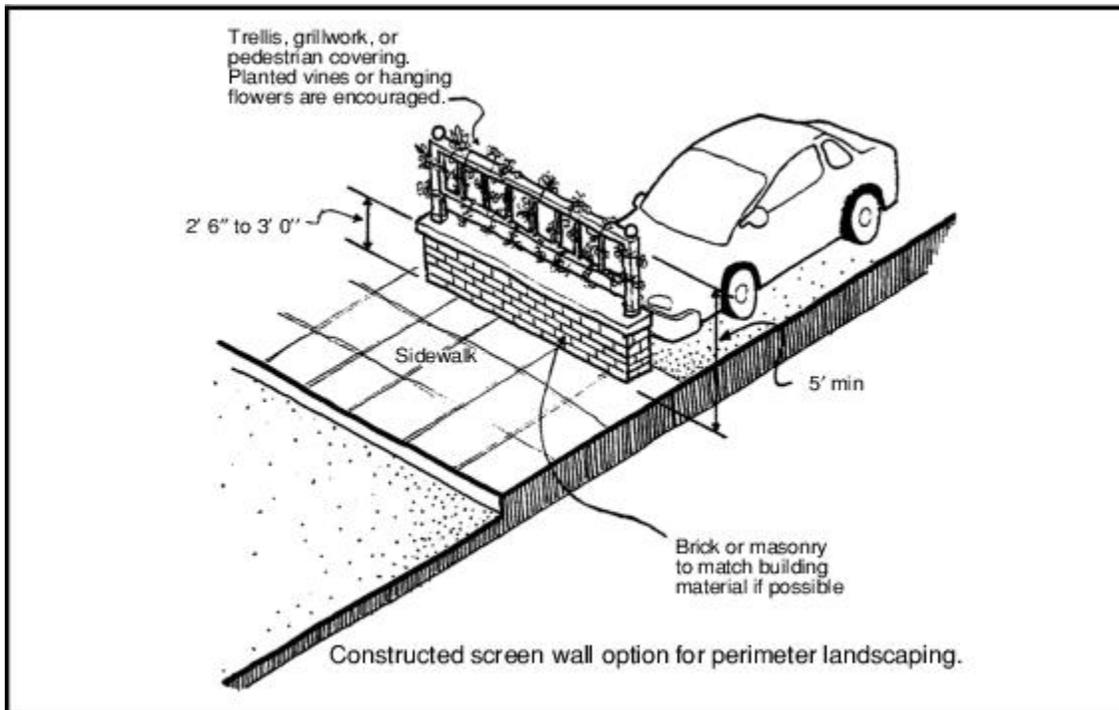


FIGURE 95.45.B

Perimeter Parking – Examples of Various Screen Wall Designs

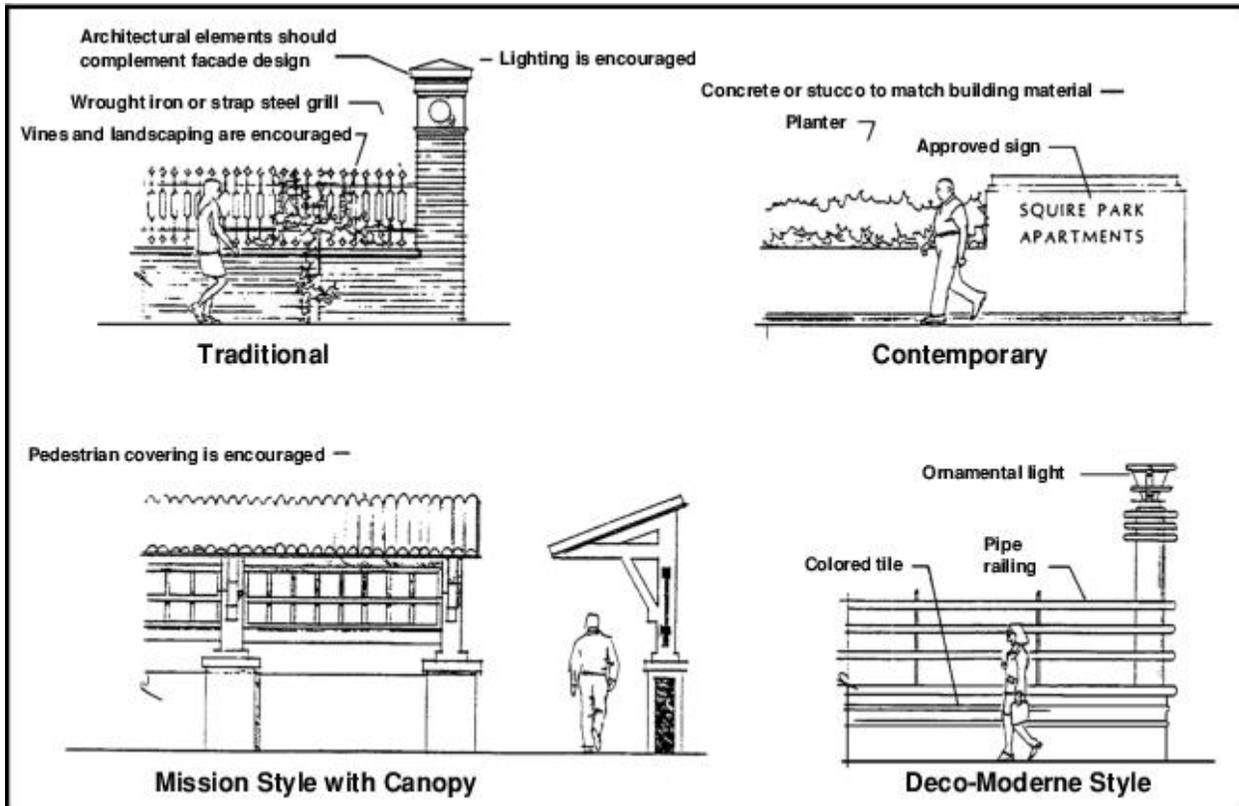


FIGURE 95.45.C

95.46 Modifications to **Required Landscaping and Buffer Standards**

1. Modification to Land Use Buffer Requirements. The applicant may request a modification of the requirements of the buffering standards in KZC 95.42. The Planning Official may approve a modification if:
 - a. The owner of the adjoining property agrees to this in writing; and
 - b. The existing topography or other characteristics of the subject property or the adjoining property, or the distance of development from the neighboring property decreases or eliminates the need for buffering; or
 - c. The modification will be more beneficial to the adjoining property than the required buffer by causing less impairment of view or sunlight; or
 - d. The Planning Official determines that it is reasonable to anticipate that the adjoining property will be redeveloped in the foreseeable future to a use that would require no, or a less intensive, buffer; or
 - e. The location of pre-existing improvements on the adjoining site eliminates the need or benefit of the required landscape buffer.
2. Modifications to General Landscaping Requirements.
 - a. Authority to Grant and Duration. If the proposed development of the subject property requires approval through Design Review or Process I, IIA, or IIB, described in Chapters 142, 145, 150, and 152 KZC, respectively, a request for a modification will be considered as part of that process under the provisions of this section. The City must find that the applicant meets the applicable criteria listed in subsections (2)(b) and (2)(c) of this section. If granted under Design Review or Process I, IIA, or IIB, the modification is binding on the City for all development permits issued for that development under the building code within five (5) years of the granting of the modification.

If the above does not apply, the Planning Official may grant a modification in writing under the provisions of this section.
 - b. Internal Parking Lot Landscaping Modifications. For a modification to the internal parking lot landscaping requirements in KZC 95.44, the landscape requirements may be modified if:
 - 1) The modification will produce a landscaping design in the parking area comparable or superior to that which would result from adherence to the adopted standard; or
 - 2) The modification will result in increased retention of significant existing vegetation; or
 - 3) The purpose of the modification is to accommodate low impact development techniques as approved by the Planning Official.
 - c. Perimeter parking lot and driveway landscaping. For a modification to the perimeter landscaping for parking lots and driveways, the buffering requirements for parking areas and driveways may be modified if:
 - 1) The existing topography of or adjacent to the subject property decreases or eliminates the need for visual screening; or
 - 2) The modification will be of more benefit to the adjoining property by causing less impairment of view or sunlight; or
 - 3) The modification will provide a visual screen that is comparable or superior to the buffer required by KZC 95.45; or
 - 4) The modification eliminates the portion of the buffer that would divide a shared parking area serving two (2) or more adjacent uses but provides the buffer around the perimeter of the shared parking area.

95.47 Nonconforming Landscaping and Buffers

1. The landscaping requirements of KZC 95.404, **Required Landscaping Based on Zoning District Replacement Supplemental Plantings**, KZC 95.43 Outdoor Use, Activity and Storage, KZC 95.44, Internal Parking Lot Landscaping, and KZC 95.45, Perimeter Landscape Buffering for Driving and Parking Areas, must be brought into conformance as much as is feasible, based on available land area, in either of the following situations:
 - a. An increase of at least 10 percent in gross floor area of any structure; or
 - b. An alteration to any structure, the cost of which exceeds 50 percent of the replacement cost of the structure.

2. Land use buffers must be brought into conformance with KZC 95.42 in either of the following situations:
 - a. An increase in gross floor area of any structure (the requirement to provide conforming buffers applies only where new gross floor area impacts adjoining property); or
 - b. A change in use on the subject property and the new use requires larger buffers than the former use.

95.50 Installation Standards for Required Plantings

All required trees, landscaping and soil shall be installed according to sound horticultural practices in a manner designed to encourage quick establishment and healthy plant growth. All required landscaping shall be installed in the ground and not in above-ground containers, except for landscaping required on the top floor of a structure.

When an applicant proposes to locate a subterranean structure under required landscaping that appears to be at grade, the applicant will: (1) provide site-specific documentation prepared by a qualified expert to establish that the design will adequately support the mature size of specified trees and other vegetation species; and (2) enter into an agreement with the City, in a form acceptable to the City Attorney, indemnifying the City from any damage resulting from development activity on the subject property which is related to the physical condition of the property. The applicant shall record this agreement with the King County Recorder's Office.

1. Compliance. It is the applicant's responsibility to show that the proposed landscaping complies with the regulations of this chapter.
2. Timing. All landscaping shall be installed prior to the issuance of a certificate of occupancy, except that the installation of any required tree or landscaping may be deferred during the summer months to the next planting season, but never for more than six (6) months. Trees should be planted in the fall, winter or early spring, between October and April, or must be irrigated.

Deferred installation shall be secured with a performance bond pursuant to Chapter 175 KZC prior to the issuance of a certificate of occupancy.

3. Grading. Berms shall not exceed a slope of two (2) horizontal feet to one (1) vertical foot (2:1).
4. Soil Specifications. Soils in planting areas shall have soil quality equivalent to Washington State Department of Ecology BMP T5.13. The soil quality in any landscape area shall comply with the soil quality requirements of the Public Works Pre-Approved Plans. See subsection (9) of this section for mulch requirements.
5. Plant Selection.
 - a. Plant selection shall be consistent with the appropriate Kirkland Plant Lists, which are shown on the Planning Department webpage and available in the Planning and Building Department. Species diversity is encouraged by planting species other than those listed, with Planning Official approval.
 - b. Plants shall be selected and sited to produce a hardy and drought-resistant landscape area. Selection shall consider soil type and depth, the amount of maintenance required, spacing, exposure to sun and wind, the slope and contours of the site, and compatibility with existing native vegetation preserved on the site. Preservation of existing vegetation is strongly encouraged.
 - c. Plants listed in the Kirkland Prohibited Plant List shall not be planted in any required landscape areas. Additionally, there are other plants that may not be used if identified in the Kirkland Plant List as potentially damaging to sidewalks, roads, underground utilities, drainage improvements, foundations, or when not provided with enough growing space.
 - d. All plants shall conform to American Association of Nurserymen (AAN) grades and standards as published in the "American Standard for Nursery Stock" manual.
 - e. Plants shall meet the minimum size standards established in other sections of the KZC.
 - f. Multiple-stemmed trees may be permitted as an option to single-stemmed trees for required landscaping provided that such multiple-stemmed trees are at least 10 feet in height and that they are approved by the Planning Official prior to installation.

6. Plant Location. Newly-planted ~~supplemental~~ ~~replacement~~ trees should generally be planted at least 3 feet away from property lines. Planting large trees under/within proximity to overhead utilities shall be avoided. Newly-planted ~~replacements~~ ~~supplemental~~ trees may be checked for the approved locations as a final inspection procedure on development sites. ~~Replacement~~ ~~Supplemental~~ trees must be planted in a manner that allows the tree species to mature to its full height and width. Trees shall be located with the appropriate spacing from buildings and other trees, soil volume should not be restricted for the mature size of the tree and soil should be amended in accordance with the storm water

code. Trees shall be installed so that the root flare is at or slightly above the finished ground elevation in order to promote a healthy root structure and identify any girdling roots at the time of planting.

7. Fertilization. All fertilizer applications to turf or trees and shrubs shall follow Washington State University, National Arborist Association or other accepted agronomic or horticultural standards. Fertilizer may include soil drenches to increase fungal biota and chemical root growth stimulators.
8. Irrigation. The intent of this standard is to ensure that plants will survive the critical establishment period when they are most vulnerable due to lack of watering. All required plantings must provide an irrigation system, using either Option 1, 2, or 3 or a combination of those options. Selected irrigation option shall be specified on the Landscape or Tree Plan. For each option irrigation shall be designed to conserve water by using the best practical management techniques available. These techniques may include, but not be limited to: drip irrigation to minimize evaporation loss, moisture sensors to prevent irrigation during rainy periods, automatic controllers to ensure proper duration of watering, sprinkler head selection and spacing designed to minimize overspray, and separate zones for turf and shrubs and for full sun exposure and shady areas to meet watering needs of different sections of the landscape.

Exceptions, as approved by the Planning Official, to the irrigation requirement may be approved xeriscape (i.e., low water usage plantings), plantings approved for low impact development techniques, established indigenous plant material, or landscapes where natural appearance is acceptable or desirable to the City. However, those exceptions will require temporary irrigation (Option 2 and/or 3) until established.

 - a. Option 1. A permanent built-in irrigation system with an automatic controller designed and certified by a licensed landscape architect as part of the landscape plan.
 - b. Option 2. An irrigation system designed and certified by a licensed landscape architect as part of the landscape plan, which provides sufficient water to ensure that the plants will become established. The system does not have to be permanent if the plants chosen can survive adequately on their own, once established.
 - c. Option 3. Irrigation by hand, which includes the use of water bags. If the applicant chooses this option, an inspection will be required one (1) year after final inspection to ensure that the landscaping has become established.
9. Drainage. All landscapes shall have adequate drainage, either through natural percolation or through an installed drainage system. A percolation rate of one-half (1/2) inch of water per hour is acceptable.
10. Mulch.
 - a. Required plantings, except turf or areas of established ground cover, shall be covered with two (2) inches or more of organic mulch to minimize evaporation and runoff. Mulch shall consist of materials such as yard waste, sawdust, and/or manure that are fully composted.
 - b. All mulches used in planter beds shall be kept at least six (6) inches away from the trunks of shrubs and trees.
11. Protection. All required landscaped areas, particularly trees and shrubs, must be protected from potential damage by adjacent uses and development, including parking and storage areas. Protective devices such as bollards, wheel stops, trunk guards, root guards, etc., may be required in some situations.
12. Final Inspection. During final inspection, if these requirements are not met, the project will not be signed off.

95.51 Tree and Landscape Maintenance Requirements

The following maintenance requirements apply to all trees, including street trees, and other vegetation required to be planted or preserved by the City:

1. Responsibility for Regular Maintenance. Required trees and vegetation, fences, walls, and other landscape elements shall be considered as elements of the project in the same manner as parking, building materials, and other site details. The applicant, landowner, or successors in interest shall be responsible for the regular maintenance of required landscaping elements. It is also the responsibility of the property owner to maintain street trees abutting their property pursuant to KZC 95.21.
2. Maintenance Duration. Maintenance shall be ensured in the following manner except as set forth in subsections (3), (4) and (5) of this section:
 - a. Commercial, Industrial and Multifamily Development. All required landscaping shall be maintained throughout the life of the development. Plants that die must be replaced in kind..
 - b. Single Family Residential Development. Any existing tree or other existing vegetation designated for preservation in a tree retention plan shall be maintained for a period of five (5) years following issuance of the certificate of

occupancy for the individual lot or development. After five (5) years, all trees on the property are subject to KZC 95.23 unless:

- 1) The tree and associated vegetation are in a grove that is protected pursuant to subsection (3) of this section; or
 - 2) The tree or vegetation is considered to be a public benefit related to approval of a Planned Unit Development; or
 - 3) The tree or vegetation was retained to partially or fully meet requirements of KZC 95.40 through 95.45, Required Landscaping and Zoning.
3. Maintenance of Preserved Grove. Any applicant who has a grove of trees identified for preservation on an approved Tree Retention Plan pursuant to KZC 95.30(2) shall provide prior to occupancy the legal instrument acceptable to the City to ensure preservation of the grove and associated vegetation in perpetuity, except that the agreement may be extinguished if the Planning Official determines that preservation is no longer appropriate.
4. Maintenance in Holmes Point Overlay Zone. Vegetation in designated Protected Natural Areas in the Holmes Point Overlay Zone is to be protected in perpetuity pursuant to KZC 70.15(8)(a). Significant trees in the remainder of the lot shall be protected in perpetuity pursuant to KZC 70.15(8)(b).
5. Nonnative Invasive and Noxious Plants. It is the responsibility of the property owner to remove nonnative invasive plants and noxious plants per the City's Prohibited Plant List, King County and Washington Weed Agencies from the vicinity of any tree or other vegetation that the City has required to be planted or protected. Removal must be performed in a manner that is not injurious to required trees and vegetation.
6. Landscape Plans and Utility Plans. Landscape plans and utility plans shall be coordinated. In general, the placement of trees and large shrubs should adjust to the location of required utility routes both above and below ground. Location of plants shall be based on the plant's mature size both above and below ground. See the Kirkland Plant List for additional standards.

95.52 Prohibited Vegetation

Plants listed in the Kirkland Prohibited Plant List shall not be planted in the City or required to be retained.

For landscaping not required under this chapter, this prohibition shall become effective on February 14, 2008. The City may require removal of prohibited vegetation if installed after this date. Residents and property owners are encouraged to remove pre-existing prohibited vegetation whenever practicable.

95.55 Enforcement and Penalties

Upon determination that there has been a violation of any provision of this chapter, the City may pursue code enforcement and penalties in accordance with the provisions of Chapter 1.12.100 KMC, Special Provisions Relating to Enforcement of Tree Regulations in Chapter 95 KZC. ~~non~~Notwithstanding the provisions of Chapter 1.12.100 KMC, Tree ~~T~~Iopping shall result in the following penalties:

1. Required Trees. Trees that were required to be planted or retained by this chapter that are less than six (6) inches DBH that have been ~~damaged by Topping~~topped must be replaced pursuant to the standards in Chapter 1.12 KMC.

2. Restoration. For ~~topped~~ trees greater than six (6) inches DBH that have been damaged by Topping, property owners must have a Qualified Professional develop and implement a restoration pruning plan.

95.57 City Forestry Account

1. Funding Sources. All civil penalties received under this chapter and all money received pursuant to KZC 95.34.6 shall be used for the purposes set forth in this section. In addition, the following sources may be used for the purposes set forth in this section:

- a. Agreed upon restoration payments imposed under KZC 95.55 or settlements in lieu of penalties;
- ~~*b.~~ Agreed upon payment in lieu of planting ~~required-replacement~~ trees under KZC 95.34.6;

- ~~bc.~~ Sale of trees or wood from City property where the proceeds from such sale have not been dedicated to another purpose;
- ~~ed.~~ Donations and grants for tree purposes;
- ~~de.~~ Sale of seedlings by the City; and
- ~~ef.~~ Other monies allocated by the City Council.

2. Funding Purposes. The City shall use money received pursuant to this section for the following purposes:
 - a. Acquiring, maintaining, and preserving wooded areas within the City;
 - b. Planting and maintaining trees within the City;
 - c. Establishment of a holding public tree nursery;
 - d. Urban forestry education;
 - e. Implementation of a tree canopy monitoring program; or
 - f. Other purposes relating to trees as determined by the City Council.



 [Print Article](#)

Tree Topping Increases Safety Risks and Expense Say Tree Care Experts

TCIA Cites A300 Standards as Resource for Proper Pruning Techniques

New York, Mar 21, 2008

“Topping,” “hat-racking” and “de-horning” – all names for a non-standard pruning procedure that severely cuts back large trees to a predetermined size – has long been considered an easy and inexpensive way to manage the size and improve the safety of mature trees. Researchers, however, are cautioning that topping can increase safety risks and result in greater expense for the consumer . . . not greater savings.

A recent statement issued by the [Tree Care Industry Association](#) (TCIA), a professional resource on trees and arboriculture, identifies that topping trees:

- leaves large exposed wounds that can become infested;
- ruins tree structure;
- removes too much foliage, disrupting the tree’s energy storage;
- stimulates vigorous new growth, which is prone to breakage;
- increases tree maintenance costs; and,
- destroys a tree’s appearance and value.

Many trees die as a result of the damage caused by this drastic pruning technique; others eventually become unsafe due to dangerous limb breakage or whole tree failure that occurs years after the cuts were done. The risks arise because topping removes too much foliage, upsetting the delicate foliage-to-root ratio each tree tries to naturally maintain. The entire tree can fall due to root dieback.

Topping also means that large cuts are made at locations where a tree has no natural defense against the wood-eating insects and decay organisms that can quickly destroy it. Limbs weakened by decay may be unable to handle the weight of rapid re-growth, leaving new branches susceptible to breakage and falling. Published research has proven that topped trees grow more over a five-year period than do trees that were pruned correctly.

“Millions of trees have been hacked with little or no consideration to their health and structural integrity,” says Bob Rouse, TCIA’s director of accreditation. “Trees that survive topping may eventually become a bigger safety hazard than they were prior to the cutbacks.”

TCIA’s recommendations against tree topping, along with guidelines for more acceptable pruning practices, are noted in the [A300 series](#) of American National Standards for tree care operations (see specific reference in [ANSI/A300 – Part 1: 2001](#), section 5.5.7). The standards were developed by TCIA, administrator of the A300 committee, and approved by the [American National Standards Institute](#) (ANSI).

“Tree care professionals that follow industry standards will refuse to top your tree,” said Rouse. “Topping is a form of consumer fraud. Customers need to specify that corrective pruning be carried out in accordance with the appropriate ANSI A300 standards.”

Attachment 2

Rouse suggests that consumers ask tree care services to define exactly what work they plan to do on a written proposal, thus avoiding any misunderstanding or surprises. The service provider can be requested to state on its proposal that all pruning will be done according to specifications contained in the ANSI A300 standards.

TCIA provides a free, online database of professional tree care service providers on its [website](#). The resource contains contact information for the more than 2,000 TCIA members and accredited tree care companies that recognize stringent safety and performance standards, including the ANSI/A300 pruning standards. Additional tree care information is available at www.treecaretips.org.

[Close This Window](#)

KIRKLAND ZONING CODE CHAPTER 95 – TREE MANAGEMENT AND REQUIRED LANDSCAPING

Sections:

- 95.05 Purpose and Intent
- 95.10 Definitions
- 95.20 Tree Removal Permit Exemptions
- 95.21 Public Tree Removal and Pruning
- 95.23 Tree Pruning and Removal on Private Property in the Absence of Development Activity
- 95.30 Tree Retention Associated with Development Activity
- 95.32 Tree and Soil Protection during Development Activity
- 95.34 Tree Planting Requirements Related to Development Activity
- 95.40 Required Landscaping Based on Zoning District
- 95.42 Land Use Buffer Requirements
- 95.43 Outdoor Use, Activity, and Storage
- 95.44 Internal Parking Lot Landscaping Requirements
- 95.45 Perimeter Landscape Buffering for Driving and Parking Areas
- 95.46 Modifications to Required Landscaping and Buffer Standards
- 95.47 Nonconforming Landscaping and Buffers
- 95.50 Installation Standards for Required Plantings
- 95.51 Tree and Landscape Maintenance Requirements
- 95.52 Prohibited Vegetation
- 95.55 Enforcement and Penalties
- 95.57 City Forestry Account

95.05 Purpose and Intent

1. Trees and other vegetation are important elements of the physical environment. They are integral to Kirkland's community character and protect public health, safety and general welfare. Protecting, enhancing, and maintaining healthy trees and vegetation are key community values. Comprehensive Plan Policy NE-3.1 describes working towards achieving a healthy, resilient urban forest with a City-wide tree canopy coverage of 40 percent. The many benefits of healthy trees and vegetation contribute to Kirkland's quality of life by:
 - a. Minimizing the adverse impacts of land disturbing activities and impervious surfaces such as runoff, soil erosion, land instability, sedimentation and pollution of waterways, thus reducing the public and private costs for storm water control/treatment and utility maintenance;
 - b. Improving the air quality by absorbing air pollutants, mitigating the urban heat island effect, assimilating carbon dioxide and generating oxygen, and decreasing the impacts of climate change;
 - c. Reducing the effects of excessive noise pollution;
 - d. Providing cost-effective protection from severe weather conditions with cooling effects in the summer months and insulating effects in winter;
 - e. Providing visual relief and screening buffers;
 - f. Providing recreational benefits;
 - g. Providing habitat, cover, food supply and corridors for a diversity of fish and wildlife; and
 - h. Providing economic benefit by enhancing local property values and contributing to the region's natural beauty, aesthetic character, and livability of the community.
2. Tree and vegetation removal in urban areas has resulted in the loss to the public of these beneficial functions. The purpose of this chapter is to establish a process and standards to provide for the protection, preservation, replacement, proper maintenance, and use of significant trees, associated vegetation, and woodlands located in the City of Kirkland.

The intent of this chapter is to:

 - a. Maintain and enhance canopy coverage provided by trees for their functions as identified in KZC 95.05(1);
 - b. Preserve and enhance the City of Kirkland's environmental, economic, and community character with mature landscapes;

- c. Promote site planning, building, and development practices that work to avoid removal or destruction of trees and vegetation, that avoid unnecessary disturbance to the City's natural vegetation, and that provide landscaping to buffer the effects of built and paved areas;
- d. Mitigate the consequences of required tree removal in land development through on- and off-site tree replacement with the goals of halting net loss and enhancing Kirkland's tree canopy to achieve an overall healthy tree canopy cover of 40 percent City-wide over time;
- e. Encourage tree retention efforts by providing flexibility with respect to certain other development requirements;
- f. Implement the goals and objectives of the City's Comprehensive Plan;
- g. Implement the goals and objectives of the State Environmental Policy Act (SEPA); and
- h. Manage trees and other vegetation in a manner consistent with the City's Urban Forest Strategic Management Plan; industry standards; and best management practices established by the International Society of Arboriculture (ISA) and the American National Standards Institute (ANSI) for Management of Trees During Site Planning, Development and Construction, Pruning, and Tree Risk Assessment.
- i. Preserve and protect street trees, trees in public parks and trees on other City property.

95.10 Definitions

The following definitions shall apply throughout this chapter unless the context clearly indicates otherwise. Definitions that apply throughout this code are also located in Chapter 5 KZC.

1. Caliper – The industry standard for trunk measurement of nursery stock, applicable to required replacement trees. Caliper shall be measured six (6) inches above the ground.
 2. Critical Root Zone (CRZ) –The area encircling the trunk of a tree equal to one (1) foot radius for every inch of DBH. Example: a 24-inch DBH tree has a 24-foot radius CRZ measured from the face of the trunk.
 3. Crown – The area of a tree containing leaf- or needle-bearing branches.
 4. Diameter at Breast Height (DBH) – The diameter or thickness of a tree trunk measured at 4.5 feet above average grade. For trees with multiple leaders at 4.5 feet height, the DBH shall be the combined cumulative total of branches greater than six (6) inches diameter at 4.5 feet above average grade. If a tree has been removed and only the stump remains that is below 4.5 feet tall, the size of the tree shall be the diameter of the top of the stump.
 5. Dripline – The distance from the tree trunk, that is equal to the furthest extent of the tree's Crown.
 7. Inner Critical Root Zone – an area half the distance of the CRZ that, when Impacted, may compromise the structural integrity of the applicable tree. Example: a 24-inch DBH tree has a 12-foot radius Inner Critical Root Zone measured from the face of the trunk.
 8. Impact – A condition or activity that adversely affects any part of a tree, including, but not limited to, the trunk, branches, or CRZ.
 9. Qualified Professional – An individual with relevant education and training in arboriculture or urban forestry, having two (2) or more of the following credentials:
 - International Society of Arboriculture (ISA) Certified Arborist;
 - Tree Risk Assessor Qualification (TRAQ) as established by the ISA (or equivalent);
 - American Society of Consulting Arborists (ASCA) registered Consulting Arborist;
 - Society of American Foresters (SAF) Certified Forester for Forest Management Plans;
 - Board Certified Master Arborist as established by the ISA.
- For tree retention associated with a development permit, a Qualified Professional must have, in addition to the above credentials, a minimum of three (3) years' experience working directly with the protection of trees during construction and have experience with the likelihood of tree survival after construction. A Qualified Professional must also be able to prescribe appropriate measures for the preservation of trees during land development.
10. Prohibited Plant List –The Planning and Building Department shall make available a list of trees, which may include other vegetation, that are invasive, noxious, or inappropriate species for replacement trees or for retention.

11. **Significantly Wooded Site** – A subject property that has trees with Crowns that, when outlined in aerial imagery, cover at least 40 percent of the total area of the property.
12. **Site Disturbance** – Any development, construction, or related operation that could alter the subject property, including, but not limited to, soil compaction; tree or tree stump removal; road, driveway, or building construction; installation of utilities; or grading.
13. **Topping** – Indiscriminate cuts made between branches that leave a stub, used to reduce the height or crown size of an established tree. Topping is not an acceptable practice pursuant to best management practices in the ANSI A300 Pruning Standards.
14. **Tree Protection Zone (TPZ)** – The outer boundary of a tree’s protected area, as determined by a Qualified Professional, intended to protect individual trees, groups of trees’ trunks, roots and soil from construction-related impacts. TPZ is measured in feet from the face of the trunk and may be determined using Critical Root Zone, Dripline, exploratory root excavations or other methodologies. The TPZ is variable depending on species, age and health of the tree, soil conditions and proposed construction. TPZ denotes the location of tree protection fencing.
15. **Tree Removal** – The removal of a tree, through either direct or indirect actions, including but not limited to: (1) clearing, damaging, girdling, or poisoning, in each case, resulting in an unhealthy or dead tree; (2) Topping that results in removal of more than 25% of the live Crown; or (3) damage to roots or trunk that is likely to destroy the tree’s structural integrity.
16. **Trees** – A tree or a group of trees may fall under one of the following definitions for purposes of this chapter:
- a. **Grove** – A group of three (3) or more Regulated Trees with overlapping or touching Crowns, one of which is a minimum 30-inch DBH tree in excellent or good condition per KZC.95.30.3, or a group of five (5) or more Regulated Trees, one of which is a minimum 24-inch DBH tree in excellent or good condition per KZC.95.30.3; provided, that Groves will not be deemed Hedge Trees.
 - b. **Hazard Trees** – A tree assessed by a Qualified Professional as having an imminent or high risk rating using the ISA Tree Risk Assessment Qualification (TRAQ) method in its most current form, as applied in KZC 95.23.10.
 - c. **Hedge Trees** – Five (5) or more trees of the same species with overlapping or touching Crowns that have been planted by a current or former owner of a subject property in a linear formation, typically to function as a screen or barrier. A Hedge will not be deemed a Grove.
 - d. **Landmark Tree** – a Regulated Tree with a minimum 30-inch DBH in excellent or good condition per KZC.95.30.3.
 - e. **Nuisance Tree** – A tree that meets either of the following criteria:
 - 1) Is causing obvious physical damage to private or public structures, including, but not limited to: a sidewalk, curb, road, driveway, parking lot, building foundation, or roof; or
 - 2) Has sustained damage from past maintenance practices.

The problems associated with a Nuisance Tree must be such that they cannot be corrected by reasonable practices, including, but not limited to: pruning of the Crown or roots of the tree, bracing, or cabling to reconstruct a healthy Crown.
 - f. **Public Tree** – A tree located in parks, within maintained or unmaintained public rights-of-way, in a stormwater facility, or on other property owned by the City.
 - g. **Regulated Tree** – A tree that is at least six (6) inches DBH that is not listed on the Prohibited Plant List.
 - h. **Street Tree** – A Public Tree located within the public right-of-way; provided, that, if the trunk of the tree straddles the boundary line of the public right-of-way and the abutting property, it shall be considered to be on the abutting property and subject to the provisions of this chapter.
 - i. **Tier 1 Tree(s)** – Landmark Trees and Groves.
 - j. **Tier 2 Tree** – A Regulated Tree with any portion of the trunk located in a Required Yard or a required landscaping area in excellent or good condition per KZC 95.30.3, subsection (c).
17. **Wildlife Snag** – The remaining trunk of a tree that is intentionally reduced in height and usually stripped of its live branches.

18. Windfirm – A condition of a tree in which it withstands average peak local wind speeds and gusts.

95.20 Tree Removal Permit Exemptions

The following activities are exempt from the provisions of this chapter:

1. **Emergency Tree Removal.** Any tree that poses an imminent threat to life or property may be removed. The City must be notified within seven (7) days after the emergency tree removal with evidence of the threat for removing the tree to be considered exempt from this chapter. If the Planning Official determines that the emergency tree removal was not warranted or if the removed tree was required to be retained or planted pursuant to a development permit, then the removal will be subject to code enforcement, including fines and restoration. The Planning Official may require that the party obtain a tree removal permit.
2. **Utility Maintenance.** Trees may be removed by the City or utility provider in situations involving interruption of services provided by a utility only if pruning cannot solve utility service problems. Utility maintenance shall conform to a City-approved Utility Vegetation Management Plan.
3. **Commercial Nurseries or Tree Farms.** A nursery or tree farm owner may remove trees that are being grown to be sold as Christmas or landscape trees.

95.21 Public Tree Removal and Pruning

1. **Public Tree Removal.** Other than City crews, no person, directly or indirectly, shall remove any Public Tree (including any Tree Removal as defined in KZC 95.10.15) without first obtaining a tree removal permit as provided in this chapter, unless the activity is exempt per KZC 95.20. The City will not authorize removal of any Public Tree by any private party unless the tree is determined to be a Hazard Tree or Nuisance Tree.
2. **Public Tree Pruning.** The pruning of Public Trees, including Street Trees, shall conform to the following:
 - a. Other than City crews, no person, directly or indirectly, shall prune, trim, modify, alter, or damage any Public Tree without first obtaining a Public Tree pruning permit as provided in this chapter, unless the activity is exempt per KZC 95.20 or falls within one of the exceptions set forth in subsection (b) below related to Street Trees.
 - b. It is the responsibility of the adjacent property owner to maintain Street Trees abutting their property, which may include minor pruning of up to one-inch diameter branches for sidewalk clearance, watering, and mulching. A Public Tree pruning permit is required to trim, modify, alter, or substantially prune branches of a Street Tree more than one-inch in diameter. The City reserves the right to have City or utility crews perform routine pruning and maintenance of Street Trees.
 - c. The pruning of Public Trees, including Street Trees, shall conform to the most recent version of the American National Standards Institute (ANSI) A300 Pruning Standards or as outlined in a City-approved Utility Vegetation Management Plan.

95.23 Tree Pruning and Removal on Private Property in the Absence of Development Activity

Tree and vegetation removal in urban areas has resulted in the loss of beneficial functions provided by trees to the public. The majority of tree canopy within the City of Kirkland is on private property. The purpose of this section is to establish a process and standards to slow the loss of tree canopy on private property resulting from tree removal, contributing towards the City's canopy goals and a more sustainable urban forest.

1. **Tree Removal on Private Property.** No person, directly or indirectly, shall remove any Regulated Tree (including any Tree Removal as defined in KZC95.10.15) from private property without first obtaining a tree removal permit as provided in this chapter, unless the activity is exempt per KZC 95.20 or is subject to the tree removal allowances set forth in KZC 95.23.5.
2. **Tree Pruning on Private Property.** Any private property owner may prune trees on their property without a permit, subject to the following:
 - a. Any pruning of Landmark Trees or Groves preserved pursuant to KZC 95.51.3 by private property owners shall conform to the most recent version of the ANSI A300 Pruning Standards.
 - b. Private property owners shall not prune trees located in wetlands, streams, or their buffers.

3. Tree Removal Notification Form. The Planning and Building Department shall make available a tree removal notification form. The tree removal notification form may be used by property owners to request review by the Planning and Building Department for compliance with applicable City regulations.
4. Tree Removal Permit Application Form. The applicable City department shall make available a tree removal permit application form. Property owners required by this chapter to obtain a tree removal permit shall submit a completed permit application for City review for compliance with applicable City regulations. The tree removal permit application form shall require, at a minimum, submittal of the following:
 - a. A site plan showing the approximate location of all Regulated Trees on the subject property, their DBH, and their species, along with the location of structures, driveways, access ways, and easements on the subject property.
 - b. For required replacement trees, a planting plan showing the location, size, and species of each replacement tree to be planted on the subject property, in accordance with the tree replacement requirements set forth in KZC 95.23.8.
5. Tree Removal Allowances. Any private property owner of developed property may remove a specified number of Regulated Trees from their property based on the table below within a 12-month period without having to apply for a tree removal permit; provided, that:
 - a. The trees are not located in wetlands, streams, or their buffers; are not located on properties in the Holmes Point Overlay area; are not located within the City's shoreline jurisdiction; are not a Landmark Tree; and do not consist of a preserved Grove pursuant to KZC 95.51.3. Trees within shoreline jurisdiction are subject to additional tree removal and replacement standards if the tree(s) to be removed are located within the required shoreline setback. See Chapter 83 KZC for additional standards;
 - b. There is no active application for development activity for the subject property;
 - c. The trees were not required to be retained or planted as a condition of previous development activity per KZC 95.40, 95.42-45;
 - d. All the additional standards for tree replacement described in KZC 95.23.8 are met.

Table x

Lot Size	Maximum number of allowed Regulated Tree removal every 12 months with notification
Lots up to 10,000 sq. ft.	2
Lots 10,000 to 20,000 sq. ft.	4
Lots 20,000 sq. ft. or greater	6
Lots greater than 35,000 sq. ft	May remove more than 6 trees with a Forest Management Plan

6. Tree Removal Permit. A Tree Removal Permit is required if a property owner is requesting to exceed the allowances in subsection (5) of this section, or to remove Hazard Trees or Nuisance Trees pursuant to subsection 10 of this section.
7. Tree Removal on Private Property Prior to Development Permits. The City will not accept any application for a short plat or subdivision for a property with a pending tree removal permit or tree removal notification. Further, with the exception of approved removals of Hazard Trees or Nuisance Trees per KZC 95.23.9, for a period of 12 months following the most recent removal of a Regulated Tree on a subject property (including girdling), the City will not accept any application for a short plat or subdivision for the subject property.
8. Tree Removal Permit Decision and Appeals.
 - a. The City shall review each tree removal permit application within 21 calendar days and either approve, approve with conditions or modifications, deny, or request additional information. Any decision to deny the application shall be in writing along with the reasons for the denial and the appeal process.
 - b. The decision of the Planning Official is appealable using the applicable appeal provisions of Chapter 145 KZC.

- c. Time Limit. Tree removal by felling shall be completed within one (1) year from the date of permit approval or the permit is void.

9. Tree Replacement Requirements.

- a. Tree Replacement. For every Regulated Tree that is removed, the City encourages the planting of a replacement tree that is appropriate to the site.
- b. Public Trees. For every Public Tree that is removed, the City shall require a minimum one-for-one replacement in a suitable location.
- c. Holmes Point Overlay Zone. The removal of any tree in the Holmes Point Overlay Zone requires the planting of a native tree of a minimum of six (6) feet in height in close proximity to where the removed tree was located. Selection of native species and timing of installation shall be approved by the Planning Official.
- d. Hedge Trees. For the approved removal of Hedge Trees, the City shall require a one-for-one replacement in a suitable location.
- e. The Last Regulated Trees on Certain Lots. For the removal of one (1) or both of the last two (2) Regulated Trees on lots containing single-family homes, cottages, carriage units, or two/three-unit homes under 10,000 square feet, approval of a tree removal permit is required and the City is authorized to require the planting of replacement trees, on a one-for-one basis, that are appropriate to the subject property and in locations on the subject property that are suitable. For the removal of one (1) or more of the last four (4) Regulated Trees on any lots under 20,000 square feet but at least 10,000 square feet, approval of a tree removal permit is required and the City is authorized to require the planting of replacement trees, on a one-for-one basis, that are appropriate to the subject property and in locations on the subject property that are suitable. For the removal of (1) or more of the last six (6) Regulated Trees on any lots 20,000 square feet or greater, approval of a tree removal permit is required and the City is authorized to require the planting of replacement trees, on a one-for-one basis, that are appropriate to the subject property and in locations on the subject property that are suitable. The replacement trees required by this subsection shall be at least six (6) feet tall for conifers and at least 2-inch Caliper for deciduous or broad-leaf evergreen trees.
- f. Other Circumstances. For all other circumstances, the required tree replacement will be based on the required landscaping standards in KZC 95.40 through 95.50.

10. Removal of Hazard Trees or Nuisance Trees. Any private property owner seeking to remove any number of Regulated Trees that are Hazard Trees or Nuisance Trees from their developed or undeveloped property shall first obtain approval of a tree removal permit and meet the requirements of this subsection. Removal of a Hazard Tree or Nuisance Tree by the applicable property owner does not count toward the allowed number of tree removals set forth in KZC 95.23.5, if the conditions giving rise to the nuisance or hazard are evident in a photograph or, in the case of a Hazard Tree, the conditions giving rise to the hazard are supported by a Tree Risk Assessment prepared by a Qualified Professional in accordance with KZC 95.23.10 and approved by the City. The City may order diseased trees removed from private property as Hazard Trees to prevent the spread of a disease/pest that would cause catastrophic decline in tree health and failure.

11. Tree Risk Assessments for Hazard Trees.

- a. If the conditions giving rise to a hazard are not evident in a photograph, a Tree Risk Assessment report prepared by a Qualified Professional explaining how the tree, or trees, meet the definition of a Hazard Tree is required. Tree Risk Assessments shall follow the method for developing a tree risk rating set forth in the ISA Tree Risk Assessment Manual.
- b. The method for developing a tree risk rating set forth in the ISA Tree Risk Assessment Manual involves assessing levels of tree risk as a combination of the likelihood of a tree failing and impacting a specified target and the severity of the associated consequences should the tree or any part of the tree fail. Potential targets are permanent structures or an area of moderate to high use. Where a potential target does not exist, applicants should consider routine pruning and maintenance.
- c. Where a tree is found to have a high risk or extreme risk rating, the Planning Official may approve mitigation measures to reduce the risk rather than approving the removal of the entire tree.
- d. Where a tree is found to have a high risk or extreme risk rating and mitigation of the risk through pruning or moving of potential targets is not feasible, the Planning Official shall approve the removal of the tree as a Hazard Tree.

12. Trees in Wetlands, Streams, or their Buffers. See Chapters 85 and 90 KZC.

- a. Hazard Trees or Nuisance Trees in wetlands, streams, or their buffers shall be removed in a manner that creates a Wildlife Snag;
- b. If creation of a Wildlife Snag is not feasible, then the felled tree shall be left in place unless the Planning Official approves tree removal in writing; and
- c. The removal of any tree in a wetland, stream, or their buffers shall be replaced with one (1) to three (3) native tree species at a minimum height of six (6) feet depending on the size, quality, and species of removed tree. The Planning Official shall determine the location and required number of replacement trees.
- d. No trees shall be removed from a wetland, stream, or their buffers unless determine to be Nuisance Trees or Hazard Trees. Any tree removal shall be authorized in advance through a tree removal permit unless emergency tree removal is warranted per KZC 95.20.1.

13. Forest Management Plan.

- a. Traditional forest management may require selective tree removal to meet objectives for sustainable growth, composition, health, and quality. A Forest Management Plan may be submitted for developed, Significantly Wooded Sites of at least 35,000 square feet in size where tree removal exceeds the allowances of KZC 95.23.5 and is not exempt under KZC 95.20. A Forest Management Plan must be developed by a Qualified Professional and shall include the following:
 - i. A site plan depicting the location of all Regulated Trees (a survey identifying tree locations is not required) with a numbering system of the trees (with corresponding tags on trees in the field). The site plan shall include the DBH, species, and condition of each tree;
 - ii. Identification of trees proposed to be removed, including reasons for their removal and a description of low impact removal techniques pursuant to subsection (12)(b) of this section.
 - iii. A reforestation plan that includes location, size, species, and timing of installation;
- b. The following Forest Management Plan standards shall apply:
 - i. Trees to remain should be dominant or co-dominant in the stand, healthy and Windfirm.
 - ii. No removal of trees from wetlands, streams, or their buffers, unless otherwise permitted by this chapter.
 - iii. No removal of Landmark Trees or Groves, unless otherwise permitted by this chapter.
 - iv. No removal of trees that would cause trees on adjacent properties to become hazardous.
 - v. The reforestation plan ensures perpetuity of the wooded areas. The size of planted trees for reforestation shall be a minimum of three (3) feet tall.
 - vi. Logging operations shall be conducted so as to expose the smallest practical area of soil to erosion for the least possible time. To control erosion, native shrubs, ground cover, and stumps shall be retained where feasible. Where not feasible, appropriate erosion control measures to be approved by the City shall be implemented.
 - vii. Removal of tree debris shall be done pursuant to Kirkland Fire Department standards.
 - viii. Recommended maintenance prescription for retained trees with a specific timeline.
- c. The Planning Official may require a performance security pursuant to KZC 175 in order to ensure that the reforestation requirements of the approved Forest Management Plan are met.

95.30 Tree Retention Associated with Development Activity

The City's objective is to mitigate the impacts of incremental canopy loss due to development by establishing clear standards for the retention of existing trees and standards for planting and maintenance of new trees.

Applicants for a development permit are encouraged to confer with City staff as early in the design process as possible so that the tree planting and retention principles found in this chapter can be incorporated into the design of the subject property. The Planning Official and the applicant shall work in good faith to find reasonable solutions.

1. **Tree Retention Plan General Requirements.** An applicant for a development permit must submit a Tree Retention Plan that complies with this section. A Qualified Professional may be required to prepare certain submittal elements at the applicant's expense. If proposed development activities call for more than one Tree Retention Plan element, the Planning Official may require the more stringent of, or a combination of, the elements based on the nature of the proposed development activities. If the proposed activity is not clearly identified in this chapter, the Planning Official shall determine the appropriate Tree Retention Plan requirements.

2. **Tree Retention Plan Applicability.** Unless otherwise exempt pursuant to KZC 95.20 or subject to the exception in subsection (a) of this section, any proposed development of the subject property requiring approval through a building permit; land surface modification permit; demolition permit; and/or Design Review, Process I, IIA, or IIB, described in Chapters 142, 145, 150 and 152 KZC, respectively, shall include a Tree Retention Plan. Tree Retention Plans containing reports of one or more Qualified Professionals in which the field work was completed over 3 years ago may need to be updated with current data.

- a. **Exception.** A Tree Retention Plan is not required for additions to and remodels of existing improvements in which the total square footage of the proposed improvements is less than 50 percent of the total square footage of the existing improvements on the subject property and no development activity is proposed within the CRZ of Tier 1 Trees or Tier 2 Trees.
- b. **Additional tree retention and protection regulations apply to:**
 - 1) Properties within jurisdiction of the Shoreline Management Act as set forth in Chapter 83 KZC;
 - 2) Properties with Critical Areas or Critical Area Buffers as set forth in Chapters 85 and 90 KZC; and
 - 3) Properties within the Holmes Point Overlay Zone as set forth in Chapter 70 KZC.

3. **Tree Retention Plan Submittal Requirements.** Tree Retention Plans shall contain the following information unless waived by the Planning Official:

- a. **Inventory.** The inventory may be noted on the site plan or in the report of a Qualified Professional, listing the following:
 - 1) All existing Regulated Trees on the subject property identified by a consistent numbering system in the report of a Qualified Professional or site plan and onsite tree tags or flagging. The inventory must also include Regulated Trees that are on adjacent properties that appear to have CRZs extending onto the subject property;
 - 2) The CRZ and the proposed TPZ of all existing Regulated Trees specified in feet from the face of each tree trunk. The inventory must also include the approximate CRZ and proposed TPZ of Regulated Trees that appear to have CRZs extending onto the subject property;
 - 3) Existing Regulated Tree DBH;
 - 4) Proposed tree removals;
 - 5) Condition rating of Regulated Trees (i.e., poor, fair, good, excellent, etc.) per KZC 95.30.3, subsection (c); and
 - 6) Tree species and/or common name.
- b. **Site plan.** The site plan must be drawn to scale showing the following:
 - 1) Location of all proposed improvements, including building footprint, access, utilities, applicable Required Yards, buffers, and required landscaped areas clearly identified.
 - 2) Surveyed location of Regulated Trees on the subject property. The site plan must also show the approximate trunk location of Regulated Trees that are potentially Impacted on adjacent properties;
 - 3) Trees labeled corresponding to the tree inventory numbering system per subsection (a) of this section;
 - 4) CRZs drawn to scale around all trees potentially impacted by site disturbances resulting from grading, demolition, or construction activities (including approximate CRZs of all trees that are potentially Impacted on adjacent properties);
 - 5) Location of tree protection fences at the proposed TPZs, with distances from the applicable trunks to fences noted on the site plan. Specific tree protection standards during construction are described in KZC

95.32. These standards must be adhered to and included on demolition, grading, and building permit plans;

6) Trees proposed to be removed, noted by an 'X' or by ghosting out;

7) Proposed locations of any replacement trees to be planted to meet tree density credits or the minimum number of trees as outlined in KZC 95.34.

c. Report of a Qualified Professional with the following:

1) The condition rating for each Regulated Tree based on its health and structure, including Regulated Trees that appear to have CRZs extending onto the subject property. The condition rating for each Regulated Tree shall be assessed using the following criteria:

Condition Rating	Tree Structure <i>Root flare, trunk condition, branch assembly</i>	Tree Health <i>Twig and leaf density, size and growth, pest/pathogen issues</i>
Excellent	Trunk and root flare are sound and solid, no visible defects or cavities. Generally symmetric crown. Branch spacing, structure and attachments are normal for species and free of defects.	High vigor with little to no twig dieback, discoloration or defoliation. No apparent pest problems. New growth has normal to exceeding shoot length. Leaf size and color normal. Exceptional life expectancy for the species.
Good	Well-developed structure. Defects are minor and can be corrected. Codominant stem formation may be present. Trees that are part of a designated grove may have major asymmetries/deviations form an open-grown form of the same species.	Vigor is normal for species. No significant damage due to diseases or pests. Any twig dieback, defoliation or discoloration is minor (less than 25% of the crown). Typical life expectancy for the species. Trees that are part of a designated grove may have reduced vigor compared to an open-grown form of the same species.
Fair	A single defect of a significant nature such as a trunk cavity or multiple moderate defects such as large girdling roots, trunk damage, evidence of decay that are not practical to correct or would require multiple treatments over several years.	New growth is stunted or absent. Twig dieback, defoliation, discoloration, and/or dead branches may compromise from 25-50% of the crown. Damage due to insects or diseases may be significant and associated with defoliation but is not likely to be fatal. Below average life expectancy.
Poor	High to imminent risk trees (hazard). Structural problems cannot be corrected. Failure may occur at any time.	Poor vigor, unhealthy and declining. Low foliage density with extensive (more than 50%) twig and/or branch dieback. Smaller-than-normal leaf size and little evidence of new growth. Potentially fatal pest infestation.

2) For trees not suitable for retention, a description of the reason(s) for removal must be given based on poor health; high risk of failure due to poor structure, other defects, or unavoidable isolation (windfirmness); or unsuitability of species, etc., and for which no reasonable alternative action is possible (pruning, cabling, etc.);

3) The Qualified Professional's description of the method(s) used to determine the TPZs (i.e., CRZ formula,, exploratory root excavations, or a case-by-case basis description for individual trees);

4) Any special instructions specifically outlining any work proposed within the CRZ of retained trees (i.e., additional protection from soil compaction, hand-digging, tunneling or boring, root pruning, mitigating any grade changes, monitoring during development activity, and aftercare), including potentially Impacted trees on adjacent properties;

5) A discussion of timing and installation of tree protection measures that must include fencing in accordance with the tree protection standards in KZC 95.32, including any anticipated changes to tree protection fence location or other activity within the CRZ of retained trees during project construction (i.e. material delivery, equipment access, landscaping, etc.);

6) Describe the impact of necessary tree removal to the trees to be retained, including those in a Grove or on adjacent properties;

7) The suggested location and species of replacement trees to be planted. The report shall include planting and maintenance specifications pursuant to KZC 95.50, 95.51, and 95.52.

4. Tree Retention Plan Review Standards for Development of Single-Family Dwellings, Short Plats, Subdivisions, and Two/Three-Unit Homes.

To retain Regulated Trees, the applicant shall modify its proposed design, consistent with the provisions in this chapter that allow development standards to be modified. The authority to make decisions under this chapter resides with the Planning Official for building permits, land surface modification permits, and/or demolition permits or with the applicable decision authority for Design Review, Process I, IIA, or IIB permits described in Chapters 142, 145, 150 and 152 KZC, respectively.

The City does not require tree retention efforts that would reduce maximum allowed density or number of lots or maximum allowed Floor Area Ratio (FAR) or Maximum Lot Coverage or that preclude required access and utility connections.

Tree Retention Plan review and approval shall be based on compliance with the following provisions:

- a. Tier 1 Trees located anywhere on the subject property shall be retained using the following standards:
 - 1) The applicant is entitled to a maximum building footprint, where consistent with applicable dimensional standards, in a configuration of 40-foot wide by 40-foot deep building footprint, in combination with a contiguous 20-foot wide by 20-foot deep building footprint that may shift location around Tier 1 Trees. An applicant is not required to limit the building footprint pursuant to this section where the limitation is not necessary to retain one or more Tier 1 Tree(s).
 - 2) In order to retain Tier 1 trees, the applicant shall pursue, and the Planning Official is authorized to require, site plan alterations, such as adjustments to the location of building footprints, adjustments to the location of driveways and other access ways, or adjustment to the location of walkways, easements, or utilities, including the following:
 - a) Shift or flip (mirror) the location of building footprints and driveways;
 - b) Selection of the required front yard on corner lots in the RSA and RSX zones and selection of the required side yard to meet the 15-foot total required in RS zones;
 - c) Adjust deck, patio, and path designs;
 - d) Relocate utilities when gravity and location of existing mains permit;
 - e) Avoid rockery/retaining walls located within CRZs;
 - f) Shore basements and other extensive excavations in order to avoid impact within CRZs;
 - g) Cantilever structures over CRZs; and
 - h) With short plats and subdivisions, clustering per KZC 95.30.7, subsection (b), rearrangement of property lines within the applicable short plat or subdivision, relocation of access roads, and relocation of utilities.
 - 3) The applicant shall employ arboricultural methods such as air excavations, boring under roots instead of trenching, and using additional CRZ protection per KZC 95.34.
 - 4) The applicant may pursue the following variations prior to restricting/adjusting the building footprint, and the Planning Official (or Public Works Official, where applicable) is authorized to allow these variations to development standards:
 - a) Allow 10-foot front and 5-foot rear Required Yards;
 - b) Allow variations to the garage requirements of KZC 115.43.3;
 - c) Allow variations to the maximum lot coverage by not more than 10 percent, where necessary, and the driveway width does not exceed a width of 20 feet to extend access due to building footprint location;
 - d) Allow 18-foot by 18-foot parking pads;
 - e) Modify right-of-way frontage improvement requirements, such as waiving any required landscape strip.;
 - f) Allow up to a 5-foot increase in building height where the additional height is clearly related to tree retention (i.e., locating mechanical equipment in the attic, avoiding excavation or fill, etc.);
 - g) With short plats and subdivisions, allow 3-foot required side yards within the proposed short plat or subdivision.

b. Tier 2 Trees shall be retained using the following standards:

1) The applicant is entitled to a maximum building footprint of the following configuration, where consistent with applicable dimensional standards:

- a) 50-foot wide by 50-foot deep building footprint, or
- b) For parcels where an applicant could otherwise construct a Front Façade that is wider than the 50-foot wide building footprint, the allowable width of the Front Façade shall be determined by measuring the distance between the Required Yards parallel to and along the Front Façade and reducing that width by 10% as provided in the formula below:

$$\text{MAXIMUM FRONT FAÇADE WIDTH} = (\text{DISTANCE BETWEEN REQUIRED YARDS}) - (\text{DISTANCE BETWEEN REQUIRED YARDS} \times 10\%)$$

For example: a 70-foot wide lot with a 60-foot wide front building facade and two 5-foot side Required Yards results in a 10 percent, or 6-foot reduction, to the building pad width, which totals a 54-foot maximum building envelope width.

An applicant is not required to limit the building footprint pursuant to this section where the limitation is not necessary to retain one or more Tier 2 Tree(s).

2) In order to retain Tier 2 trees, the applicant shall pursue and the Planning Official is authorized to require site plan alterations, including the following:

- a) Shift or flip (mirror) the location of building footprints and driveways;
- b) Selection of the required front yard on corner lots in the RSA and RSX zones and selection of the required side yard to meet the 15-foot total required in RS zones;
- c) Reduce required front yard by up to 5 feet and reduce any rear yards that are not directly adjacent to another parcel's rear yard but that, instead, are adjacent to an access easement or tract by up to 5 feet;
- d) Shift the building footprint on the lot to take advantage of the modifications/reductions allowed in subsection (4);
- e) Adjust deck, patio, and path designs;
- f) Avoid rockery/retaining walls located within CRZs; and
- g) Bore under roots within TPZs for utilities less than 2 inches diameter.

3) The applicant may pursue the following variations prior to restricting/adjusting the building footprint, and the Planning Official (or Public Works Official, where applicable) is authorized to allow these variations to development standards:

- a) Allow 10-foot front and 5-foot rear Required Yards;
- b) Allow variations to the garage requirements of KZC 115.43.3;
- c) Allow variations to the maximum lot coverage by not more than 10 percent, where necessary, and the driveway width does not exceed a width of 20 feet to extend access due to building footprint location;
- d) Modify right of way frontage improvement requirements, such as waiving any required landscape strip;
- e) With short plats and subdivisions, clustering per KZC 95.30.7, subsection (b).

5. Tree Retention Plan Review Standards for Development of Multifamily, Commercial, Mixed Use, and Cottage/Carriage Development.

To retain Regulated Trees in Required Yards and/or required landscape areas, the applicant shall modify its proposed design, consistent with the provisions in this chapter that allow development standards to be modified. The authority to make decisions under this chapter resides with the Planning Official for building permits, land surface modification permits, and/or demolition permits or with the applicable decision authority for Design Review, Process I, IIA or IIB permits described in Chapters 142, 145, 150 and 152 KZC, respectively.

The City does not require tree retention efforts that would reduce maximum allowed density or Lot Coverage or that preclude required access and utility connections.

Tree Retention Plan review and approval shall be based on compliance with the following provisions for Regulated Trees located in Required Yards and/or required landscape areas. Regulated Trees in these areas shall be retained to the maximum extent possible using the following standards:

- a. Adjust deck, patio, and path designs;
 - b. Relocate utilities when gravity and location of existing mains permit;
 - c. Avoid rockery/retaining walls located within CRZs;
 - d. Shore basements and other extensive excavations in order to avoid impact within CRZs;
 - e. Cantilever structures over CRZs;
 - f. Employ arboricultural methods such as air excavations, boring under roots instead of trenching, and using additional CRZ protection per KZC 95.34;
 - g. Modify right-of-way frontage improvement requirements, such as waiving any required landscape strip;
 - h. Reduce or vary the area, width, or composition of any required common recreational open space;
 - i. Vary parking lot design and/or access driveway requirements when the Public Works Official and Planning Official both determine the variations to be consistent with the intent of City policies and codes; and
 - j. Vary requirements pertaining to stormwater if approved by the Public Works Official under KMC 15.52.060.
6. Tier 1 Tree and Tier 2 Tree Retention Priorities. The City may authorize the removal of Tier 1 Trees and Tier 2 Trees otherwise required by this chapter to be retained if:
- a. After utilizing the required site plan alterations and allowed variations to development standards listed in KZC 95.30.4 and 95.30.5, encroachment into the CRZ of one or more Tier 1 Tree or Tier 2 Tree would result in either of the following:
 - 1) One or more Tier 1 Trees or Tier 2 Trees that are unsuitable for retention per the condition ratings in KZC 95.30.3, subsection (c), in which case the City may authorize the removal of the applicable Tier 1 Trees or Tier 2 Trees; or
 - 2) Conditions in which the retention of a Tier 2 Tree compromises a Tier 1 Tree's suitability for retention, in which case the City may authorize the removal of the applicable Tier 2 Tree.
 - b. Proposed alternative measures using sustainable site development strategies and qualifying sustainability certifications result in development sites that are equal or superior to the intent of this chapter, such as:
 - 1) Low Impact Development (LID) standards within the Public Works Pre-Approved Plans and Policies and King County Stormwater Manual;
 - 2) International Living Futures Institute (ILFI) Living Building Challenge;
 - 3) Leadership in Energy and Environmental Design (LEED);
 - 4) Built Green Net Zero;
 - 5) Salmon Safe, ILFI Net Zero or Passive House programs; and
 - 6) The installation of renewable energy system hardware, such as solar panels or wind turbines.

Requests to use alternative measures and procedures shall be reviewed by the Planning Official, who may approve, approve with conditions or modifications, or deny the request. The Planning Official and the applicant shall work in good faith to find reasonable solutions.

7. Additional Tree Retention Plan Standards for Short Plats and Subdivisions.

- a. Modifications. Modifications to the Tree Retention Plan may be approved by the Planning Director pursuant to the following criteria:
 - 1) The need for the modification was not known and could not reasonably have been known before the Tree Retention Plan was approved;
 - 2) The modification is necessary because of special circumstances that are not the result of actions by the applicant regarding the size, shape, topography, or other physical limitations of the subject property relative to the location of proposed and/or existing improvements on or adjacent to the subject property; and

- 3) There is no practicable or feasible alternative development proposal that results in fewer additional tree removals.
- b. Public Notice for Modifications. The Planning Director shall not approve or deny a modification pursuant to this subsection without first providing notice of the modification request consistent with the noticing requirements for the short plat or subdivision and providing opportunity for comments for consideration by the Planning Director. Said comment period shall not be less than 14 calendar days. The fee for processing a modification request shall be established by City ordinance.
- c. Clustering of Lots Associated with Short Plats and Subdivisions. The Planning Director may approve variations to minimum Lot Size and maximum Floor Area Ratio and Lot Coverage requirements in order to facilitate retention of Tier 1 Trees and Tier 2 Trees where necessitated by retention of trees in protective tracts or where lot sizes are averaged in order to retain trees. The following standards shall apply:
- 1) Lot sizes may be averaged with no minimum lot size specified, provided there is no increase in the allowed density or number of lots otherwise allowed for the subject property;
 - 2) The maximum Floor Area Ratio (FAR) and/or Lot Coverage requirements may be adjusted proportionate to the Lot Size reduction(s), provided there is no net increase in the aggregate Floor Area Ratio (FAR) and/or aggregate Lot Coverage otherwise allowed for the subject property. The variations and resultant restrictions shall be included in a recorded agreement and binding on future owners of the lots.

95.32 Tree and Soil Protection during Development Activity

Prior to development activity or initiating tree removal on the site, vegetated areas, individual trees and soil to be preserved shall be protected from potentially damaging activities during development activity per ISA and ANSI standards for tree protection as follows:

1. Tree Cutting in Advance of Issuance of Land Development Permit. There shall be no tree removal, land surface modifications, or clearing of other vegetation on any site for the sake of preparing that site for future development.
2. Placing Materials near Trees. No person may conduct any activity within the TPZ of any tree designated to remain, including, but not limited to, operating or parking equipment, placing solvents, storing building material or stockpiling any materials, or dumping concrete washout or other chemicals. During construction, no person shall attach any object to any tree designated for protection.
3. Tree Protection Fence. Before development, land clearing, filling, or any land surface modifications, the applicant shall:
 - a. Erect and maintain readily visible temporary protective tree fencing at the approved Limits of Disturbance which completely surrounds the protected area of all retained trees, groups of trees, vegetation and native soil. Fences shall be constructed of chain link and be at least six (6) feet high, unless other type of fencing is authorized by the Planning Official.
 - b. Install highly visible signs spaced no further than 15 feet along the entirety of the Tree Protection Fence. Said sign must be approved by the Planning Official and shall state at a minimum "Tree and Soil Protection Area, Entrance Prohibited" and provide the City phone number for code enforcement to report violations.
 - c. Site plans showing approved tree retention/protection shall be displayed on development sites in plain view with the general contractor or other responsible party's phone number.
 - d. Prohibit excavation or compaction of soil or other potentially damaging activities within the fence; provided, that the Planning Official may allow such activities approved by a qualified professional and under the supervision of a qualified professional retained and paid for by the applicant.
 - e. If any disturbance is proposed within the Inner Critical Root Zone of one or more Regulated Trees on a neighboring property, the applicant shall provide evidence that the owner of said tree(s) has been notified in writing of the potential impact. The Planning Official may waive this requirement if the applicant's Qualified Professional can demonstrate, through non-injurious methods such as pneumatic root excavations, that there are no roots within the Inner Critical Root Zone.
 - f. Maintain the Tree Protection Fence in its approved location for the duration of the project until the Planning Official authorizes its removal.

- g. Ensure that any approved landscaping done in the protected zone subsequent to the removal of the barriers shall be accomplished with machinery from outside the protected zone or by hand.
- h. In addition to the above, the Planning Official may require the following:
 - 1) If equipment is authorized to operate within the CRZ, the soil and CRZ of a tree must be covered with mulch to a depth of at least six (6) inches or with plywood, steel plates or similar material in order to protect roots and soil from damage caused by heavy equipment.
 - 2) Minimize root damage by hand-excavating a 2-foot-deep trench, at the edge of the CRZ, to cleanly sever the roots of trees to be retained. Never rip or shred roots with heavy equipment.
 - 3) Corrective pruning performed on protected trees in order to avoid damage from machinery or building activity.
 - 4) Maintenance of trees throughout construction period by watering and fertilizing.

4. Grade.

- a. The grade shall not be elevated or reduced within the CRZ of trees to be preserved without the Planning Official's authorization based on recommendations from a qualified professional. The Planning Official may allow coverage of up to one-half (1/2) of the area of the tree's CRZ with light soils (no clay) to the minimum depth necessary to carry out grading or landscaping plans, if it will not imperil the survival of the tree. Aeration devices may be required to ensure the tree's survival.
- b. If the grade adjacent to a preserved tree is raised such that it could slough or erode into the tree's CRZ, it shall be permanently stabilized to prevent soil erosion and suffocation of the roots.
- c. The applicant shall not install an impervious surface within the CRZ of any tree to be retained without the authorization of the Planning Official. The Planning Official may require specific construction methods and/or use of aeration devices to ensure the tree's survival and to minimize the potential for root-induced damage to the impervious surface.
- d. To the greatest extent practical, utility trenches shall be located outside of the CRZ of trees to be retained. The Planning Official may require that utilities be tunneled under the roots of trees to be retained if the Planning Official determines that trenching would significantly reduce the chances of the tree's survival.
- e. Trees and other vegetation to be retained shall be protected from erosion and sedimentation. Clearing operations shall be conducted so as to expose the smallest practical area of soil to erosion for the least possible time. To control erosion, it is encouraged that shrubs, ground cover and stumps be maintained on the individual lots, where feasible.

5. Directional Felling. Directional felling of trees shall be used to avoid damage to trees designated for retention.

6. Additional Requirements. The Planning Official may require additional tree protection measures that are consistent with accepted urban forestry industry practices, including maintenance pursuant to KZC 95.51.

95.34 Tree Planting Requirements Related to Development Activity

This section establishes the minimum tree planting requirements for development permits using a tree credit system. This section does not establish a maximum retention standard for existing trees.

1. Trees Required to be Planted to Meet Tree Density Requirements. The required tree density for replanting is 30 tree credits per acre for single-family homes, cottages, carriage units, two/three-unit homes, short plats, and/or subdivisions and associated demolition and land surface modification.
2. Applicability of Tree Credits. The tree credit value that corresponds with DBH shall be found in Table 95.34. The maximum number of credits awarded to any one individual tree is 11 credits. Existing native conifers (or other conifer species as approved by the Planning Official shall count 1.5 times credits for retention. For individual lots in a short plat or subdivision with an approved Tree Retention Plan, the required tree density applies to each lot within the short plat or subdivision. Trees planted in the following locations shall not count towards tree density credit requirements:

- a. in the public right of way, areas to be dedicated as public right of way, and vehicular access easements not included as lot area with the approved short plat or subdivision.
- b. Existing trees transplanted to an area on the same site unless approved by the Planning Official based on transplant specifications provided by a Qualified Professional that will ensure a good probability for survival

**Table 95.34.
Tree Density for Existing Significant Trees
(Credits per minimum diameter – DBH)**

DBH	Tree Credits	DBH	Tree Credits	DBH	Tree Credits
3 – 5"	0.5				
6 – 10"	1	24"	8		
12"	2	26"	9		
14"	3	28"	10		
16"	4	30"	11		
18"	5				
20"	6				
22"	7				

3. **Tree Density Credit Calculation.** To calculate required tree density credits, divide the square foot area of the subject lot by 43,560 (the square foot equivalent to one acre). The resulting number is then multiplied by 30, the minimum tree density credit requirement for one acre. In calculating required tree density credits, any fraction of credits shall be rounded up to the next whole number from a 0.5 or greater value.

Example: an 8,500-square-foot lot would need six (6) tree credits ($8,500/43,560 = 0.195 \times 30 = 5.8$, or six (6) credits). The tree density for the lot would be exceeded/met by retaining two (2) existing Landmark Trees and two (2) existing 12-inch DBH Tier 2 Trees that are conifers (tree densities may be exceeded to retain Landmark Trees and existing native conifers count 1.5 times credits). Or, the tree density for the lot would be met by retaining two (2) existing 14-inch DBH deciduous Tier 2 Trees.

4. **Minimum Size for Replacement Trees.** The required minimum size of a replacement tree worth one (1) tree credit shall be four (4) feet tall for native or other conifers and 2-inch Caliper for deciduous or broad-leaf evergreen trees. Additional credits may be awarded for larger replacement trees. Trees planted to form a clipped or sheared hedge or living wall will not be counted toward tree density credits. Supplemental Thuja/Arborvitae or other slow-growing conifers planted on development sites shall not count towards tree density credits on a lot. The installation and maintenance shall be pursuant to KZC 95.50 and 95.51 respectively.

5. **Replacement Tree Locations.** In designing a development and in meeting the required tree density, the replacement trees shall be planted pursuant to KZC 95.50 in the following order of priority:

- a. On-Site. The preferred locations for new trees are:
 - 1) On individual residential building lots
 - 2) In preserved Groves, Critical Areas or Critical Area Buffers.
 - 3) Adjacent to storm water facilities as approved by Public Works under KMC 15.52.060.
 - 4) Site perimeter – The area of the subject property that is within 10 feet from the property line.

- 5) Entrance landscaping, traffic islands, and other common areas within the development of residential subdivisions.
 - b. Off-Site. When room is unavailable for planting the required replacement trees on site, then they may be planted at another approved location in the City. Trees that are planted off site from the subject property may be required to be preserved in perpetuity.
6. Payment in Lieu of Planting. When the Planning Official determines on-site and off-site locations are unavailable, then the applicant shall pay an amount of money in lieu of planting, utilizing the most recent version of the Pacific Northwest International Society of Arboriculture (PNW ISA) "Species Ratings for Landscape Tree Appraisal" unit costs for conifers and deciduous trees, multiplied by the number of required tree credits into the City Forestry Account pursuant to KZC 95.57.

95.40 Required Landscaping based on Zoning District

1. User Guide. Chapters 15 through 56 KZC containing the use zone or development standards tables assign a landscaping category to each use in each zone. This category is either "A," "B," "C," "D," or "E." If you do not know which landscaping category applies to the subject property, you should consult the appropriate use zone or development standards tables.

Requirements pertaining to each landscaping category are located throughout this chapter, except that Landscaping Category E is not subject to this section.

Landscape Categories A, B, C, D, and E may be subject to additional related requirements in the following other chapters:

- a. Various use zone charts or development standards tables, in Chapters 15 through 56 KZC, establish additional or special buffering requirements for some uses in some zones.
 - d. Chapter 110 KZC and Chapter 19.36 KMC address vegetation within rights-of-way, except for the I-405 and SR-520 rights-of-way, and the Cross Kirkland Corridor railbanked rail corridor or the Eastside Rail Corridor.
 - e. KZC 115.135, Sight Distance at Intersections, which may limit the placement of landscaping in some areas.
 - f. Chapter 22 KMC addresses trees in subdivisions.
2. Use of Significant Existing Vegetation.
 - a. General. The applicant shall apply subsection KZC 95.30, Tree Retention Plan Procedure to retain existing native trees, vegetation and soil in areas subject to the landscaping standards of this section. The Planning Official shall give substantial weight to the retained native trees and vegetation when determining the applicant's compliance with this section.
 - b. Replacements. The City may require the applicant to plant trees, shrubs, and groundcover according to the requirements of this section to supplement the existing vegetation in order to provide a buffer at least as effective as the required buffer.
 - c. Protection Techniques. The applicant shall use the protection techniques described in KZC 95.32 to ensure the protection of significant existing vegetation and soil.
 3. General. The applicant shall provide the replacement landscaping specified in subsection (2) of this section in any area of the subject property that:
 - a. Is not covered with a building, vehicle circulation area or other improvement; and
 - b. Is not in an area to be planted with required landscaping; and
 - c. Is not committed to and being used for some specific purpose.
 4. Standards. The applicant shall provide the following at a minimum:
 - a. Living plant material which will cover 80 percent of the area to be landscaped within two (2) years. If the material to be used does not spread over time, the applicant shall re-plant the entire area involved immediately. Any area that will not be covered with living plant material must be covered with nonliving groundcover, i.e.: mulch. Preference is given to using native plant species. See Kirkland Native Tree/Plant Lists.
 - b. One (1) tree for each 1,000 square feet of area to be landscaped. At the time of planting, deciduous trees must be at least two (2) inches in caliper and coniferous trees must be at least five (5) feet in height.

- c. If a development requires approval through Process I, IIA or IIB as described in Chapters 145, 150 and 152 KZC, respectively, the City may require additional vegetation to be planted along a building facade if:
 - 1) The building facade is more than 25 feet high or more than 50 feet long; or
 - 2) Additional landscaping is necessary to provide a visual break in the facade.
- d. In RHBD varieties of rose shrubs or ground cover along with other plant materials shall be included in the on-site landscaping.
- e. If development is subject to Design Review as described in Chapter 142 KZC, the City will review plant choice and specific plant location as part of the Design Review approval. The City may also require or permit modification to the required plant size as part of Design Review approval.

5. Landscape Plan Required. In addition to the Tree Retention Plan required pursuant to KZC 95.30, application materials shall clearly depict the quantity, location, species, and size of plant materials proposed to comply with the requirements of this section and shall address the plant installation and maintenance requirements set forth in KZC 95.50 and 95.51. Plant materials shall be identified with both their scientific and common names. Any required irrigation system must also be shown.

95.42 Land Use Buffer Requirements

The applicant shall comply with the provisions specified in the following chart and with all other applicable provisions of this chapter. Land use buffer requirements may apply to the subject property, depending on what permitted use exists on the adjoining property or, if no permitted use exists, depending on the zone that the adjoining property is in.

LANDSCAPING CATEGORY	ADJOINING PROPERTY	*Public park or low density residential use or if no permitted use exists on the adjoining property then a low density zone.	Medium or high density residential use or if no permitted use exists on the adjoining property then a medium density or high density zone.	Institutional or office use or if no permitted use exists on the adjoining property then an institutional or office zone.	A commercial use or an industrial use or if no permitted use exists on the adjoining property then a commercial or industrial zone.
A		Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (2) (Buffering Standard 2)	
B		Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)		
C		Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (2) (Buffering Standard 2)		
D		Must comply with subsection (2) (Buffering Standard 2)			
E					
Footnotes:		*If the adjoining property is zoned Central Business District, Juanita Business District, North Rose Hill Business District, Rose Hill Business District, Finn Hill Neighborhood Center, Houghton/Everest Neighborhood Center, Business District Core or is located in TL 5, this section KZC 95.42 does not apply.			

This chart establishes which buffering standard applies in a particular case. The following subsections establish the specific requirement for each standard:

- 1. For standard 1, the applicant shall provide a 15-foot-wide landscaped strip with a 6-foot-high solid screening fence or wall. Except for public utilities, the fence or wall must be placed on the outside edge of the land use buffer or on the property line when adjacent to private property. For public utilities, the fence or wall may be placed either on the outside or inside edge of the landscaping strip. A fence or wall is not required when the land use buffer is adjacent and parallel to a

public right-of-way that is improved for vehicular use. See KZC 115.40 for additional fence standards. The land use buffer must be planted as follows:

- a. Trees planted at the rate of one (1) tree per 20 linear feet of land use buffer, with deciduous trees of two and one-half (2-1/2) inch caliper, minimum, and/or coniferous trees eight (8) feet in height, minimum. At least 70 percent of trees shall be evergreen. The trees shall be distributed evenly throughout the buffer, spaced no more than 20 feet apart on center.
 - b. Large shrubs or a mix of shrubs planted to attain coverage of at least 60 percent of the land use buffer area within two (2) years, planted at the following sizes and spacing, depending on type:
 - 1) Low shrub – (mature size under three (3) feet tall), 1- or 2-gallon pot or balled and burlapped equivalent;
 - 2) Medium shrub – (mature size from three (3) to six (6) feet tall), 2- or 3-gallon pot or balled and burlapped equivalent;
 - 3) Large shrub – (mature size over six (6) feet tall), 5-gallon pot or balled and burlapped equivalent.
 - c. Living ground covers planted from either 4-inch pot with 12-inch spacing or 1-gallon pot with 18-inch spacing to cover within two (2) years 60 percent of the land use buffer not needed for viability of the shrubs or trees.
2. For standard 2, the applicant shall provide a 5-foot-wide landscaped strip with a 6-foot-high solid screening fence or wall. Except for public utilities, the fence or wall must be placed on the outside edge of the land use buffer or on the property line when adjacent to private property. For public utilities, the fence or wall may be placed either on the outside or inside edge of the landscaping strip. A fence or wall is not required when the land use buffer is adjacent and parallel to a public right-of-way that is improved for vehicular use. See KZC 115.40 for additional fence standards. The landscaped strip must be planted as follows:
- a. One (1) row of trees planted no more than 10 feet apart on center along the entire length of the buffer, with deciduous trees of 2-inch caliper, minimum, and/or coniferous trees at least six (6) feet in height, minimum. The spacing may be increased to 15 feet to accommodate larger species and avoid long-term crowding. At least 50 percent of the required trees shall be evergreen.
 - b. Living ground covers planted from either 4-inch pot with 12-inch spacing or 1-gallon pot with 18-inch spacing to cover within two (2) years 60 percent of the land use buffer not needed for viability of the trees.
3. Plant Standards. All plant materials used shall meet the most recent American Association of Nurserymen Standards for nursery stock: ANSI Z60.1.
4. Location of the Land Use Buffer. The applicant shall provide the required buffer along the entire common border between the subject property and the adjoining property.
5. Multiple Buffering Requirement. If the subject property borders more than one (1) adjoining property along the same property line, the applicant shall provide a gradual transition between different land use buffers. This transition must occur totally within the area which has the less stringent buffering requirement. The specific design of the transition must be approved by the City.
6. Adjoining Property Containing Several Uses. If the adjoining property contains several permitted uses, the applicant may provide the least stringent land use buffer required for any of these uses.
7. Subject Property Containing Several Uses. If the subject property contains more than one (1) use, the applicant shall comply with the land use buffering requirement that pertains to the use within the most stringent landscaping category that abuts the property to be buffered.
8. Subject Property Containing School. If the subject property is occupied by a school, land use buffers are not required along property lines adjacent to a street.
9. Encroachment into Land Use Buffer. Typical incidental extensions of structures such as chimneys, bay windows, greenhouse windows, cornices, eaves, awnings, and canopies may be permitted in land use buffers as set forth in KZC 115.115(3)(d); provided, that:
- a. Buffer planting standards are met; and
 - b. Required plantings will be able to attain full size and form typical to their species.

95.43 Outdoor Use, Activity, and Storage

Outdoor use, activity, and storage (KZC 115.105(2)) must comply with required land use buffers for the primary use, except that the following outdoor uses and activities, when located in commercial or industrial zones, are exempt from KZC 115.105(2)(c)(1) and (2)(c)(2) as stated below:

1. That portion of an outdoor use, activity, or storage area which abuts another outdoor use, activity, or storage area which is located on property zoned for commercial or industrial use.
2. Outdoor use, activity, and storage areas which are located adjacent to a fence or structure which is a minimum of six (6) feet above finished grade, and do not extend outward from the fence or structure more than five (5) feet; provided, that the total horizontal dimensions of these areas shall not exceed 50 percent of the length of the facade or fence (see Plate 11).
3. If there is an improved path or sidewalk in front of the outdoor storage area, the outdoor use, activity or storage area may extend beyond five (5) feet if a clearly defined walking path at least three (3) feet in width is maintained and there is adequate pedestrian access to and from the primary use. The total horizontal dimension of these areas shall not exceed 50 percent of the length of the facade of the structure or fence (see Plate 11).
4. Outdoor dining areas.
5. That portion of an outdoor display of vehicles for sale or lease which is adjacent to a public right-of-way that is improved for vehicular use; provided, that it meets the buffering standards for driving and parking areas in KZC 95.45(1); and provided further, that the exemptions of KZC 95.45(2) do not apply unless it is fully enclosed within or under a building, or is on top of a building and is at least one (1) story above finished grade.
6. Outdoor Christmas tree lots and fireworks stands if these uses will not exceed 30 days, and outdoor amusement rides, carnivals and circuses, and parking lot sales which are ancillary to the indoor sale of the same goods and services, if these uses will not exceed seven (7) days.

95.44 Internal Parking Lot Landscaping Requirements

The following internal parking lot landscape standards apply to each parking lot or portion thereof containing more than eight (8) parking stalls.

1. The parking lot must contain 25 square feet of landscaped area per parking stall planted as follows:
 - a. The applicant shall arrange the required landscaping throughout the parking lot to provide landscape islands or peninsulas to separate groups of parking spaces (generally every eight (8) stalls) from one another and each row of spaces from any adjacent driveway that runs perpendicular to the row. This island or peninsula must be surrounded by a 6-inch-high vertical curb and be of similar dimensions as the adjacent parking stalls. Gaps in curbs are allowed for stormwater runoff to enter landscape island.
 - b. Landscaping shall be installed pursuant to the following standards:
 - 1) At least one (1) deciduous tree, two (2) inches in caliper, or a coniferous tree five (5) feet in height.
 - 2) Groundcover shall be selected and planted to achieve 60 percent coverage within two (2) years.
 - 3) Natural drainage landscapes (such as rain gardens, bio-infiltration swales and bioretention planters) are allowed when designed in compliance with the stormwater design manual adopted in KMC 15.52.060. Internal parking lot landscaping requirements for trees still apply. Refer to Public Works Pre-Approved Plans.
 - c. Exception. The requirements of this subsection do not apply to any area that is fully enclosed within or under a building.
2. Rooftop Parking Landscaping. For a driving or parking area on the top level of a structure that is not within the CBD zone or within any zone that requires design regulation compliance, one (1) planter that is 30 inches deep and five (5) feet square must be provided for every eight (8) stalls on the top level of the structure. Each planter must contain a small tree or large shrub suited to the size of the container and the specific site conditions, including desiccating winds, and is clustered with other planters near driving ramps or stairways to maximize visual effect.
3. If development is subject to Design Review as described in Chapter 142 KZC, the City will review the parking area design, plant choice and specific plant location as part of the Design Review approval. The City may also require or permit modification to the required landscaping and design of the parking area as part of Design Review approval.

95.45 Perimeter Landscape Buffering for Driving and Parking Areas

1. Perimeter Buffering – General. Except as specified in subsection (2) of this section, the applicant shall buffer all parking areas and driveways from abutting rights-of-way and from adjacent property with a 5-foot-wide strip along the perimeter of the parking areas and driveways planted as follows (see Figure 95.45.A):
 - a. One (1) row of trees, two (2) inches in caliper and planted 30 feet on center along the entire length of the strip.
 - b. Living groundcover planted to attain coverage of at least 60 percent of the strip area within two (2) years.
 - c. Natural drainage landscapes (such as rain gardens, bio-infiltration swales and bioretention planters) are allowed when designed in compliance with the stormwater design manual adopted in KMC 15.52.060. Perimeter landscape buffering requirements for trees in driving and parking areas still apply. Refer to Public Works Pre-Approved Plans.
2. Exception. The requirements of this section do not apply to any parking area that:
 - a. Is fully enclosed within or under a building; or
 - b. Is on top of a building and is at least one (1) story above finished grade; or
 - c. Serves detached dwelling units exclusively; or
 - d. Is within any zone that requires design regulation compliance. See below for Design District requirements.
3. Design Districts. If subject to Design Review, each side of a parking lot that abuts a street, through-block pathway or public park must be screened from that street, through-block pathway or public park by using one (1) or a combination of the following methods (see Figures 95.45.A, B, and C):
 - a. By providing a landscape strip at least five (5) feet wide planted consistent with subsection (1) of this section, or in combination with the following. In the RHBD Regional Center (see KZC Figure 92.05.A) a 10-foot perimeter landscape strip along NE 85th Street is required planted consistent with subsection (1) of this section.
 - b. The hedge or wall must extend at least two (2) feet, six (6) inches, and not more than three (3) feet above the ground directly below it.
 - c. The wall may be constructed of masonry or concrete, if consistent with the provisions of KZC 92.35(1)(g), in building material, color and detail, or of wood if the design and materials match the building on the subject property.
 - d. In JBD zones:
 - 1) If the street is a pedestrian-oriented street, the wall may also include a continuous trellis or grillwork, at least five (5) feet in height above the ground, placed on top of or in front of the wall and planted with climbing vines. The trellis or grillwork may be constructed of masonry, steel, cast iron and/or wood.
 - 2) If the wall abuts a pedestrian-oriented street, the requirements of this subsection may be fulfilled by providing pedestrian weather protection along at least 80 percent of the frontage of the subject property.
 - e. If development is subject to Design Review as described in Chapter 142 KZC, the City will review plant choice and specific plant location as part of the Design Review approval. The City may also require or permit modification to the required plant size as part of Design Review approval.
4. Overlapping Requirements. If buffering is required in KZC 95.42, Land Use Buffering Standards, and by this subsection, the applicant shall utilize the more stringent buffering requirement.

Perimeter Parking Lot Landscaping

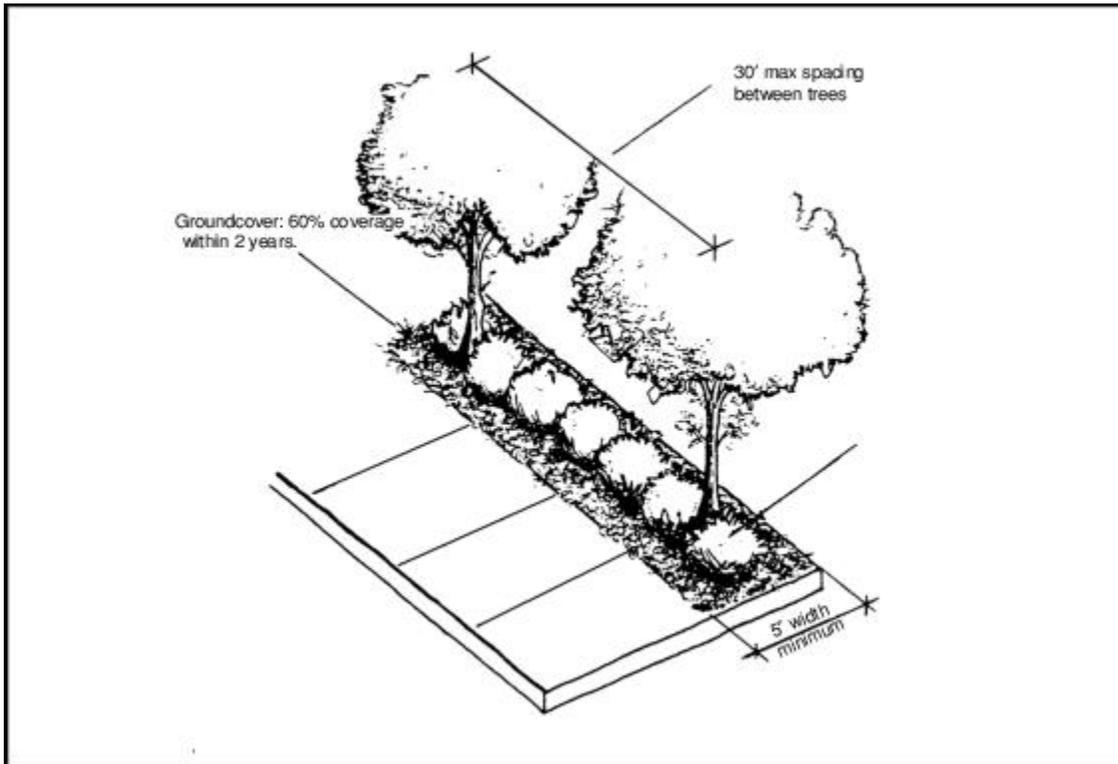


FIGURE 95.45.A

Perimeter Parking – Examples of Various Screen Wall Designs

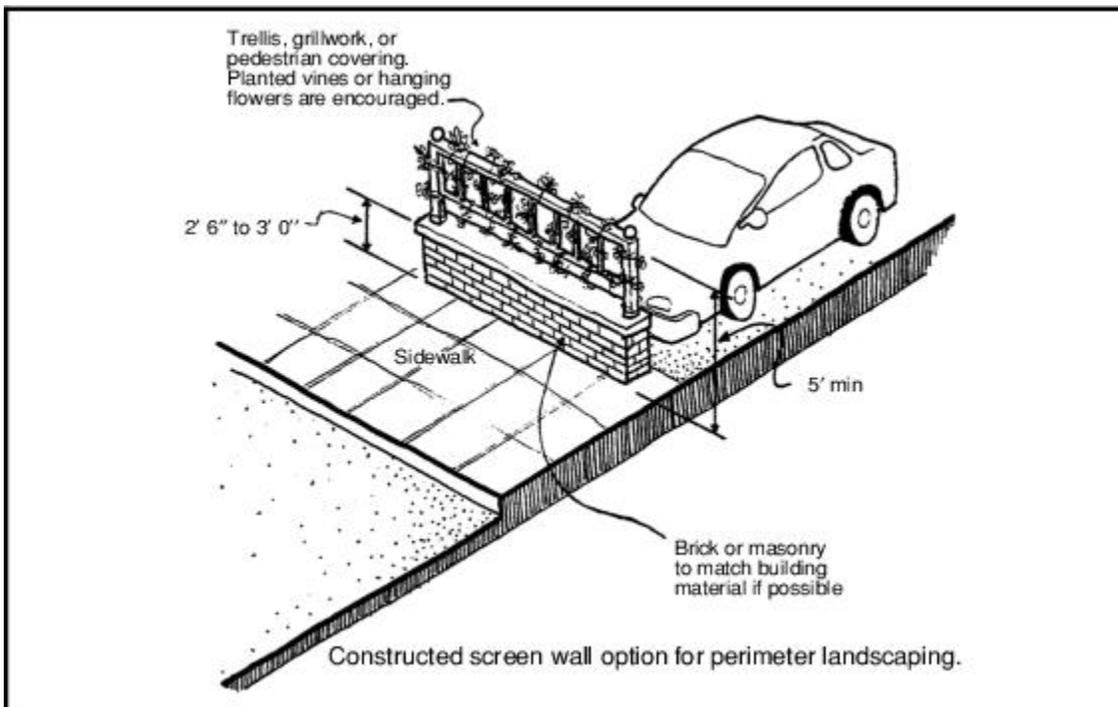


FIGURE 95.45.B

Perimeter Parking – Examples of Various Screen Wall Designs

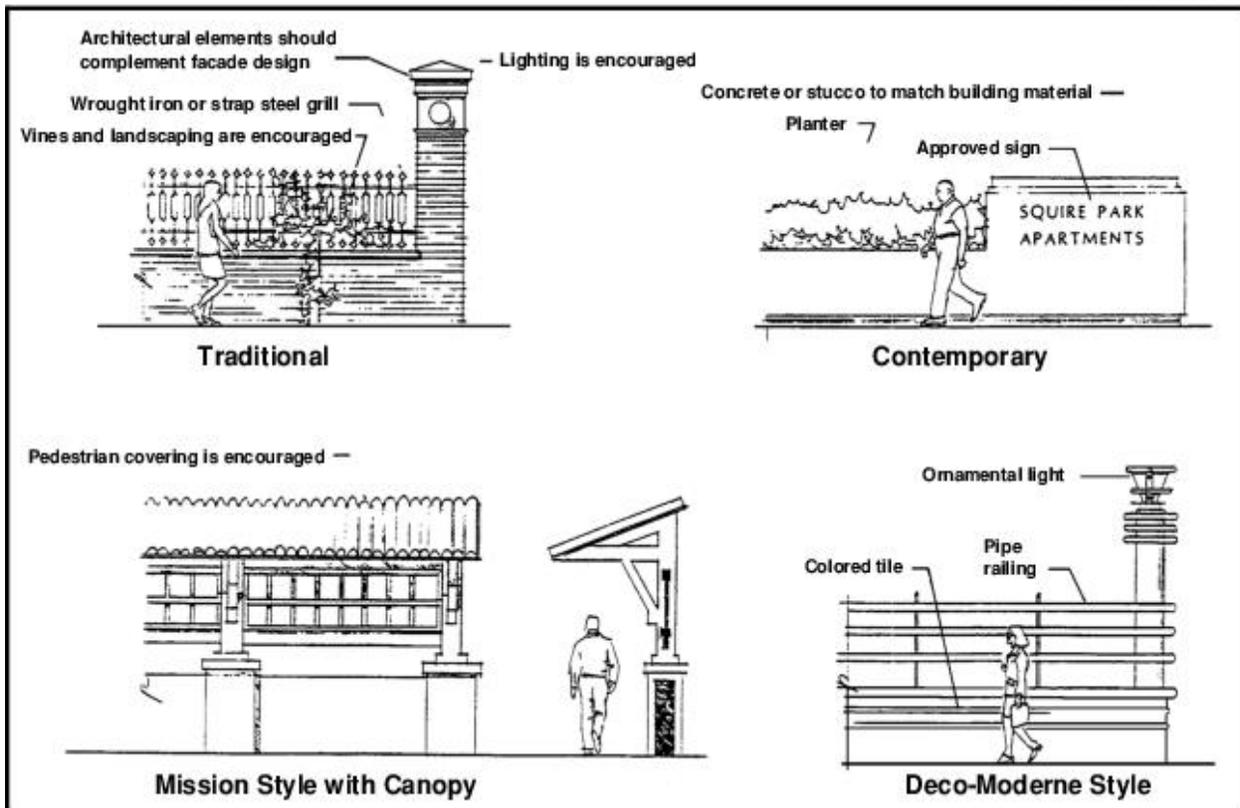


FIGURE 95.45.C

95.46 Modifications to Required Landscaping and Buffer Standards

1. Modification to Land Use Buffer Requirements. The applicant may request a modification of the requirements of the buffering standards in KZC 95.42. The Planning Official may approve a modification if:

- a. The owner of the adjoining property agrees to this in writing; and
- b. The existing topography or other characteristics of the subject property or the adjoining property, or the distance of development from the neighboring property decreases or eliminates the need for buffering; or
- c. The modification will be more beneficial to the adjoining property than the required buffer by causing less impairment of view or sunlight; or
- d. The Planning Official determines that it is reasonable to anticipate that the adjoining property will be redeveloped in the foreseeable future to a use that would require no, or a less intensive, buffer; or
- e. The location of pre-existing improvements on the adjoining site eliminates the need or benefit of the required landscape buffer.

2. Modifications to General Landscaping Requirements.

- a. Authority to Grant and Duration. If the proposed development of the subject property requires approval through Design Review or Process I, IIA, or IIB, described in Chapters 142, 145, 150, and 152 KZC, respectively, a request for a modification will be considered as part of that process under the provisions of this section. The City must find that the applicant meets the applicable criteria listed in subsections (2)(b) and (2)(c) of this section. If granted under Design Review or Process I, IIA, or IIB, the modification is binding on the City for all development permits issued for that development under the building code within five (5) years of the granting of the modification.

If the above does not apply, the Planning Official may grant a modification in writing under the provisions of this section.

- b. Internal Parking Lot Landscaping Modifications. For a modification to the internal parking lot landscaping requirements in KZC 95.44, the landscape requirements may be modified if:

- 1) The modification will produce a landscaping design in the parking area comparable or superior to that which would result from adherence to the adopted standard; or
 - 2) The modification will result in increased retention of significant existing vegetation; or
 - 3) The purpose of the modification is to accommodate low impact development techniques as approved by the Planning Official.
- c. Perimeter parking lot and driveway landscaping. For a modification to the perimeter landscaping for parking lots and driveways, the buffering requirements for parking areas and driveways may be modified if:
- 1) The existing topography of or adjacent to the subject property decreases or eliminates the need for visual screening; or
 - 2) The modification will be of more benefit to the adjoining property by causing less impairment of view or sunlight; or
 - 3) The modification will provide a visual screen that is comparable or superior to the buffer required by KZC 95.45; or
 - 4) The modification eliminates the portion of the buffer that would divide a shared parking area serving two (2) or more adjacent uses but provides the buffer around the perimeter of the shared parking area.

95.47 Nonconforming Landscaping and Buffers

1. The landscaping requirements of KZC 95.40, Required Landscaping Based on Zoning District, KZC 95.43 Outdoor Use, Activity and Storage, KZC 95.44, Internal Parking Lot Landscaping, and KZC 95.45, Perimeter Landscape Buffering for Driving and Parking Areas, must be brought into conformance as much as is feasible, based on available land area, in either of the following situations:
 - a. An increase of at least 10 percent in gross floor area of any structure; or
 - b. An alteration to any structure, the cost of which exceeds 50 percent of the replacement cost of the structure.
2. Land use buffers must be brought into conformance with KZC 95.42 in either of the following situations:
 - a. An increase in gross floor area of any structure (the requirement to provide conforming buffers applies only where new gross floor area impacts adjoining property); or
 - b. A change in use on the subject property and the new use requires larger buffers than the former use.

95.50 Installation Standards for Required Plantings

All required trees, landscaping and soil shall be installed according to sound horticultural practices in a manner designed to encourage quick establishment and healthy plant growth. All required landscaping shall be installed in the ground and not in above-ground containers, except for landscaping required on the top floor of a structure.

When an applicant proposes to locate a subterranean structure under required landscaping that appears to be at grade, the applicant will: (1) provide site-specific documentation prepared by a qualified expert to establish that the design will adequately support the mature size of specified trees and other vegetation species; and (2) enter into an agreement with the City, in a form acceptable to the City Attorney, indemnifying the City from any damage resulting from development activity on the subject property which is related to the physical condition of the property. The applicant shall record this agreement with the King County Recorder's Office.

1. Compliance. It is the applicant's responsibility to show that the proposed landscaping complies with the regulations of this chapter.
2. Timing. All landscaping shall be installed prior to the issuance of a certificate of occupancy, except that the installation of any required tree or landscaping may be deferred during the summer months to the next planting season, but never for more than six (6) months. Trees should be planted in the fall, winter or early spring, between October and April, or must be irrigated.

Deferred installation shall be secured with a performance bond pursuant to Chapter 175 KZC prior to the issuance of a certificate of occupancy.

3. Grading. Berms shall not exceed a slope of two (2) horizontal feet to one (1) vertical foot (2:1).

4. Soil Specifications. Soils in planting areas shall have soil quality equivalent to Washington State Department of Ecology BMP T5.13. The soil quality in any landscape area shall comply with the soil quality requirements of the Public Works Pre-Approved Plans. See subsection (9) of this section for mulch requirements.
5. Plant Selection.
- Plant selection shall be consistent with the appropriate Kirkland Plant Lists, which are shown on the Planning Department webpage and available in the Planning and Building Department. Species diversity is encouraged by planting species other than those listed, with Planning Official approval.
 - Plants shall be selected and sited to produce a hardy and drought-resistant landscape area. Selection shall consider soil type and depth, the amount of maintenance required, spacing, exposure to sun and wind, the slope and contours of the site, and compatibility with existing native vegetation preserved on the site. Preservation of existing vegetation is strongly encouraged.
 - Plants listed in the Kirkland Prohibited Plant List shall not be planted in any required landscape areas. Additionally, there are other plants that may not be used if identified in the Kirkland Plant List as potentially damaging to sidewalks, roads, underground utilities, drainage improvements, foundations, or when not provided with enough growing space.
 - All plants shall conform to American Association of Nurserymen (AAN) grades and standards as published in the "American Standard for Nursery Stock" manual.
 - Plants shall meet the minimum size standards established in other sections of the KZC.
 - Multiple-stemmed trees may be permitted as an option to single-stemmed trees for required landscaping provided that such multiple-stemmed trees are at least 10 feet in height and that they are approved by the Planning Official prior to installation.
6. Plant Location. Newly-planted replacement trees should generally be planted at least 3 feet away from property lines. Planting large trees under/within proximity to overhead utilities shall be avoided. Newly-planted replacement trees may be checked for the approved locations as a final inspection procedure on development sites. Replacement trees must be planted in a manner that allows the tree species to mature to its full height and width. Trees shall be located with the appropriate spacing from buildings and other trees, soil volume should not be restricted for the mature size of the tree and soil should be amended in accordance with the storm water code. Trees shall be installed so that the root flare is at or slightly above the finished ground elevation in order to promote a healthy root structure and identify any girdling roots at the time of planting.
7. Fertilization. All fertilizer applications to turf or trees and shrubs shall follow Washington State University, National Arborist Association or other accepted agronomic or horticultural standards. Fertilizer may include soil drenches to increase fungal biota and chemical root growth stimulators.
8. Irrigation. The intent of this standard is to ensure that plants will survive the critical establishment period when they are most vulnerable due to lack of watering. All required plantings must provide an irrigation system, using either Option 1, 2, or 3 or a combination of those options. Selected irrigation option shall be specified on the Landscape or Tree Plan. For each option irrigation shall be designed to conserve water by using the best practical management techniques available. These techniques may include, but not be limited to: drip irrigation to minimize evaporation loss, moisture sensors to prevent irrigation during rainy periods, automatic controllers to ensure proper duration of watering, sprinkler head selection and spacing designed to minimize overspray, and separate zones for turf and shrubs and for full sun exposure and shady areas to meet watering needs of different sections of the landscape.
- Exceptions, as approved by the Planning Official, to the irrigation requirement may be approved xeriscape (i.e., low water usage plantings), plantings approved for low impact development techniques, established indigenous plant material, or landscapes where natural appearance is acceptable or desirable to the City. However, those exceptions will require temporary irrigation (Option 2 and/or 3) until established.
- Option 1. A permanent built-in irrigation system with an automatic controller designed and certified by a licensed landscape architect as part of the landscape plan.
 - Option 2. An irrigation system designed and certified by a licensed landscape architect as part of the landscape plan, which provides sufficient water to ensure that the plants will become established. The system does not have to be permanent if the plants chosen can survive adequately on their own, once established.
 - Option 3. Irrigation by hand, which includes the use of water bags. If the applicant chooses this option, an inspection will be required one (1) year after final inspection to ensure that the landscaping has become established.

9. Drainage. All landscapes shall have adequate drainage, either through natural percolation or through an installed drainage system. A percolation rate of one-half (1/2) inch of water per hour is acceptable.

10. Mulch.

a. Required plantings, except turf or areas of established ground cover, shall be covered with two (2) inches or more of organic mulch to minimize evaporation and runoff. Mulch shall consist of materials such as yard waste, sawdust, and/or manure that are fully composted.

b. All mulches used in planter beds shall be kept at least six (6) inches away from the trunks of shrubs and trees.

11. Protection. All required landscaped areas, particularly trees and shrubs, must be protected from potential damage by adjacent uses and development, including parking and storage areas. Protective devices such as bollards, wheel stops, trunk guards, root guards, etc., may be required in some situations.

12. Final Inspection. During final inspection, if these requirements are not met, the project will not be signed off.

95.51 Tree and Landscape Maintenance Requirements

The following maintenance requirements apply to all trees, including street trees, and other vegetation required to be planted or preserved by the City:

1. Responsibility for Regular Maintenance. Required trees and vegetation, fences, walls, and other landscape elements shall be considered as elements of the project in the same manner as parking, building materials, and other site details. The applicant, landowner, or successors in interest shall be responsible for the regular maintenance of required landscaping elements. It is also the responsibility of the property owner to maintain street trees abutting their property pursuant to KZC 95.21.
2. Maintenance Duration. Maintenance shall be ensured in the following manner except as set forth in subsections (3), (4) and (5) of this section:
 - a. Commercial, Industrial and Multifamily Development. All required landscaping shall be maintained throughout the life of the development. Plants that die must be replaced in kind..
 - b. Single Family Residential Development. Any existing tree or other existing vegetation designated for preservation in a tree retention plan shall be maintained for a period of five (5) years following issuance of the certificate of occupancy for the individual lot or development. After five (5) years, all trees on the property are subject to KZC 95.23 unless:
 - 1) The tree and associated vegetation are in a grove that is protected pursuant to subsection (3) of this section; or
 - 2) The tree or vegetation is considered to be a public benefit related to approval of a Planned Unit Development; or
 - 3) The tree or vegetation was retained to partially or fully meet requirements of KZC 95.40 through 95.45, Required Landscaping and Zoning.
3. Maintenance of Preserved Grove. Any applicant who has a grove of trees identified for preservation on an approved Tree Retention Plan pursuant to KZC 95.30(2) shall provide prior to occupancy the legal instrument acceptable to the City to ensure preservation of the grove and associated vegetation in perpetuity, except that the agreement may be extinguished if the Planning Official determines that preservation is no longer appropriate.
4. Maintenance in Holmes Point Overlay Zone. Vegetation in designated Protected Natural Areas in the Holmes Point Overlay Zone is to be protected in perpetuity pursuant to KZC 70.15(8)(a). Significant trees in the remainder of the lot shall be protected in perpetuity pursuant to KZC 70.15(8)(b).
5. Nonnative Invasive and Noxious Plants. It is the responsibility of the property owner to remove nonnative invasive plants and noxious plants per the City's Prohibited Plant List, King County and Washington Weed Agencies from the vicinity of any tree or other vegetation that the City has required to be planted or protected. Removal must be performed in a manner that is not injurious to required trees and vegetation.
6. Landscape Plans and Utility Plans. Landscape plans and utility plans shall be coordinated. In general, the placement of trees and large shrubs should adjust to the location of required utility routes both above and below ground. Location of plants shall be based on the plant's mature size both above and below ground. See the Kirkland Plant List for additional standards.

95.52 Prohibited Vegetation

Plants listed in the Kirkland Prohibited Plant List shall not be planted in the City or required to be retained.

For landscaping not required under this chapter, this prohibition shall become effective on February 14, 2008. The City may require removal of prohibited vegetation if installed after this date. Residents and property owners are encouraged to remove pre-existing prohibited vegetation whenever practicable.

95.55 Enforcement and Penalties

Upon determination that there has been a violation of any provision of this chapter, the City may pursue code enforcement and penalties in accordance with the provisions of Chapter 1.12.100 KMC, Special Provisions Relating to Enforcement of Tree Regulations in Chapter 95 KZC. Notwithstanding the provisions of Chapter 1.12.100 KMC, Tree Topping shall result in the following penalties:

1. Required Trees. Trees that were required to be planted or retained by this chapter that are less than six (6) inches DBH that have been damaged by Topping must be replaced pursuant to the standards in Chapter 1.12 KMC.

2. Restoration. For trees greater than six (6) inches DBH that have been damaged by Topping, property owners must have a Qualified Professional develop and implement a restoration pruning plan.

95.57 City Forestry Account

1. Funding Sources. All civil penalties received under this chapter and all money received pursuant to KZC 95.34.6 shall be used for the purposes set forth in this section. In addition, the following sources may be used for the purposes set forth in this section:

- a. Agreed upon restoration payments imposed under KZC 95.55 or settlements in lieu of penalties;
- b. Agreed upon payment in lieu of planting replacement trees under KZC 95.34.6;
- c. Sale of trees or wood from City property where the proceeds from such sale have not been dedicated to another purpose;
- d. Donations and grants for tree purposes;
- e. Sale of seedlings by the City; and
- f. Other monies allocated by the City Council.

2. Funding Purposes. The City shall use money received pursuant to this section for the following purposes:

- a. Acquiring, maintaining, and preserving wooded areas within the City;
- b. Planting and maintaining trees within the City;
- c. Establishment of a holding public tree nursery;
- d. Urban forestry education;
- e. Implementation of a tree canopy monitoring program; or
- f. Other purposes relating to trees as determined by the City Council.