



CITY OF KIRKLAND
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MEMORANDUM

To: Kurt Triplett, City Manager

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

Date: January 21, 2020

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

Staff Recommendation

City Council should receive the Planning Commission's recommendations (Attachment 1) and a briefing on [Kirkland Zoning Code Chapter 95 \(KZC 95\)](#) draft code amendments for review of substantive issues prior to adopting the draft code. This initial Council discussion is not intended to be a comprehensive review of the draft code. Rather, the focus is on the key issues that have presented the greatest challenges during the process.

Background

Over the last 18 months, the Planning Commission (PC) has diligently worked on code amendments to KZC 95. Prior to the public hearing and subsequent PC and Houghton Community Council (HCC) final recommendations, the City Council reviewed draft KZC 95 code amendments at the joint study session with the PC on October 1, 2019. Information presented in the October 1 staff memo that remains unchanged is referenced by page number herein. Links to staff memos and study topics up to the public hearing are provided in the tables below.

For the first six months of the project, the PC carefully reviewed technical data, how the current code works, related policy issues and options for code changes. The following table is a summary of the topics for those meetings and links to meeting packets:

Date/Link		Study Session Topic
June 28, 2018	PC	Understanding KZC 95, Tree Canopy Cover 101
July 12, 2018	PC	Preliminary project scope
Aug 9, 2018	PC	2018 field study findings on KZC 95 efficacy
Aug 27, 2018	HCC	Briefing on PC progress
Sept 13, 2018	PC	Preliminary code changes with low-level policy impacts
Sept 27, 2018	PC	Preliminary code changes with moderate policy impacts
Nov 8, 2018(A) Nov 8, 2018(B)	PC	A) Review 2018 Tree Canopy Assessment B) Review 1st draft KZC 95 , options, initial public feedback

Nov 20, 2018	CC	Briefing on PC progress, 1st draft KZC 95, staff recommendations, options, emerging issues
Nov 26, 2018	PC-HCC	Joint review of major code amendments, preliminary public feedback. Discuss canopy cover vs tree density credits.

The PC considered the more straightforward code amendments with the least policy impacts within that first six months. By late 2018, the PC had begun to work on the most complex and controversial code amendments involving tree retention with development. Intending to get feedback that would provide a greater level of clarity and predictability on the remaining code issues, staff was directed to get consensus feedback from a stakeholder group consisting of members of the Finn Hill Neighborhood Alliance (FHNA), the Master Builders Association of King and Snohomish Counties (MBAKS) and other interested individuals. Staff met with the stakeholder group for six months on development code-related concepts, including the tiered approach outlined in Attachment 2. The Planning Commission resumed work on the code following the initial discussions with the stakeholders as summarized by study session topic in the table below:

Date/Link		Study Session Topic
Feb 14, 2019	PC	Review stakeholder position on remaining code issues, review 2nd draft KZC 95 , consider staff recommendations and other city tree codes
Feb 25, 2019	HCC	Briefing on PC progress, status of code amendments
Apr 25, 2019	PC-HCC	Joint briefing on status of code amendments
May 23, 2019	PC	Review stakeholder's 2-tiered approach and resulting effects of proposed codes, study tree trunk diameter (DBH) data, provide direction on code
May 30, 2019	HCC	Briefing on May 23 PC meeting topics
July 11, 2019	PC	Review 3rd draft KZC 95 , 6 remaining key code issues, stakeholder feedback and other city tree codes, provide direction on code
Jul 22, 2019	HCC	Review 4th draft KZC 95 and the 6 remaining key code issues using the HCC's Guiding Principles, consider options, prepare for hearing
Oct 1, 2019	CC-PC	Review staff-stakeholder process and key code changes prior to hearing
Nov 5, 2019	PC-HCC	Public hearing, initial joint PC-HCC deliberations

Having received considerable stakeholder feedback directly and through over 10 staff-stakeholder meetings, the PC moved forward in July 2019 with code amendment options that strike a balance between predictable regulations while meeting the City's guiding goals and policies in Kirkland's Comprehensive Plan. As part of their consideration of the stakeholder group's recommended tree retention standards, the PC examined development review outcomes for tree retention based on the current regulations compared to outcomes based on the stakeholder's proposed code provisions (Attachment 3). From there, the PC's code amendment decisions balanced achieving a more prescriptive and streamlined tree ordinance against what the PC found were acceptable results in tree removal or retention (Attachment 4). The resulting draft code was presented at the November 5, 2019 joint PC-HCC public hearing for greater community review and feedback.

Following the hearing, the HCC continued deliberations separately on [November 25, 2019](#), resulting in its recommendations to the PC (Attachment 5). In preparation for the HCC

deliberations, then-HCC member Neal Black contributed an enormous amount of time collaborating with staff on code changes that improved the clarity and administration of the draft KZC 95. That revised draft was used by the HCC and PC as the basis for their deliberations. While recommending adoption of most of the draft code, the two code provisions that the HCC expressed concern over that may prompt the HCC to exercise disapproval jurisdiction are:

- Prohibiting homeowner landmark tree removal where no development activity is involved (95.23.5a).
- Retaining Tier 2 trees (see Attachment 2) without a quota limiting the number of trees a developer is expected to retain (would be added to 95.30.4b).

A discussion and recommendations for code amendments on these two areas of concern are noted with an asterisk (*) under Key Code Changes below.

The PC continued deliberations on [December 12, 2019](#), carefully considering the HCC's recommendations and written public testimony received since the public hearing. The resulting PC recommendations to the City Council (Attachment 1) and resulting draft KZC 95 (Attachment 6) integrate code changes from a legal, code enforcement, staff and stakeholder perspective, forming the draft KZC 95 for City Council consideration for adoption.

Throughout the KZC code amendment process, staff has provided regular briefings to the City Council at two study sessions, 8 Council sub-committee meetings, and at the March 2019 Council Retreat.

To assist in review of the draft KZC 95, two versions are attached. Attachment 6 indicates completely deleted and entirely new code provisions with strikeouts and red text. This annotated format is intended to easily distinguish the draft amendments from the original code, not track insignificant word changes or editorial markups. References to current code sections are noted (*previous 95.xx*) while reorganized code sections are indicated by (*moved*) or (*consolidated*). One placeholder is noted for a PC-requested code change that has not been determined yet. A clean copy of the draft code is provided in Attachment 7. A simplified "table of contents" outline of the revised Chapter is provided on pages 5-6 in the [November 5, 2019](#) joint PC-HCC public hearing meeting memo.

Key Code Changes

The key code changes discussed below reflect the most substantive issues addressed in the draft code that resulted from the public hearing, HCC deliberations and PC recommendations.

In outlining these key changes, the City Council has requested that staff identify areas of disagreement within the stakeholder group (as represented by FNHA and MBAKS) on key code changes. We attempt to do so below but encourage a more comprehensive review of related written and oral testimony for a complete understanding of their respective positions. The FHNA submitted a letter to the Planning Commission on December 10, 2019 indicating the FHNA's position on recent draft KZC 95 key code changes (Attachment 8). It is not clear that the letter is consistent with oral testimony as it related to Tier 2 tree retention. MBAKS presented an altogether new draft KZC 95 on November 22 with substantially more code changes than the PC had requested from the stakeholders (Attachment 9). Without specific comments on more

recent draft KZC 95 amendments, the MBAKS position on areas of agreement or disagreement with FHNA is more difficult to articulate and may not be accurately described below.

1. Tree removal allowances – Draft KZC 95.23.2

Issues:

- Some owners of larger properties feel that the current tree removal allowance is not equitable, particularly when larger properties are heavily treed.
- Preemptive tree removal prior to permit submittal is an “unintended consequence” of complying with a code that some deem too restrictive. Intern findings indicate a prevalence of preemptive tree removal.

Options:

- Allow additional tree removal on larger properties
- Consider how other cities prohibit preemptive tree removal, for example, Renton prohibits tree removal or land clearing on any site for the purposes of preparing that site for future development.

Code Recommendations:

- Allow increased tree removals per larger property sizes; however, lower the number of trees from the initially-proposed draft code for lot sizes of 10,000 to 20,000 square feet (from 4 to 3) and lot sizes 20,000 square feet or larger (from 6 to 4) allowed annually. Allow the removal of overgrown hedges comprising trees over 6 inches DBH. Don’t allow “banking” of tree removals for future years (i.e. 6 trees in year one instead of 2 trees per year for three years) due to complexity of tracking and potential accelerated canopy loss.
- To disincentive preemptive removals, don’t accept applications for short plats and subdivisions within one year of tree removal, with a two-year timeframe where Landmark trees are removed.

Area of Stakeholder Disagreement: The FHNA-MBAKS group is generally in concurrence on the topic of tree removal allowances, with the exception that MBAKS advocates for “banking” or borrowing against future tree removals.

Questions: Does the City Council believe the proposed tree removal allowances address homeowner equity issues? Are the proposed numbers of trees allowed for annual removal per property size appropriate? Are proposed rules to address preemptive removals appropriate?

2. Landmark tree definition and removal - Draft KZC 95.10.15d and i

Issues: A field study showed only 10% of all trees retained on development sites are large trees over 22-inch trunk diameter, reducing urban forest health and resiliency. Preemptive tree removals regularly occur on development sites. Larger trees provide the maximum amount of public benefits such as improving air and water quality in the interim as newly-planted trees grow large enough to begin to contribute benefits. But protecting the very largest trees in an

urban forest and planting new trees creates a gap of the “mid-sized/aged trees” that would otherwise ensure an even succession of benefits over time.

Options: Considered other cities’ high-priority tree definitions (Issaquah, Lake Forest Park, Redmond, Bellevue, Medina, Renton, Vancouver WA and Olympia). Define by size over 30 inches DBH (Redmond, Issaquah).

Code Recommendation: Retain 30-inch or greater trunk diameter (DBH) trees in good-excellent condition on development sites. Limit preemptive removals of Landmark trees on development sites with a 24-month permit application wait period following Landmark tree removal. Outside of development, limit Landmark tree removal to one every 24 months. In addition, the PC encouraged implementation of a robust public information campaign so homeowners are aware of the change; otherwise, there may not be widespread compliance.

The landmark tree approach may retain additional large trees when compared to existing regulations. However, the new condition ratings will result in removal of “fair” landmark trees that might have been protected under current regulations and protection of large trees on typically-sized Kirkland lots will remain quite challenging. Lot clustering requirements and code flexibility provide new tools for retention (see Attachment 4).

Areas of Disagreement between Stakeholders: FHNA recommends that the definition of a Landmark tree be extended to include 26-inch DBH trees and agrees that Landmark trees should not qualify for removal without a permit. MBAKS draft code implies that with non-development tree removals, Landmark trees can be removed as an allowance (no permit) except with a Forest Management Plan. Note this is not consistent with the stakeholder’s original Tier 1/Landmark tree definition (see Attachment 2).

*Questions: Does the City Council agree with the proposed Landmark tree definition?
Are the proposed 30” size threshold and condition ratings appropriate?*

3. Grove definition - Draft KZC 95.10.15a

Issue: Most trees that are retained on development sites are protected with a 5 Year Maintenance Agreement that, once it expires, allows the trees to be removed under the homeowner tree removal codes (the draft code proposes increased tree removal allowances – no permit - on larger properties). However, designated tree groves are protected through a covenant (formerly easement). With short plats and subdivisions, grove designation allows the trees located on one lot to satisfy the tree credit requirements for all the lots in the development. Unless the grove designation is recorded on the title of the subject property, a future homeowner would be unaware how the trees on their property mitigated the effects of the development over a much larger area. Some developers feel they’re required to retain groves with trees of lesser quality and object to easements as the mechanism for protecting dedicated groves as easements encumber the property.

Options: Examine other municipal tree codes that protect tree groves, including Bellevue, Issaquah, Kenmore, Mercer Island, Renton, Sammamish, Shoreline, and Woodinville. Revise code so easement and maintenance requirements are in the same code section. Consider increasing the size (currently 6-inch DBH) and number (currently three) of trees that may

constitute a grove. Develop standards for health and structure of trees worthy of protection. Clarify grove designations on sites undergoing remodels/additions. Utilize a covenant rather than an easement to protect dedicated groves.

Code Recommendation: Define groves so that trees must be in excellent to good condition as defined in proposed health and structure rating table. Keep current grove definition for “three or more trees with touching/overlapping crowns” but increase the size threshold to specify that at least three trees must meet a minimum 12-inch DBH size.

Increasing the size and establishing condition ratings will reduce protection of groves when compared to the current regulations (see Attachment 4), although the protected groves may be of higher quality.

In response to MBAKS suggestions, staff has worked with the City Attorney to develop and begin using covenants rather than easements for protection of grove trees.

Area of Disagreement between Stakeholders: MBAKS proposes defining groves as a “group of trees (that) share community-definitional characteristics to Landmarks,” consisting of either

- 3 or more trees with at least one 30-inch DBH tree, or
- 5 or more trees with at least one 22-inch DBH tree.

FHNA has been aligned with this definition; however, it is unclear if FHNA’s reduced Landmark tree threshold, from 30 inches DBH to 26 inches DBH, would apply to trees within groves.

The MBAKS position on grove protection has shifted over the course of the KZC 95 code amendments, from promoting a modest code clarification to, more recently, objecting to the grove covenant altogether.

Questions: Does the City Council agree with the proposed grove definition? Are the size thresholds appropriate?

4. Tier 2 tree definition - Draft KZC 95.10j

Issue: The current high (trees in setbacks – retain if possible), moderate (other trees – retain if feasible), low (unhealthy or removal unavoidable) retention values for existing trees on development sites are perceived as too subjective.

Options: Aside from retention standards for landmark and grove trees, define which other trees should be protected during development and standards of protection. Options considered have been retention by credit count (require retention up to a quota), retention based on location (setbacks), and a combination (see HCC recommendation).

Code Recommendation: Delete high-moderate-low retention value definitions. Add landmark and grove tree definitions (above) with the highest level of protection and very specific retention requirements (below) for Tier 1 trees. Consistent with current practice, keep the “high retention value” concept of retaining high quality trees in setbacks but define Tier 2 trees using specific condition ratings and very specific retention requirements (below).

Elimination of moderate retention value trees and proposed condition ratings will result in removal of additional trees outside of setbacks as well as “fair” condition trees in setbacks that might be protected under current regulations (see Attachment 4).

Area of Disagreement between Stakeholders: The December 10 FNHA letter appears to support the Tier 2 retention standards as proposed, but oral testimony indicates that FNHA is still interested in a quota approach with a substantial increase in credit requirements (80-100 per acre rather than the previous 50 credits per acre recommendation). Prior to the public hearing, MBAKS advocated for a 50 credit per acre quota approach that allows the applicant the discretion to remove any Tier 2 trees, provided that the quota is met by any combination of retaining or planting new trees. More recently, MBAKS maintained that the draft code lacks an acceptable level of predictability and a tree credit quota is necessary so “staff can’t make developers require more tree retention.”

Staff and the Planning Commission share the same interest in making the development permit process less subjective. 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. Generally, applicants seek to meet only the minimum required credits on development sites, hastening the loss of canopy cover. The PC opted to not use a “credit quota system” after analyzing the significant tree and associated canopy loss results as applied to 22 SF development sites (see Attachment 3). The most recent MBAKS proposal takes the same quota approach using a different credit per area calculation. Depending on land use type, the MBAKS formula calculates a fraction of tree credits varying from 0.20 for low-use intensity areas up to 1 credit per 1,000 square feet of single-family residential areas. Note that this calculation results in lower credit requirements than the stakeholder group’s previously-proposed 50 credits per acre.

***Question:** Does the City Council agree that the proposed Tier 2 tree retention provisions, maintaining the current focus on trees in setbacks, are appropriate?*

5. Retention requirements to retain Tier 1/Tier 2 trees

The current code reads “retain trees to the maximum extent possible” and that the applicant “shall pursue [tree retention] where feasible,” which was perceived by some developers as too subjective and inconsistently applied. More predictable outcomes mean code provisions would need to clearly identify the applicant’s guaranteed development rights, regulatory expectations and the code flexibility requirements required to retain Tier 1/Tier 2 trees in four distinct topical portions of the code:

- Codify specific development rights for density, lot coverage, floor area ratio, and minimum building envelope dimensions - Draft KZC 95.30.4a(1), 95.30.4b(1)

Issues: Objectionable levels of unpredictability when developers plan the location of structures in relation to retained trees on a development site. Developers want to gauge which trees must be retained during brief feasibility study periods.

Options: Require applicants to adjust building configurations to protect trees “within the site interior” (Bellevue), “not within the building footprint of the principal building on the lot, excluding those trees where alternative design of the building is feasible in retaining the tree” (Medina), or “outside the area of land disturbance except where necessary to install site improvements, e.g., driveways, utilities, etc.” (Mercer Island).

Code Recommendation: Specifies that the application of the code will not reduce allowed density, lot coverage, or floor area ratio. Incorporates stakeholder’s specific building envelope dimensions using a footprint that may shift/move within the boundaries of the property and applicable setbacks. These dimensions are more stringent for Tier 1 trees and more generous for Tier 2 trees.

- Site plan alterations - Draft KZC 95.30.4a(2), 95.30.4b(2)

Issue: Objectionable levels of unpredictability when developers initially design structural features and configurations in relation to retained trees on a development site.

Options: Specify when and how site improvements shall be designed and constructed to protect trees with specific characteristics (Redmond, Shoreline), or require an applicant to show where alternative design of the building is feasible in retaining the tree (Medina), or consider Reasonable Use Exception language so an applicant would need to apply for an exception to the Hearing Examiner (or another decision-making body) if the code prevents any reasonable economic use of the owner’s property (Redmond, Lake Forest Park).

Code Recommendation: Incorporates stakeholder’s expectations on how and to what extent proposed improvements will be designed or modified that are more stringent for Tier 1 trees and more generous for Tier 2 trees.

- Tree protection practices/methods - Draft KZC 95.30.4a(3), 95.30.4b(3)

Issue: Objectionable levels of unpredictability on the specific tree protection measures that will be required for retained trees expected to sustain the impacts of construction.

Code Recommendation: Incorporates stakeholder’s measures appropriate for Tier 1/Tier 2 tree retention.

- Variations to development standards - Draft KZC_95.30.4a(4), 95.304b(4) and 95.30.7b

Issues: Some developers believe that tree retention requirements lead to overly burdensome site constraints. Greater predictability and successful tree retention can be achieved with specific variations to development standards such as setback requirements and shortplat/subdivision lot clustering and lot size reductions.

Code Recommendation: Allow greater flexibility with certain zoning/development standards to retain trees in single family and short plat/subdivision developments that are more stringent for Tier 1 trees.

Area of Disagreement between Stakeholders: FHNA generally supports “staff recommendations that accommodate some of the ‘predictability’ concerns raised by builders...they...guarantee building pad dimensions, lot coverage, FAR, and the density of units allowed by applicable zoning.”

Although these requirements to retain Tier 1/Tier 2 trees originated from stakeholder participation, very little of the site plan alteration, tree protection practices and variations to development plan requirements are specified in the MBAKS-proposed code or supported in their correspondence and oral testimony (Attachment 9). Ambiguous draft code language drafted by MBAKS and included in Attachment 9 such as “plan to retain in good faith” and “submit a development proposal that *avoids* Tier 1 Trees” lessens code predictability.

Question: Does the City Council agree that the guaranteed development rights, proposed building envelope dimensions, site plan alterations, tree protection practices and allowed variations to development standards are appropriate?

6. Eliminate phased tree retention with short plats/subdivisions (IDP) - Draft KZC 95.30.7a

Issues: The IDP process was created in 2010 (the last major tree code amendment) as a response to the development community requesting more predictability for tree removal with short plats and subdivisions. The IDP process requires tree retention/removal decisions to be made early in the design of the development, whereas “phased” developments allow tree removal as each demolition, clearing/grading and building permit is submitted and approved. More recently, phased short plat/subdivision plan review results in protracted discussions and disagreements about tree retention between staff and permit applicants. Phased development results in the public perception that all trees fenced with initial site grading will be retained when the homes are built. Neighbors don’t feel that they are able to understand and comment on tree retention at the short plat or subdivision stage because the impact have not been fully disclosed. Developers are concerned that they don’t always have home plans and full civil drawings during the land use permit and that their ability to modify the IDP after approval is limited.

Code Recommendation: Eliminate the option for phased short plat/subdivision development, thus mandating Integrated Development Plans (IDP). Clarify and streamline modification provisions for approved short plats/subdivisions.

Area of Disagreement between Stakeholders: FHNA strongly supports the adoption of mandatory of IDPs throughout the City. Currently, MBAKS’ position on mandatory IDP is unclear; in a November 4, 2019 email to select FHNA, HCC and PC members, Gina Clark stated MBAKS support for IDP; however, the November 22, 2019 MBAKS draft code asserts “if a short plat or subdivision is being proposed and the location of all proposed improvements cannot be established, a phased tree retention plan review is required,” indicating mandatory IDPs may not be an area of full agreement between stakeholders.

Questions: Does the City Council agree that mandating the IDP process is appropriate and are the streamlined IDP modification procedures adequate?

7. Summary of Areas of Agreement Between Stakeholders Addressed in Proposed Code

The summary of twelve stakeholder meeting discussions (Attachment 2) and the [October 1, 2019](#) joint City Council-PC staff memo, pages 3-7, outlines code amendments that, at the time, did not appear to be areas of disagreement between stakeholders. These areas include:

- New Landmark, Tier 1 and Tier 2 tree definitions
- Revised grove definitions
- Increased tree removals based on property size; not allowing tree removal “banking”
- Preventing preemptive tree removals prior to development
- Tree condition ratings
- Specific requirements and priorities to retain Tier 1/Tier 2 trees: building footprint dimensions, site plan alterations, tree protection practices and variations to development standards
- Expanded development standards to retain trees on multifamily, commercial & mixed-use developments
- Not awarding credits for planting arborvitae
- Addressing undesirable tree species in the Prohibited Plant List
- Codifying the monetary value of in-lieu-of trees for payment into City Forestry Account
- Language on requiring summer-planted trees be watered

Policy-Related Issues

The policy-related issues below were addressed in the [October 1, 2019](#) joint City Council-PC staff memo on pages 7-8. Additional information on these issues of concern is provided below. City Council’s inquiries or requests for additional information that were made at the October 1 study session are shown in Attachment 11 with policy-related issues that have been recently raised by the PC and HCC.

Tree canopy cover goals

After thoroughly examining the issue, the PC decided that developing a more precise credit-to-canopy cover formula or converting entirely to canopy cover-based requirements is not desirable at this time. To gauge the immediate effectiveness of the proposed code changes, the current code has been used as a baseline for comparison. The City will continue to periodically monitor its [canopy cover](#) for guidance on where/how to meet its 40 percent tree canopy cover goal.

The PC acknowledges there are other opportunities to increase canopy cover city-wide, as described in the objectives of [Kirkland’s Urban Forestry Strategic Management Plan](#) (UFSMP). Achieving these objectives may involve multiple departmental coordination or taking a city-wide programmatic approach to urban forestry management.

Tree codes and affordable housing

Unless zoning standards change substantially, the proposed KZC 95 complements rather than presents a barrier to achieving an affordable and diverse housing stock in Kirkland. The standards for retention are generally more lenient than current regulations, development rights are guaranteed and specified, and additional code flexibility is added to help developers with retention efforts. The PC is currently studying “missing middle” and ADU code provisions, and

nothing in the proposed KZC 95 code amendments would hamper these efforts. As housing codes change in response to increasing density, adjustments to KZC 95 can reflect that growth while maintaining a livable city and region.

Solar arrays and other property use

Tree removal is already allowed under the 2-per rule (or more as proposed). A clarified code provision allows greater tree removal for the installation of solar panels with development. As previously discussed, staff is only aware of one tree conflict with solar installation and that was related to a large ground-mounted solar array. Additional tree removals could be considered as part of solar-related electrical/building permits, however that would add review time, disincentivizing solar energy system installations. The City could consider a code provision that grants additional tree removal beyond the allowances for installed/active solar panels (Issaquah grants "removal of tree(s) preventing solar access to buildings incorporating active solar devices...").

Private views

Private views are not regulated by the City, as stated in Kirkland Comprehensive Plan policy CC-4.5. Property owners can explore guaranteed view corridors by working with adjacent property owners in developing a view covenant.

Require or incentivize planting conifer/native tree species

The PC acknowledges that species diversity is an important performance measure for healthy, sustainable urban forests. The existing credit system incentivizes the retention of native conifers on development sites by awarding them 1.5 times the credits – a provision that has remained in the draft code. However, the PC has determined that regulating for species diversity on private property increases code complexity and presents too many challenges such as effective code enforcement. Discussions with MBAKS indicated that incentives (i.e., credit bonuses for planting native vs ornamental trees) are not meaningful since the cost of planting is so minimal relative to the total project cost. The PC concurs with staff that greater success could be achieved through managing public trees for species diversity (see [Kirkland Urban Forest Strategic Management Plan](#)) and by developing tree planting incentives and programs that promote species diversity. The City could establish community guidelines for the selection of suitable tree species and incentivize tree species diversity on private property with tree giveaways and similar programs.

Plant trees rather than retain trees on development sites

Science does not support the concept that tree planting is an effective alternative towards meeting canopy cover goals, as described in an online *This Week in Kirkland* bulletin, [Tree Code Update: The Importance of Preservation](#) published April 11, 2018. However, the City may want to explore incentives for increasing canopy cover on public/private property.

Public Feedback

Public feedback on potential tree code amendments was obtained in two phases. Staff obtained initial feedback in 2018 through Juanita Farmers Market and Crossing Kirkland pop-up stands, at City Hall for All and by holding two facilitated stakeholder workshops – one attended by individuals interested in tree protection and another attended by members from the development community. Responses to the questions asked at each of these events are

recorded in Attachment 10. At the 2019 Sustainability Forum event, an overwhelming number of attendees focused on trees and urban forestry issues, prompting subsequent special interest meetings.

High levels of general public interest in the tree code updates is expressed in an unusually large number (over 900) webpage listserv subscribers signed up to receive project updates. The second phase of public outreach was conducted during the period staff was focused on stakeholder involvement, from late 2018 through May 2019. To communicate the issues and complexities of the project and maintain the broader community's continued awareness, staff published several articles in [This Week in Kirkland](#) online bulletins and produced and released a series of three [videos](#) in the spring and summer 2019, generating over 4,000 YouTube and Facebook hits.

Staff provided project updates at Kirkland Alliance of Neighborhood (KAN) and other neighborhood meetings and served as a technical resource at the Finn Hill Neighborhood Alliance Tree Code Tutorial event. Prior to the public hearing on November 5, 2019 staff held an open house with handouts, maps and other display materials and was available to answer questions about the draft tree codes. Standard noticing for the public hearing was given, with direct notification to the Kirkland Developers Partnership, MBAKS, consulting arborists and tree care companies and the Eastside Audubon Society. Over 60 [written testimonials](#) have been submitted to the City and at the public hearing, 18 meeting attendees provided oral testimony on the draft code amendments to KZC 95.

Next Steps

At the October 1, 2019 joint PC-City Council study session, the City Council requested that, prior to adoption, a review of the Planning Commission recommendation occur with a study session. Staff will schedule future study sessions or meetings with Council based on responses to the questions set forth above. Substantive changes to the draft code may warrant additional public comments and/or hearings.

The City Council has expressed interest in simultaneously adopting changes to Kirkland Municipal Code 1.12.100, tree code enforcement, in conjunction with the adoption of the KZC 95 amendments. Previously considered in 2018 with the Holmes Point Overlay (KZC 70) amendments, both code updates were tabled at the time, with Council's desire to complete amendments to the geologic hazard regulations (KZC 85) and tree regulations (KZC 95) before further consideration of the HPO and KMC amendments. Although the PC understands the KMC is not within PC jurisdiction, they expressed a desire that City Council direct changes that further strengthen tree code enforcement, having made such an extensive effort on KZC 95 code amendments.

Both KZC and KMC code changes involve comprehensive implementation phases. Public education and outreach related to KZC 95 and KMC 1.12.100 requirements geared for developers, arborists and homeowners are an incentive for greater code compliance. Prior to adoption of KZC 95, staff will be seeking additional direction from the City Council on effective dates and options related to vesting of projects.

Attachments

1. PC Recommendation to City Council
2. Stakeholder Meeting Topic Summary
3. 22 Development Scenario Analysis
4. Effects of Proposed Code Changes
5. HCC Recommendations to PC
6. Draft Kirkland Zoning Code Chapter 95
7. Draft Kirkland Zoning Code Chapter 95 – Clean Copy
8. FHNA December 10, 2019 Letter to PC
9. MBAKS November 22, 2019 New Draft KZC 95
10. Public Feedback Phase I
11. Responses to Policy-Related Questions and Requests for Additional Information

cc: File Number CAM18-00408
Planning Commission
Houghton Community Council



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MEMORANDUM

To: Kirkland City Council

From: Kirkland Planning Commission

Date: January 9, 2019

Subject: Planning Commission Recommendation
Amendments to Kirkland Zoning Code Chapter 95
Tree Management and Required Landscaping, File Number CAM18-00408

INTRODUCTION

The Planning Commission has concluded 18 months of study on amendments to Kirkland Zoning Code Chapter 95 - Tree Management and Required Landscaping and now presents our final recommendations to the City Council for consideration and adoption. Our objective in this process has been to strike an appropriate balance between adding clarity and predictability to the City's tree regulations while honoring the City's adopted goals and policies for environmental stewardship and a healthy, resilient urban forest.

In developing our recommendation, the Commission has met 14 times to consider information provided by staff, the City Council, the Houghton Community Council, various stakeholders, and the broader community. All of this input served as the basis to develop a draft code for consideration at our November 5th joint public hearing with the Houghton Community Council. The Planning Commission left the record open for additional written testimony until our deliberations on December 12th. At that final meeting we considered all public testimony, as well as the recommendation of the Houghton Community Council, and finalized our recommendation to the City Council.

Throughout this process, certain groups and individuals have dedicated tremendous time and energy to a shared goal of improving Kirkland's tree regulations. The Planning Commission offers special thanks to the working group comprised of the representatives the Master Builders Association of King and Snohomish County (MBAKS), the Finn Hill Neighborhood Alliance (FNHA), and other dedicated Kirkland residents for their efforts. The Commission has incorporated a significant amount of their work into the proposed regulations. In respect of their efforts, the Planning Commission and Houghton Community Council offered the working group additional time at the public hearing to present their work and explain points of consensus and areas of ongoing disagreement. Gina Clark, representing MBAKS, and Scott Morris, representing FNHA, took this opportunity as the first speakers at our joint hearing. Their testimony can be watched starting at the 22:30 minute mark in the [public hearing](#) video. MBAKS took the opportunity to testify that the working group, Planning Commission, Community Council, and staff had failed - without offering specificity on the requested points of consensus

and areas of ongoing disagreement. FNHA took the opportunity to speak regarding the objectives of the working group, points where the working group was generally aligned (Tier 1 trees), and areas where there was not consensus (Tier 2 trees).

The specific issues raised by MBAKS and FNHA are addressed in more detail below and in staff's memo. The Planning Commission obviously takes issue with the MBAKS contention that our efforts have failed and were surprised by that characterization. The Community Council, the Planning Commission, and the community as a whole have invested significant time and resources to developing this recommendation. We have listened intently to the issues and solutions that MBAKS has presented to us throughout this process. We have worked diligently listening to all constituents to develop a balanced approach and we take issue with MBAKS contention that these efforts have failed because they do not feel that all of their solutions are included in the final product.

We appreciate the work of the Houghton Community Council during the process in sharing their recommendations and in improving the clarity and organization of the draft code. The Planning Commission has accepted most of the Community Council's recommendations into the draft that we recommend to Council and we highlight the two key differences (tree quota and Landmark tree retention) below. It should be noted that we support the Community Council's recommendation to review regulations for parking lot landscaping standards. We will include future review of these standards in our upcoming recommendations on the 2020-2023 Planning Work Program.

Regulating trees is an important and challenging task. Tree codes touch on many disparate community values such as environmental stewardship, property rights, housing affordability, private views, climate change, and community character to name a few. The City has established itself as a leader in sustainability and climate action with programs and initiatives like Kirkland Green and our King County Cities Climate Collaboration (K4C) commitment and tree retention and planting are key components of Kirkland's sustainability. Every community that chooses to regulate trees and each participant in Kirkland's process weighs these values differently. That means there is no "right" answer. Rather, the City must consider adopted goals and policies that express community-held values, listen to its constituents, then develop regulations that best balance community interests. The Planning Commission has listened attentively and deliberated extensively in developing our recommendation. We extended the process significantly to seek consensus in the community on as many aspects of the code as possible. It is clear that consensus on all topics is not likely, leaving difficult decisions for the Commission and City Council on a number of issues.

KEY ISSUES

The Planning Commission would like to highlight the following key issues that we have deliberated and outline our rationale for these specific recommendations. The staff report to City Council will contain a full assessment of the draft code but following are the topics that have been the most controversial and, consequently, have received the Planning Commission's greatest attention.

1. General

For purposes of regulating tree retention with development, our recommendation is separated into two tiers of trees. The largest and most significant trees are regulated as Tier 1 trees and subject to the most stringent retention standards and would be reviewed for retention regardless of their location on the development site. Smaller and less significant trees are regulated as Tier 2 trees and subject to lower standards for retention and would only be reviewed for retention if they are located in a required setback.

2. Landmark Trees

The draft code establishes a new category of trees regulated as Landmark trees. These are trees that have a minimum 30" trunk diameter (DBH) and are in good-excellent condition. Landmark trees are subject to the highest standard for retention (Tier 1) and are subject to more stringent standards for homeowner removal.

The concept for regulating Landmark trees came from the stakeholder group, which recommended singling out large iconic trees for special protection during development. Throughout our deliberations, the concept of these special protections has been supported by public testimony, but there have been divergent opinions regarding the size of these trees (24"-30" DBH has been the common range) and whether homeowners should be allowed to remove these trees.

Regarding establishing a size threshold for Landmark trees, the Commission supports a minimum size of 30" DBH. We know that large trees have large critical root zones and that makes them challenging to retain on typical single family-sized Kirkland lots. Therefore, we do not recommend expanding these retention standards to trees smaller than 30" DBH.

Regarding a homeowner's ability to remove Landmark trees absent development activity, our concern is that by establishing stringent development regulations for Landmark trees, an incentive is created for developers or property owners to eliminate such trees prior to application for development permits. To address this concern, the draft code considered at the public hearing prohibited homeowner Landmark tree removal. In their recommendation, the Houghton Community Council objects to this prohibition. The Planning Commission is now recommending compromise language that would allow homeowner removal of Landmark trees, with a permit, subject to the following limitations:

- Only one Landmark tree per every 24 months
- Require robust replacement plantings
- No short plat or subdivision applications for 24 months after removal of a Landmark tree (rather than recommended 12 months for other tree removals)

3. Trees in Setbacks

The draft code also establishes regulations for retention of trees that are not Landmark or Grove trees with development. Consistent with the City's current practice, these are

trees located toward the perimeter of the site, in setbacks where buildings are not allowed. By virtue of their location, these trees have the greatest likelihood of retention. The Commission is recommending regulations that add predictability, assurance of basic development rights, and flexibility in code standards to improve this approach to tree retention.

The MBAKS has pressed for the elimination of protection of trees in setbacks and proposed to replace it with regulations that establish a quota that, aside from Tier 1 tree retention, allows an applicant the discretion to remove any trees as long as the quota is met by planting new trees. The Houghton Community Council recommends a hybrid approach, accepting the proposed Tier 2 approach of protecting trees in setbacks subject to a quota of 50 credits per acre. This would allow any trees in excess of that quota to be cut, regardless of whether they are impacted by the proposed development. In the absence of (or if too few) existing trees can be retained, the applicant must plant new trees to meet a lower (30) credit quota.

The Planning Commission considered the quota approach and, based on specific data provided by staff, concluded that it would allow a significant increase in tree removal with development when compared to the City's current regulations. We know from the 2018 canopy assessment that the City has lost 253 acres of tree canopy since 2010 in our single family neighborhoods, attributed to robust development activity. Based on those findings, we cannot recommend regulations that would significantly accelerate this canopy loss in these neighborhoods. FNHA has suggested the alternative of increasing the quota to 80-100 credits per acre, but it is not clear how that approach would add additional clarity or predictability than our recommendation to keep the focus on trees in setbacks with additional standards of predictability and additional code flexibility.

4. Short Plats and Subdivisions – Elimination of Phased Review Option

In the interest of providing additional predictability around tree retention associated with short plats and subdivisions, both for developers and for neighbors of development, the draft code eliminates phased review of tree retention plans. The City had previously eliminated the phased review option for short plats and subdivisions in the Holmes Point Overlay and the Commission now recommends a consistent Citywide approach. A comprehensive review of tree retention earlier in the process through an integrated development plan (IDP) will result in better decisions about tree retention and more transparency to neighbors about what the final product will look like. In response to concerns from the development community about this requirement, the draft code contains streamlined and clarified provisions for modifications to approved IDPs.

5. Enforcement

The Planning Commission understands that the City Council will be considering updates to the enforcement and penalty provisions of the Kirkland Municipal Code (KMC) related to violations of the tree regulations. While the code enforcement provisions of the KMC are not the purview of the Planning Commission, we have worked hard on updating the tree regulations and support efforts to ensure that these regulations are followed, and violations result in appropriate penalties. Public testimony has expressed concern that

there are blatant violations of current regulations and that current enforcement and penalties are not adequate to deter these violations. The Planning Commission supports stiffer penalties, especially for those who knowingly violate the regulations for profit (i.e. – in violation of permit conditions) and those who are in the business of trees and are thus responsible for knowing the rules (i.e. – developers and arborists).

CONCLUSION

After over a year of careful study, the Planning Commission is pleased to recommend adoption of amendments to the City's tree regulations that balance multiple community interests in a manner that is consistent with the guiding goals and policies established in the Comprehensive Plan.

6/24/19 revisions

1/6/20 revisions reflecting HCC/PC recommendations or stakeholder areas of disagreement

STAKEHOLDER AREAS OF AGREEMENT	Continue using tree density credits rather than canopy cover
	Eliminate High, Moderate and Low Retention Value Trees
	Agree in principle to define trees of merit, i.e. what's worthy of retention and the extent of requirements
	Agree in principle to increase tree credit requirements per acre – Later, became an area of disagreement when MBAKS defined 50 credits per acre as a tree removal quota.
	A covenant rather than an easement is preferred by MBAKS for grove protection - Official City Document #089 has been revised to a Grove Protection Covenant instead of Easement with encumbrances on the protected trees, not the land.
	Agree in principle to cap total number of credits awarded for individual existing trees Stakeholders propose 11 credits maximum (correlates to 30" dbh tree). Staff may lower to 8 credits (24" dbh tree) pending PC direction.
	Don't award credits for arborvitae or other slow-growing/small-statured trees
	Agree in principle to increase species diversity and a more uneven-aged urban forest
	Landmark/grove tree location: anywhere on development site
	Landmark/grove tree size and number of trees - Stakeholders propose 30" dbh Landmark trees. (MBAKS) groves of 3 or more must include one Landmark (30" dbh) or 5 or more that include one 24" dbh. PC: grove = 3 or more, each with a minimum 12" DBH (12/12/18).
	Landmark/grove condition - Good to excellent per industry standards. (MBAKS feels the current definition is often applied to trees of limited significance or health).
	Landmark/grove application of credits – If Landmark/grove trees meet or exceed 50 credits per acre, no other trees are required to be planted PC: Landmark trees/groves shall be retained using standards in matrix below. Tier 2 trees must be retained if criteria is met (12/12/18).
	What development rights are applicants guaranteed towards Tier 1 Landmark/grove tree retention? - see matrix below and draft code
	What modifications/site plan alterations are required to retain Tier 1 Landmark/grove trees? - see matrix below and draft code
	Tier 1 challenges - mock scenario exercise showed 30" dbh threshold trees may be challenging to retain due to: Low percentage of 30" dbh trees on pre-development sites to begin with (2018 field study) Largest root zone (30' CRZ radius, 60' diameter) typically covers small-average size lots. Singles out the most mature trees rather than a broader range of older trees High likelihood that the outcome on small and average size properties is no/few 30" Landmark retention Best chance of success may be large lots that are not maxing out lot coverage and medium to large short plats and subdivisions where clustering can be a new tool

	Tier 2 tree location: in setbacks
	Tier 2 tree size: minimum 6" dbh
	Tier 2 tree condition: Good to excellent per industry standards
	Tier 2 application of credits: in the absence of Landmark/grove trees , existing Tier 2 trees in setbacks must be retained. If Tier 2 trees meet or exceed 50 credits per acre, no additional planting is required. If not, planting is required to 30 credits per acre.
	Determine what development rights are guaranteed for applicants to retain Tier 2 trees - Discussed May 1, May 13, May 29, and June 5, 2019. See Tier 2 matrix/draft code below
	Determine what modifications/site plan alterations are required to retain Tier 2 trees – same as above
	Define trees that are <i>not</i> required to be retained or count towards tree density credits. - Defined as trees in poor health and/or have significant defects in structure that cannot be mitigated with treatment. Can be expected to decline regardless of management. The species or individual tree may possess characteristics that are incompatible or undesirable in landscape settings or be unsuited for the intended use of the site. Use Prohibited Plant List for undesirable species such as cottonwoods, etc.
	Don't require supplemental trees that grow to a certain size in 10 years and/or require native species. - Not typical code language. Requiring tree species on private property adds complexity to the code and additional review time. Better as incentive
	The hazard tree definition per TRAQ/industry standard is justified and clearly distinguished from emergency tree removal. Strike proposed language from code, refer to standard.
	MBAKS objects to adding the term "immovable" to tree protection fence requirements. "Immovable" is an update on response to the public, City Council and Planning Commission regarding prevalence of fence creep/tree damage on construction sites. Staff is open to clarification on wording or further discussion of pros/cons of pier block vs driven fence posts. Strike proposed "immovable" language from draft code
REQUESTS FOR INFORMATION	Did the intern's data record the sizes of trees retained or the sizes of trees removed or both? Is the City estimating the prevalence of 30" diameter trees that have been retained during development activity or does data include info on trees that were removed during such activity? The intern collected data on the end results of the tree code: the number of retained trees and their sizes, plus the number of new trees planted to meet credits. What we found was plenty of new trees are planted and there's a low percentage of large retained trees, causing an uneven-aged urban forest. In response, staff went back through the arborist's reports of the same projects and obtained/shared additional data regarding the trees original to the development site, categorized by size. That data is reflected in the yellow columns in Attachment 4 to the 5/23/19 PC memo.
	Does the City have field data on groves to continue preserving groves in the same way as the current code? - Not from the intern's field work, but we do have general data from the canopy assessment. In the non-annexed city boundary under the current code, canopy cover increased from 2002 to 2010 in SFR areas. From 2010 to 2018 within the same boundary, the greatest canopy loss of any land use was SFR. The estimated average number of trees removed (no development) over the same period is relatively low (approx. 1K/year).
	Does the City have data that breaks down land use and trees? That is, does the City know what zoned areas have what percentage of current tree canopy, what has been lost, and where the areas of potential gains could be seen over the next 20-years?

	Yes, the canopy assessment shows data in various land use/other geographic areas. Yes, it shows changes in canopy for all those areas from 2010 to 2018, the most recent canopy assessment cycle. It also shows potential planting areas for each land use classification.
POLICY-RELATED ISSUES/DISCUSSION	MB-FH: in 95.05 there is no stated goal of balancing the needs of City landowners, nor recognition that those owners will bear all the costs of implementing Chapter 95. Is there room to insert recognition of the ‘cost’ side of the equation? Staff has not circled back to this section in our draft but is open to ongoing comment and discussion. KZC 95.05.2(c, d, e) addresses development in the context of tree retention. KZC 95.30 establishes that “the City’s objective is to retain as many viable trees as possible on a developing site while still allowing the development proposal to move forward in a timely manner.” The assertion that “owners will bear all the cost of implementing...” may not be true or appropriate code language. The City Council has suggested that the City Manager explore alternative methods to increase canopy cover on municipal property/city-wide
	MB-FH: Does the City have a concurrent plan, or is willing to include in 95.05, the City’s role to improve tree canopy and urban tree health on municipal land? And to update the 2013 Urban Forest Management Plan? - Speaking to municipal tree management is not the purpose of zoning codes, however it is addressed in KZC 95.05 in the general sense (see above). Requires CMO direction, involves Parks and Public Works depts. Updates to the Urban Forestry Strategic Management Plan are on the Planning Dept Work Plan, pending resources. Studying the precise relationship between tree credit requirements and canopy cove goals may be added to the Planning Dept Work Plan
	MB-FH: If data supports that greater gains could be found in some areas of the City on municipal land, should policy reflect that data and strategy shift to include ways to fund and implement (City Forestry Account?) - Data supports slowing canopy loss on private property, namely SFR. The primary purpose and current use of City Forestry Account funds is to plant trees on public property.
	MB-FH: Short verbiage if possible when all this is done. We agree with City it’s still too long - Determined by the PC, HCC and City Council. The KZC 95 code revision project timeline was extended for 6 months to involve stakeholders.
	MB-FH: Provide annual review with community and industry stakeholders on how the code is working in practice. Develop a community advisory committee for code implementation over the next few years. Propose to Council that KZC 95 is brought back for necessary amendments at 12, 18 and 24 months based on staff/stakeholder feedback? - Open for discussion. May be added to Planning Dept Work Plan.
NOT SUPPORTED BY PC	“Borrow” against future tree removals – as previously discussed, the City can’t track “borrowed” removals on its permit database. “Borrowing” against future tree removals doesn’t meet intent of code to slow canopy loss. Staff is concerned with abuse of rules by developers, who are already incentivized to cut trees prior to filing permits. The draft code partially closes loophole with a 12-month delay on permit filing. Need to discuss consequences of Landmark/best tree removed from potential development sites then waiting 13 months to file permits.
	Continue to allow “phased” development tree removal in addition to the Integrated Development Plan review (IDP) as an option – Tree removals that occur with multiple development phases often resulting in the public perception of “saved” trees getting removed. IDP requires tree retention decisions made early in the SPL/SUB design process, when access roads and utilities are planned. MBAKS would like to retain phased review for short plats (<10 lots) while allowing larger builders to use IDP. This is not an area of agreement between stakeholders

MBAKS-FHNA Stakeholder Group

Tier 1/Tier 2 Code Concepts

Revised July 11, 2019

<i>Tier 1 General Principles</i>		
LOCATION – anywhere on a development site except within Tier 1 building footprint guaranteed area SIZE – Landmark tree = 30” dbh GROVES – 3 or more trees with one 30” dbh or 5 or more trees with one 24” dbh CONDITION – good-excellent condition per industry standards CREDITS – per PC direction 7/11/19, Landmark trees/groves must be retained regardless of credits REPLANTING STANDARD – per PC direction 7/11/19, replanting is triggered when retained trees do not meet/exceed 30 tree density credits per acre (current code)		
<i>The applicant is guaranteed...</i>	<i>The applicant shall pursue/City will require these site plan alterations to retain Tier 2 trees...</i>	<i>...and the City has the authority to vary these development standards...</i>
General support for 40’ wide front facade x 36’ deep building pad, with an attached 20’ x 20’ allowed behind that pad. The 20’ x 20’ pad can shift from side-to-side. Total pad length is 56-60’ deep. This is based on feedback on garage locations, standard room sizes and access to rooms behind garage. No adjustments are made for larger lots by area. Maximums allowed by the applicable zoning for: - FAR - Lot coverage - Density	<u>Site plan modifications</u> - Flip (mirror) house and driveway configuration 10’ front setbacks, 5’ rear setbacks - Selection of side yard setbacks (5’ min/15’ total) - Design deck, patio, paths to retain trees - Relocate utilities when it’s an option with PW approval - Avoid rockery, retaining wall locations in Tier 1 CRZs - Shore basements and other extensive excavations - Cantilever structures over CRZs <u>Shortplat/subdivision alterations</u> - Cluster houses/lots - Reroute access roads - Relocate utilities as applicable (see above) - Rearrange property lines (same as clustering) <u>Arboricultural methods</u> - Air spade excavations - Bore/tunnel under CRZs rather than trench - Additional CRZ protection (plywood, steel, mats, etc.)	<u>Site plan modifications</u> 10’ front/5’ rear setbacks - Modify garage width limits 18’ x 18’ parking pad limits - Parking pads designed to retain Landmarks - Modify ROW frontage improvement requirements (no landscape strip, etc.) - Building height limitations per PC direction 5/23/19 <u>Shortplat/subdivision alterations</u> - Allow 3’ side yard setbacks with internal lots - Reduce lot size when clustering, while allowing full FAR & lot coverage through averaging

<i>Tier 2 General Principles</i>		
LOCATION – within setbacks SIZE – 6” dbh or greater CONDITION - in good/excellent health and structure per industry standard but will be clearly defined for greatest predictability. Includes: - Windfirm if isolated (or remains as part of a grove) - No “weed trees” such as cottonwood or alder per Prohibited Plant List (doesn’t apply in critical areas/buffers) CREDITS – per PC direction 5/23/19 no credit quotas apply to require removal of Tier 2 trees REPLANTING STANDARD - replanting is triggered when retained trees do not meet/exceed 30 tree density credits per acre per current code. May use table format for # trees per lot size. Incentivize replanting large/native conifers by awarding additional credits.		
<i>To retain Tier 2 trees, the applicant is guaranteed...</i>	<i>To retain Tier 2 trees, the applicant shall pursue/City will require these site plan alterations...</i>	<i>...and the City has the authority to vary these development standards...</i>
A 50’ by 50’ building pad, setbacks allowing. For front facades wider than 50’ (setbacks allowing), less 10% of the distance between side setbacks (i.e. – with a 70’ lot with two 5’ side setbacks and a 60’ front façade, applicant reduces front facade width by 6’ to an allowed 54’ width) Maximums allowed by the applicable zoning for: - FAR - Lot coverage - Density	<u>Site plan modifications</u> - Shift or flip (mirror) building footprint/driveways - Selection of front and side yard setbacks (5’ min/15’ total) per applicable zoning requirements - Shift the building footprint on the lot to take advantage of the setback modifications/reductions allowed - Redesign deck, patio, path for tree retention - Avoid retaining wall/rockeries where possible <u>Arboricultural methods</u> - Bore for utilities less than 2” diameter	<u>Site plan modifications</u> - Reductions of front yard setbacks by 5’ and rear yard setbacks that are not directly adjacent to another parcel’s rear yard but that are adjacent to an access easement or tract by 5’ - Modify garage requirements to allow “snout house” designs - Modify ROW frontage improvement requirements (no landscape strip, etc.) with PW approval <u>Shortplat/subdivision alterations</u> - Reduce lot size when clustering, while allowing full FAR & lot coverage through averaging

KZC Code Comparison: Current Tree Code to Draft Code Proposals

Random sampling of 22 recently-issued SFR developments

Revised January 9th, 2019

BP #	Property Size (Sq. Ft.)	Under current KZC 95			Under Stakeholder's tree retention approach			+/- Retained Trees	+/- Retained Groves	+/- Retained Trees >30" dbh
		High /Moderate/Low Retention Values+current grove definition			Landmarks + 50 credits per acre quota+increased grove qualification					
		Trees retained	Groves retained	Trees >30" dbh retained	Trees retained	Groves retained	Trees >30" dbh retained			
5491	7,560	0	0	0	0	0	0	0	0	0
7677	7,701	0	0	0	0	0	0	0	0	0
5718	7,235	1	0	1	1	0	1	0	0	0
6307	32,612	6	1	3	3	1	3	-3	0	0
7533	8,500	6	1	1	5	1	1	-1	0	0
7358	7,232	19	2	0	2	0	0	-17	-2	0
604	7,640	6	1	1	4	1	1	-2	0	0
6345	7,290	4	1	0	1	0	0	-3	-1	0
6810	7,252	3	0	1	1	0	1	-2	0	0
792	9,115	3	1	1	3	1	1	0	0	0
4584	5,444	4	1	0	1	0	0	-3	-1	0
2800	7,644	1	0	0	1	0	0	0	0	0
603	6,980	5	0	0	1	0	0	-4	0	0
7055	5,544	4	0	1	2	0	0	-2	0	-1
4380	12,266	2	0	1	1	0	1	-1	0	0
4585	4,752	2	0	0	2	0	0	0	0	0
6258	8,963	1	0	0	0	0	0	-1	0	0
5851	8,142	5	0	0	0	0	0	-5	0	0
4799	9,181	6	0	0	0	0	0	-6	0	0
488	8,024	4	0	1	2	0	0	-2	0	-1
1336	7,200	4	1	2	4	1	2	0	0	0
4622	6,065	0	0	0	0	0	0	0	0	0
	Totals	86	9	13	34	5	11	-52	-4	-2

Under Planning Commission draft KZC 95			+/- Retained Trees	+/- Retained Groves	+/- Retained Trees >30" dbh
Tier 1 and 2 building envelopes, specific site plan alterations/variations to development standards, groves as 3 @ 12" DBH					
Trees retained	Groves retained	Trees >30" dbh retained			
0	0	0	0	0	0
0	0	0	0	0	0
2	0	1	1	0	0
5	1	3	-1	0	0
6	1	1	0	0	0
16	1	0	-3	-1	0
5	1	1	-1	0	0
4	1	0	0	0	0
2	0	1	-1	0	0
3	1	1	0	0	0
2	0	0	-2	-1	0
1	0	0	0	0	0
5	0	0	0	0	0
2	0	0	-2	0	-1
2	0	1	0	0	0
2	0	0	0	0	0
0	0	0	-1	0	0
0	0	0	-5	0	0
0	0	0	-6	0	0
2	0	0	-2	0	-1
4	1	2	0	0	0
0	0	0	0	0	0
63	7	11	-23	-2	-2

Observations: Under the current KZC 95 tree code, an additional 52 trees and 4 groves were retained in comparison to the Stakeholder approach.

Under the current KZC 95 tree code, an additional 23 trees and 4 groves were retained in comparison to the Planning Commissions draft code.

Tree condition ratings have now been included in the analysis. "Fair" condition trees have been excluded for retention under Stakeholder and Planning Commission drafts. The results are that some retained groves are smaller with fewer trees and two landmark trees that have been retained under current code would be eligible for removal.

Amendments to Kirkland Zoning Code Chapter 95
Effects of Proposed Code Changes - Compared to Current Code

Attachment 4

 No change, tree retention or tree removal
  Greater tree retention on development sites, less homeowner tree removals
  Less tree retention on development sites, greater homeowner tree removals
  Unknown or untested

	PROPOSED CODE	STAKE-HOLDER ¹	WHAT WILL THE PROPOSED CODE DO?	DOES THE CURRENT CODE ADDRESS THE ISSUE?	CANOPY EFFECT ²	ANTICIPATED RESULT ³
Development Requirements	<i>Tier 1 - Landmark tree</i>	✓	Protect 30" dbh (trunk diameter) trees in good-excellent health	Yes; retains 30" dbh trees where practicable	○	o No change in tree retention on typical sites + Retention may be improved on clustered short plats/subdivisions & large lots
	<i>Tier 1- Grove</i>	✓	Redefine groves by quantity and size: 3 or more trees with one 30" dbh minimum tree, or 5 or more trees with one 24" dbh minimum tree	Yes; without size or number limits	↓	- Grove size requirements will result in retaining largest/oldest tree stock and replanted new trees, rather than retaining evenly-diverse tree ages/sizes.
	<i>Tier 2 trees</i>	✓	Retain trees in good-excellent condition located in setbacks	Yes; using "high retention value" trees in setbacks definition	↓	+ Greater code clarity with condition ratings - Slightly less tree retention without "Moderate Retention Value" tree protection
	<i>Tree condition ratings</i>	✓	Define trees' health/structure, retain "good-excellent" trees only	No; current definitions are considered too subjective	↓	+ Greater code clarity with specific tree condition ratings - Significantly less tree retention without "Fair" tree protection
	<i>Building envelope dimensions</i>	✓	Guarantees development rights using specific building envelopes: Tier 1: 40'w x 40'd with contiguous/shifting 20'w x 20'd Tier 2: 50'w x 50'd footprint, or Building facades greater than 50'w: the maximum footprint shall be less 10% a distance between side setbacks, etc.	Yes; but simply focuses on retaining trees in setbacks	○	+ Greater predictability for developers - Increased code complexity for all - Increased code text - Increased difficulty at development feasibility phase - Increased design/review time applying 2 building envelope dimension standards
	<i>Extent of tree retention requirements</i>	✓	Specify requirements for: Site plan alterations (building design and configuration on lot) Tree retention/protection methods	No; current "retain if feasible" or "to the maximum extent possible" language is considered too subjective	○	+ Greater predictability for developers + Greater code clarity
	<i>Code flexibility elsewhere</i>	✓	Allow variations to other codes/standards to retain trees	No; current "retain if feasible" or "to the maximum extent possible" language is considered too subjective	○	+ Greater predictability for developers + Greater code clarity
	<i>Retention & replanting priorities</i>	----	Clarify priority of requirements: 1-retain, 2-plant on site, 3-plant offsite, 4-payment in lieu of planting	Yes	○	+ Greater predictability for developers + Greater code clarity
	<i>Integrated Development Plans (IDP)- Tree retention decisions upfront with shortplat & subdivision design</i>	FHNA	Eliminate phased development review process Limit tree removals that occur at various permit stages Streamline modification section of code Require Planning Director decision for modifications	Yes; however, IDP is optional and modifications require Hearing Examiner decision	↑	+ Greater predictability for developers + Greater awareness of tree protection and removals upfront for all + More information available to neighbors + Greater successful tree retention with early planning
	<i>No credits for arborvitae</i>	✓	Prevent excessive use of arborvitae planted on development sites in response to field study findings	No; arborvitae is currently eligible for tree density credits when planted as replacement trees	?	+ Supplemental tree planting that best meets code intent
Homeowner Tree Removals	<i>No landmark tree removal</i>	FHNA	Prohibit removal of 30" dbh trees unless hazard/nuisance (permit)	No	↑	+ Protects iconic landmark trees before and after development
	<i>Tree removals per lot size</i>	----	Allow without a permit: 2 removals for lots <10,000 sq ft 4 removals for lots 10,000-20,000 sq ft 6 removals for lots >20,000 sq ft >6 removals with Forest Management Plan for lots >35K NEW: require same number of remaining trees as allowed for removal as a trigger for replacement trees	Yes, but currently limited to 2 tree removals every 12 months on any size property. Replacements are triggered with the removal of the last 2 trees on the property.	↓	+ More equitable across different property sizes - Greater tree removal at one time on larger properties
	<i>Prevent preemptive tree removals</i>	----	Cannot submit development permits for 12 months following tree removal Prohibit girdling, define tree removal by "felling"	No	↑	+ Less preemptive removals + Equitable code compliance + Prevention of hazard trees
	<i>Hedge removal</i>	----	Allow tree removal for overgrown hedges if the number of trees is greater than allotted per property size Replacements required.	No	↓	- Greater number of allowed tree removals at one time
	<i>Authority to order removal of severely infected trees</i>	----	Lessen massive tree failure from disease/pest outbreak	No	○	n/a - preventative (ie: Dutch Elm/Emerald Ash Borer)

Attachment 4

○ No change, tree retention or tree removal

↑ Greater tree retention on development sites,
less homeowner tree removals

↓ Less tree retention on development sites,
greater homeowner tree removals

? Unknown or untested

Prior Discussion Topics

APPROACH	STAKEHOLDER ¹	WHAT WOULD THIS APPROACH DO?	DOES THE CURRENT CODE ADDRESS THE ISSUE?	CANOPY EFFECT ²	ANTICIPATED RESULT ³
<i>Establish a 50 credit per acre quota</i>	MBAKS	Allow tree removal at applicants' discretion upon reaching a 50 credit per acre quota	No; retain to meet or exceed 30 credits per acre with trees in setbacks (areas with greatest success for retention)	↓	- Significantly less trees and density credits retained
<i>Increase planting requirements</i>	✓	Increase planting standard from 30 to 50 tree credits per acre (9 new trees on an average 7,500 square foot lot)	Yes; current standard is 30 credits per acre (5 new trees on 7,500 square foot lot)	↑	+ Long-term gains in canopy cover ⁴ may be achieved, however overcrowding and poorly-located new trees likely result in nuisance/hazard trees within 10 years
<i>Require native/conifer tree species</i>	FHNA	Require native trees, particularly conifers be planted to meet tree credits	Yes; through an incentive (not requirement) that awards 1.5x tree credits to retain native conifers	?	o Greater stormwater benefits are achieved with the retention of existing conifers versus planting new trees (regardless of type or species) o Plant with species diversity objectives, (avoid invasive vegetation)
<i>No protection for Tier 1 groves</i>	MBAKS	Eliminate grove protection covenant altogether	Yes; in addition, staff has accommodated MBAKS with Modest code changes to the grove easement Redefined legal description (2017) Replaced easement with covenant as legal instrument	↓	- Tier 1 Landmark/Grove trees not protected if grove covenant is eliminated - Subsequent property owners will have no awareness of covenant
<i>Public tree management goals</i>	✓	Identify and implement efforts to increase canopy cover on municipal property (parks and right-of-way)	No; Kirkland Zoning Codes regulate land use and development on private property	↑	+ Long-term gains in canopy cover ⁴ can be achieved by maintaining, protecting and planting public trees per the 2018 Canopy Assessment & Urban Forest Strategic Management Plan
<i>Increase tree protection enforcement and inspections</i>	FHNA	Reduce on-site incidents that result in tree/root damage	Yes; however, project sequencing could be addressed	?	o Could increase enforcement and inspections when resources are available o Could increase penalty fines, especially with repeated offenses
City Council items?					
City Council items?					
City Council items?					

¹STAKEHOLDER - code provisions that a stakeholder group collaboratively developed/have reached consensus agreement on. The stakeholder group consists of self-appointed members from Master Builders of King and Snohomish Counties, Finn Hill Neighborhood Alliance and others. Individual groups' support is noted where applicable.

²CANOPY EFFECT - as observed in the analysis of 22 recently-issued Single Family development permits in Attachment 4 using the current tree code as a baseline for comparison.

³ANTICIPATED RESULT – (o) No or negligible, (+) Positive, (-) Negative change based on the analysis in Attachment 4.

⁴Long-term canopy gains refer to tree growth in approximately 20 years; however, canopy cover in Kirkland is analyzed in 7 to 8-year cycles.

Revised October 28, 2019



CITY OF KIRKLAND
Planning and Building Department
123 5th Avenue, Kirkland, WA 98033
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MEMORANDUM

To: Kirkland Planning Commission

From: Houghton Community Council

Date: December 4, 2019

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

INTRODUCTION

The Houghton Community Council (HCC) respectfully submits our recommendations to the Kirkland Planning Commission for amendments to Kirkland Zoning Code Chapter 95 - Tree Management and Required Landscaping. The HCC has considered all of the thoughtful public testimony received over the course of this project, both in writing and at the November 5th public hearing. In particular, the HCC extends our thanks to the stakeholder group comprised of the representatives the Master Builders of King and Snohomish County, the Finn Hill Neighborhood Alliance, and other dedicated Kirkland residents for their many hours of work aimed at improving Kirkland's tree regulations.

Early in the amendment process, the HCC, in collaboration with the Planning Commission, developed the following guiding principles for our analysis of the Chapter 95 code amendments.

1. Strive to achieve a healthy, resilient urban forest with a 40 percent 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 code easier to implement

The guiding principles acknowledge the goal of a 40% tree canopy cover for our city. They also recognize that our regulation of tree canopy must strike a balance with our citizens' ability to enjoy their homes, and to allow new development within our city with reasonable restrictions that are predictable and consistently applied. We support the "Right Tree, Right Place" philosophy of the Arbor Day Foundation, among others. This includes an expectation for the city to promote tree canopy in all its land uses, and not place a disproportionate burden on single-family residential property, particularly new development.

The HCC finds that, with the recommended changes noted below, the proposed amendments are generally consistent with these principles.

KEY ISSUES

We do call attention to provisions in the draft code that are of particular concern to the HCC. Based on our deliberations, these are regulations that the HCC finds contrary to our guiding principles and adoption of these regulations may be cause for the HCC to exercise our disapproval jurisdiction pursuant to KMC 1.12 and KZC 160.95. The following provisions of the draft code rise to that level of concern:

Prohibition of landmark tree removal on properties not being developed (Section 95.23.5a).

HCC Concern: We believe that Kirkland should not force citizens to retain a tree that seriously conflicts with their desire for sunlight for gardening, views, solar energy or simply the mental and physical benefits of sunlight. To do so will cause citizens to resent our city government, and may well lead some to remove trees preemptively to avoid their regulation.

Retention of Tier 2 trees without a cap or quota establishing the maximum number of tree credits a developer is expected to retain.

HCC Concern: Providing an objective, predictable process for determining the trees that must be retained for development has been a primary objective in improving Kirkland's tree regulations. We are convinced that the only effective way to achieve this is through a quantifiable tree credit quota system.

RECOMMENDATION

The HCC recommends that the Planning Commission incorporate the following changes to the draft code. We would note that, with the exception of the Key Issues highlighted above, most of these recommendations are intended as clarifications to make the code easier to read and implement and are supported by staff.

- A. Draft Code Version:** As discussed at the public hearing with the Planning Commission, staff accepted edits from HCC members and Planning Commissioners that might improve the clarity and administration of the draft code without changing the substance or intent of the draft. To that end, HCC member Neal Black provided detailed suggestions for improvements to the draft code. Councilmember Black's suggestions have been reviewed and endorsed by both the HCC and staff and have been used by the HCC in our deliberations as the baseline version of the code. HCC and staff recommend that this improved version of the code be used by the Planning Commission as their working draft as well.
- B. Recommended Amendments:** The HCC recommends the following additional amendments to the draft code:

1. 95.10 Definitions:

95.10.4 DBH – For trees with multiple trunks, strike “a cumulative sum” of multiple trunks in favor of the industry standard formula. The industry standard is the square root of the sum of the DBHs squared. Add a provision for the calculation of DBH of multi-trunked trees that only stems of at least three (3) inches diameter at 4.5 feet height above average grade shall be included in the calculation.

95.10.16a Grove – Strike “provided that groves will not be deemed Hedge trees,” add language to ensure that groves preserved through development (KZC 95.51.3) cannot be removed as hedges

95.10.16c Hedge Trees – Add language to the end of the second sentence so that it reads “A Hedge will not be deemed a Grove or comprise regulated trees.”

2. 95.23 Tree Pruning and Removal on Private Property in the Absence of Development Activity:

95.23.5a- Do not prohibit landmark tree removal

95.23.5d - Strike “with notification” from the table to clarify that notification is not a requirement for these tree removals

95.23.7 - Preemptive language should only apply to the removal of landmark trees rather than the more broadly defined regulated trees

3. 95.30 Tree Retention Associated with Development Activity

95.30.2a – Modify the threshold for triggering a Tree Plan review with remodels/additions so that it is triggered with a 50% increase in the footprint rather than a 50% increase in the total square footage of improvements. This would recognize that upper story additions may not have impacts on trees.

95.30.4.a1 – Change “...in combination with...” to “...in addition to...” to clarify that the 20’x20’ footprint is additive to the 40’x40’ footprint

95.30.4.b – Establish a 50 tree credits per acre quota which may determine retention of Tier 2 trees. This would allow any existing Tier 2 trees to be removed once a quota of 50 tree credits per acre as calculated in 95.34 (including all Regulated trees) is reached. This does not allow removal of Tier 1 trees except as provided in 95.30.4.a. The proposed Tier 2 retention standards should still apply to ensure the application reaches the quota, but the trees chosen for retention to achieve the quota shall be determined by the applicant. If existing trees provide less than 50 credits per acre or necessary tree removal causes the property to fall below the 50 credit quota, then, the applicant must replant as necessary to meet a minimum of 30 credits per acre. When adopted, this section would require integration with other requirements of the draft code.

95.30.7 – Clarify that the intent is not to decrease the allowed FAR and

Maximum Lot Coverage for clustered short plats and subdivisions

4. 95.32 Tree and Soil Protection During Development Activity

95.32.1–Delete this section because as it is already stated in 95.23.7

95.32.3.b – Recommend that staff develop pre-approved plans as handouts to show applicants the standard for protective signs

95.32.4.a – Replace “light soils” with a more specific standard for fill over a CRZ

5. 95.34 Tree Planting Requirements Related to Development Activity

95.34.2 – Clarify that tree credits for retaining existing native conifers may exceed the cap of 11 credits due to the 1.5 times credit multiplier

95.34.2 – Recommend that staff keep a list of other non-native large conifer species that will receive the 1.5 credit to add predictability
Table 95.34– Replace the term “Significant Trees” in the Title with the current term “Regulated Trees”. Add “and above” to the 30” DBH category for clarification

95.34.5.b – For off-site planting of required tree credits, require a 5-year preservation agreement rather than preservation “in perpetuity”

6. 95.44 Internal Parking Lot Landscaping Requirements

95.44.1 – Develop more robust parking lot landscaping requirements. This will accomplish the following objectives:

Ensure that trees in parking lots will have more space to mature than the current small landscape islands

Trees will have a more meaningful contribution to reducing the heat island effect from large parking lots

Large commercial and multifamily parking lots will contribute more meaningfully to the City’s canopy goals

The Community Council would ask the Planning Commission to consider requirements and incentives, potentially including parking reductions, to achieve these objectives.

7. 95.50 Installation Standards for Required Parking

95.50.12 – Clarify to read as follows: “Final Inspections – These requirements shall be completed prior to final inspection.”

CONCLUSION

The Houghton Community Council appreciates the dedication of the Planning Commission, community members, and staff in improving the City’s tree regulations. We hope that all of our collaborative efforts will produce a tree code that will serve as a model for other communities to manage their urban tree canopy.

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 (consolidated)
95.23	Tree Pruning and Removal on Private Property in the Absence of Development Activity (consolidated)
95.25	Sustainable Site Development (moved/consolidated)
95.30	Tree Retention Associated with Development Activity
95.32	Incentives and Variations to Development Standards (moved/consolidated)
95.32	Tree and Soil Protection during Development Activity (moved)
95.33	Tree Density Requirement
95.34	Tree Planting Requirements Related to Development Activity (moved/consolidated - previously “Tree Density Requirement” and “Supplemental...”)
95.40	Required Landscaping Based on Zoning District
95.41	Supplemental Plantings
95.42	Minimum 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 ~~Natural Resource Management Plan~~ **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 (note that all definitions related to the size, condition, arrangement, number in a group, etc. are consolidated under “tree” below)

- 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 ~~American Association of Nurserymen~~ **industry** standard for trunk measurement of nursery stock, **applicable to required replacement trees.** Caliper shall be the trunk diameter measured six (6) inches above the ground ~~for up to and including 4-inch caliper size and 12 inches above the ground for larger sizes.~~
 - 2. Critical Root Zone (CRZ) –~~The area surrounding a tree at a distance from~~ **encircling the trunk which is of a tree** equal to one (1) foot radius for every inch of DBH ~~trunk diameter measured at 4.5 feet from grade or otherwise determined by a qualified professional (example: one (1) foot radius per one (1) inch 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 from the ground~~ **above average grade. DBH is also known as Diameter at Standard Height (DSH). For trees with multiple trunks at 4.5 feet height, only trunks 3" DBH or greater shall be included. Where a tree splits into several trunks close to ground level, the DBH for the tree is the square root of the sum of the DBH for each individual stem squared (example with 3 trunks: DBH = square root [(stem1)² + (stem2)² + (stem3)²]). 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.
 - 6. Impact – A condition or activity that **adversely** affects **any** part of a tree, including, **but not limited to**, the trunk, branches, or CRZ.

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.
- ~~x. Limit of Disturbance – The boundary between the protected area around a tree and the allowable site disturbance as determined by a qualified professional measured in feet from the trunk. (redefined as Tree Protection Zone)~~
- ~~x. Public Works Official – Designee of the Public Works Director.~~
8. 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.
9. 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.
- ~~x. Retention Value – The Planning Official’s designation of a tree based on information provided by a qualified professional that is one (1) of the following:~~
- ~~a. High, a viable tree, located within required yards and/or required landscape areas. Tree retention efforts shall be directed to the following trees if they are determined to be healthy and windfirm by a qualified professional, and provided the trees can be safely retained when pursuing alternatives to development standards pursuant to KZC 95.32:~~
- ~~1) Specimen trees;~~
- ~~2) Tree groves and associated vegetation that are to be set aside as preserved groves pursuant to KZC 95.51(3);~~
- ~~3) Trees on slopes of at least 10 percent; or~~
- ~~4) Trees that are a part of a grove that extends into adjacent property, such as in a public park, open space, critical area buffer or otherwise preserved group of trees on adjacent private property. If significant trees must be removed in these situations, an adequate buffer of trees may be required to be retained or planted on the edge of the remaining grove to help stabilize;~~
- ~~b. Moderate, a viable tree that is to be retained if feasible; or~~
- ~~c. Low, a tree that is either (1) not viable or (2) is in an area where removal is unavoidable due to the anticipated development activity.~~
- ~~x. Significant Tree – A tree that is at least six (6) inches in diameter at breast height (DBH) as measured at 4.5 feet from the ground.~~
10. Significantly Wooded Site – A subject property that has a number of significant trees with Crowns that, when outlined in aerial imagery, cover at least 40 percent of the total area of the property.
11. 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.
- ~~x. Specimen Tree – A viable tree that is considered in very good to excellent health and free of major defects, as determined by the City’s Urban Forester.~~
12. 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.
13. 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.
14. 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) removal of at least half of the live crown 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.
15. 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 significant Regulated Trees with overlapping or touching Crowns, each with a minimum 12-inches DBH, in excellent or good condition per KZC.95.30.3; provided, that groves preserved through development per KZC 95.51.3 shall not be removed as hedges.
- b. Hazard Trees –A tree that meets all the following criteria:

~~A tree with a combination of structural defects and/or disease which makes it subject to a high probability of failure;~~

~~Is in proximity to moderate to high frequency targets (persons or property that can be damaged by tree failure); and~~

~~The hazard condition of the tree cannot be lessened with reasonable and proper arboricultural practices nor can the target be removed.~~

- 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 and trees within a hedge will not be deemed regulated trees.
- 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 or from naturally-occurring events such as wind, ice or snow-loading.
- 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. Significant Regulated Tree – A tree that is at least six (6) inches DBH as measured at 4.5 feet from the ground 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 – (current code: “High Retention Value” 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). Tree retention efforts shall be directed to the following trees if they

are determined to be healthy and windfirm by a qualified professional, and provided the trees can be safely retained when pursuing alternatives to development standards pursuant to KZC 95.32...

x. ~~Viable Tree~~ — A significant tree that a qualified professional has determined to be in good health, with a low risk of failure due to structural defects, is windfirm if isolated or remains as part of a grove, and is a species that is suitable for its location.

- 16. Wildlife Snag – The remaining trunk of a tree that is intentionally reduced in height and usually stripped of its live branches.
- 17. 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 and/or require that replacement trees and vegetation be replanted as mitigation.
- 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 (consolidated/reorganized)

- 1. Public Tree Removal. ~~No person~~ Other than City crews, no person, directly or indirectly, shall remove any significant tree on any property within the City 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 subsection (5) of this section falls within one of the exceptions set forth in subsection (b) below related to Street Trees.
 - b. It is the responsibility of the abutting adjacent property owner to maintain Street Trees abutting their property, which may include minor pruning of up to one and a half (1.5)-inch diameter branches for sidewalk clearance; watering, and mulching. ...the abutting property owner shall apply for a permit by filing a written application with the City. A Public Tree pruning permit is required to trim, modify, alter, or substantially prune branches of a Street Tree more than one and a half-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 Not Associated with in the Absence of Development Activity (consolidated/reorganized)

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.
- 2. Tree Pruning on Private Property. ~~A permit is not required to prune trees on private property. Pruning which results in the removal of at least half of the live crown will be considered tree removal and subject to the provisions in KZC 95.23.~~

~~Tree topping is not allowed. If a tree required by this chapter is smaller than six (6) inches in diameter and is topped, it must be replaced pursuant to the standards in Chapter 1.12 KMC. If a tree six (6) inches or larger in diameter is topped, the owner must have a qualified professional develop and implement a 5-year restoration pruning program.~~

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 (reorganized). ~~The Planning and Building Department and Public Works Department shall establish and maintain~~ make available a tree removal permit application form. ~~to allow property owners to request... Applicants requesting to remove trees must~~ Property owners required by this chapter to obtain a tree removal permit shall submit a completed permit application for City review of tree removal for compliance with applicable City regulations. The tree removal permit application form shall include 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 size 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 the new each replacement tree to be planted on the subject property, in accordance to the standards with the tree replacement requirements set forth in KZC 95.23.8.
- 5. Tree Removal Allowances (reorganized). Any private property owner of developed property may remove a specified number of up to two (2)-significant Regulated trees from their property within a 12-or 24-month period based on the table below without having to apply for a tree removal permit; provided, that:
 - a. The trees are not Landmark Trees;
 - b. The removal of a Landmark Tree has not occurred within 24 months;
 - c. 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; 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;
 - d. There is no active application for development activity for the subject property;
 - e. The trees were not required to be retained or planted as a condition of previous development activity per KZC 95.40, 95.42-45;
 - f. All the additional standards for tree replacement described in KZC 95.23.8 are met.

Table x Tree Removal Allowances

Lot Size	Maximum number of allowed Regulated Tree removal every 12 months	Minimum number of Regulated Trees that must remain (see also 95.30.9.e)
Lots up to 10,000 sq. ft.	2	2
Lots 10,000 to 20,000 sq. ft.	3	3
Lots 20,000 sq. ft. or greater	4	4
Lots greater than 35,000 sq. ft	May remove more than 6 trees with a Forest Management Plan	To be determined through review of the 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, to remove Landmark trees 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 or a period of 24 months following the most recent removal of a Landmark 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 (reorganized).

~~x. Tree Retention. For single-family homes, cottages, carriage units, two/three-unit homes, two (2) trees shall be required to remain on the subject property (replaced with e below).~~

a. Tree Replacement. For every Regulated Tree that is removed and is not required to remain based on subsection (5)(b)(1) of this section, the City encourages the planting of a replacement tree that is appropriate to the site.

b. ~~Street~~ Public Trees. For every ~~Street~~ Public Tree that is removed, the City shall require a minimum one-for-one tree replacement in a suitable location.

x. (Placeholder for Landmark tree replacement standards)

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 site subject property and in locations on the subject property that are suitable. For the removal of one (1) or more of the last three (3) 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 four (4) 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 circumstance, uses not listed in subsection (5)(b)(1) of this section, a tree removal permit is required 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 nuisance or hazard condition is not obvious 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 imminent extreme (“extreme” is the proper terminology for the highest risk rating per the revised Manual) 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 Critical Areas or Critical Areas Buffers. See Chapter 90 KZC.~~ Trees in Wetlands, Streams, or their Buffers. See Chapters 85 and 90 KZC. (section moved from KZC 90)

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 in close proximity to where the removed tree was located 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 in which removal of more than two (2) trees is requested 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 ~~critical areas~~ **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 ~~healthy~~ 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 ~~for such management~~.
- 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.**

~~95.25 Sustainable Site Development~~ *(consolidated, moved to section 95.30.6b)*

95.30 Tree Retention Associated with Development Activity *(reorganized)*

~~Introduction. The City's objective is to retain as many viable trees as possible on a developing site while still allowing the development proposal to move forward in a timely manner. To that end, the City requires approval of a tree retention plan in conjunction with all development permits resulting in site disturbance and for any tree removal on developed sites not exempted by KZC 95.20. This section includes provisions that allow development standards to be modified in order to retain viable significant trees.~~

~~In order to make better decisions about tree retention, particularly during all stages of development, tree retention plans will require specific information about the existing trees before removal is allowed. Specific tree retention plan review standards provided in this section establish tree retention priorities, incentives, and variations to development standards in order to facilitate preservation of viable trees (removed).~~

~~A minimum tree density approach is being used to retain as many viable trees as possible with new development activity. The requirement to meet a minimum tree density applies to new single-family homes, cottages, carriage units, two/three-unit homes, and new residential subdivisions and short subdivisions. If such a site falls below the minimum density with existing trees, supplemental planting is required. A tree density for existing trees to be retained is calculated to see if new trees are required in order to meet the minimum density for the entire site. Supplemental tree location priority is set as well as minimum size of supplemental trees to meet the required tree density (consolidated/moved to 95.34).~~

~~The importance of effective protection of retained trees during construction is emphasized with specific protection standards in the last part of this section. These standards must be adhered to and included on demolition, grading and building plans as necessary (removed.)~~

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 ~~concepts~~ **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 ~~components~~ **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.

~~The chart in subsection (5) of this section sets forth the tree retention plan requirements for development activities and associated tree removal. Applicants for development are encouraged to confer with City staff as early in the design process as possible so that the applicable tree planting and retention concepts can be incorporated into the design of the subject property. The Planning Official may waive a component of the tree retention plan if the Planning Official determines that the information is not necessary (removed this section and chart).~~

(Sections 2-4 reorganized)

2. Tree Retention Plan Review **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 ~~to be considered as part of that process. Based on the tree retention plan information submitted by the applicant and the Planning Official's evaluation of the trees relative to the proposed development on the subject property, the Planning Official shall designate each tree as having a high, moderate, or low retention value as defined in KZC 95.10, Definitions, for application towards the regulations in this chapter. 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 footprint 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 *(moved/consolidated)*:
 - 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 ~~Components~~ **Submittal Requirements**. Tree Retention Plans shall contain the following information ~~as specified in the chart in subsection (5) of this section~~, unless waived by the Planning Official:
 - a. A tree Inventory containing the following. 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 ~~(with corresponding tags on trees)~~ **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 **with that appear to have** ~~drip lines~~ **CRZs** extending onto the subject property ~~line~~;
 - 2) ~~Limits of disturbance (LOD)~~ **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 LOD CRZ and proposed TPZ of Regulated Trees** that appear to have ~~LODs~~ **CRZs** extending onto the subject property;
 - 3) **Size Existing Regulated Tree DBH**;
 - 4) Proposed tree ~~status~~ **removals**;
 - 5) ~~Brief general health~~ or Condition rating of **Regulated** Trees (i.e., poor, fair, good, excellent, etc.) per KZC 95.30.3, subsection (c); and
 - 6) Tree ~~type~~ **species and/or common name**.

- b. Site plan depicting the following. **The site plan must be drawn to scale** showing the following (*reorganized*):
- 1) Location of all proposed improvements, including building footprint, access, utilities, applicable setbacks **Required Yards**, buffers, and required landscaped areas clearly identified. ~~If a short plat or subdivision is being proposed and the location of all proposed improvements cannot be established, a phased tree retention plan review is required as described in subsection (6)(a) of this section;~~
 - 2) Surveyed location may be required of **Regulated** Trees on the subject property. The site plan must also show the approximate trunk location and critical root zone of **Regulated** Trees with driplines extending over the subject property line that are **potentially Impacted** on adjacent properties;
 - 3) Trees labeled corresponding to the tree inventory numbering system **per subsection (a) of this section**;
 - 4) ~~LODs~~ **CRZs** drawn to scale around all trees potentially impacted by site disturbances resulting from grading, demolition, or construction activities (including approximate LOD **CRZs** of all trees ~~of off-site trees with overhanging driplines~~ that are potentially Impacted by ~~site disturbances~~ on adjacent properties);
 - 5) Location of tree protection ~~measures~~ **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 ~~tree status~~ to be removed, noted by an ‘X’ or by ghosting out;
 - 7) Proposed locations of any ~~supplemental~~ **replacement** trees to be planted to meet tree density **credits** or the minimum number of trees as outlined in KZC 95.34.
- c. ~~An arborist~~ **Report containing of a Qualified Professional with** the following:
- 1) ~~A complete description of each tree’s health, condition, and viability. The condition rating for each Regulated Tree based on its health and structure, including Regulated Trees that appear to have driplines-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 ~~viable~~ **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 limits of disturbance~~ **TPZs** (i.e., **CRZ 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 ~~limits of disturbance protection area~~ **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) ~~For development applications~~ 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.

~~In order to retain trees, the applicant should pursue provisions in Kirkland's codes that allow development standards to be modified. 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 (*moved from deleted Tree Retention Table and current code 95.30.5 and 95.32*):

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 addition to 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).
- ~~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. 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 (current code 95.34).~~
- ~~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) ~~No required yard shall be reduced by more than five (5) feet in residential zones.~~ 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.—Requirements of the Kirkland Zoning Code may be modified by the Planning Official as outlined below when such modifications would further the purpose and intent of this chapter as set forth in KZC 95.05 and would involve trees with a high or moderate retention value (current code 95.32)~~ 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:
- MAXIMUM FRONT FAÇADE WIDTH = (DISTANCE BETWEEN REQUIRED YARDS) - (DISTANCE BETWEEN REQUIRED YARDS X 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).

~~Required Yards. Initially, the applicant shall pursue options for placement of required yards as permitted by other sections of this code, such as selecting one (1) front required yard in the RSX zone and adjusting side yards in any zone to meet the 15-foot total as needed for each structure on the site. The Planning Official may also reduce the front, side or rear required yards; provided, that:~~

- ~~a.—No required side yard shall be less than five (5) feet; and~~
- ~~b.—The required front yard shall not be reduced by more than five (5) feet in residential zones. There shall not be an additional five (5) feet of reduction beyond the allowance provided for covered entry porches;~~
- ~~c.—Rear yards that are not directly adjacent to another parcel's rear yard but that are adjacent to an access easement or tract may be reduced by five (5) feet;~~
- ~~d.—No required yard shall be reduced by more than five (5) feet in residential zones. (current code 95.30.1-3, replaced with:)~~

2) ~~...the Planning Official is authorized to require site plan alterations to retain trees with a high retention value. Such alterations include minor adjustments to the location of building footprints, adjustments to the location of driveways and access ways, or adjustment to the location of walkways, easements or utilities. (current code 95.32.5) 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. 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 (current 95.34)~~

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.

~~In order to retain trees, the applicant should pursue provisions in Kirkland's codes that allow development standards to be modified. Examples include but are not limited to number of parking stalls, right of way improvements, lot size reduction under Chapter 22.28 KMC, lot line placement when subdividing property under KMC Title 22, Planned Unit Developments, and required landscaping, including buffers for lands use and parking/driving areas. Requirements of the Kirkland Zoning Code may be modified by the Planning Official as outlined below when such modifications would further the purpose and intent of this chapter as set forth in KZC 95.05 and would involve trees with a high or moderate retention value. Required Yards. Initially, the applicant shall pursue options for placement of required yards as permitted by other sections of this code, such as selecting one (1) front required yard in the RSX zone and adjusting side yards in any zone to meet the 15-foot total as needed for each structure on the site. The Planning Official may also reduce the front, side or rear required yards; provided, that...(current code 95.32) 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. ~~Modifications to General Landscaping Requirements~~ **Tree Retention Plan Review Standards for Development of Multifamily, Commercial, Mixed Use, and Cottage/Carriage Development.**

~~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 (previous 95.46.2).~~

~~In order to retain trees, the applicant should pursue provisions in Kirkland's codes that allow development standards to be modified. Examples include but are not limited to number of parking stalls, right of way improvements, lot size reduction under Chapter 22.28 KMC, lot line placement when subdividing property under KMC Title 22, Planned Unit Developments, and required landscaping, including buffers for lands use and parking/driving areas.~~

~~Requirements of the Kirkland Zoning Code may be modified by the Planning Official as outlined below when such modifications would further the purpose and intent of this chapter as set forth in KZC 95.05 and would involve trees with a high or moderate retention value (current code 95.32)~~

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.

~~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. 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. (current code 95.34.3)~~

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. ~~Common Recreational Open Space. Reductions or variations~~ **Reduce or vary the area**, width, or composition of any required common recreational open space ~~may be granted;~~
- 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. ~~All activities regulated by this chapter shall be performed in compliance with the applicable standards contained in this chapter, unless the applicant demonstrates that alternate measures or procedures will be equal or superior to the provisions of this chapter in accomplishing the purpose and intent of this chapter as described in KZC 95.05. Examples of sustainable site development include building placement with minimal site impact, habitat protection, water conservation, heat island reduction, storm water flow runoff control and water quality, and utilization of the site's natural services such as solar and wind.~~

~~Applicants requesting alternative compliance shall submit a site assessment report prepared by a qualified professional detailing how the proposed alternative measures will be equal or superior to the benefits provided by the established trees to be removed. Qualifying projects shall implement sustainable site development strategies throughout the construction process as well as contain measurable performance standards for the techniques used. Examples of sustainable site development include building placement with minimal site impact, habitat protection, water conservation, heat island reduction, storm water flow runoff control and water quality, and utilization of the site's natural services such as solar and wind. (previous 95.25)~~

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 (in response to PC/HCC requests to further clarify this section, the order of prior revisions has been changed).**

~~For lots created through a short subdivision, subdivision, or planned unit development with an approved Tree Retention Plan, the applicant must comply with the Tree Retention Plan approved with the short subdivision, subdivision, or planned unit development unless subsection (6)(a) of this section, Phased Review, applies (previous 95.30.c5)~~

~~a. Phased Review.~~

- 1) ~~If during the short plat or subdivision review process the location of all proposed improvements, including the building footprint, utilities, and access, was not able to be established, the applicant may submit a Tree Retention Plan that addresses trees only affected by the known improvements at the time of application. Tree removal shall be limited to those affected areas.~~
- 2) ~~A new Tree Retention Plan shall be required at each subsequent phase of the project as more information about the location of the proposed improvements is known subject to all of the requirements in this section.~~

~~3) Phased review of Tree Retention Plans is not permitted in the Holmes Point Overlay zone. In the HPO zone, subdivision or short plat applications shall provide a comprehensive review of Tree Retention Plans as outlined in subsections (2) through (5) of this section.~~

~~For lots created through a short subdivision, subdivision, or planned unit development with an approved Tree Retention Plan, the applicant must comply with the Tree Retention Plan approved with the short subdivision, subdivision, or planned unit development unless subsection (6)(a) of this section, Phased Review, applies. (previous 95.30.6a)~~

~~For Tree Retention Plans approved during the short plat or subdivision review process that established the location of all proposed improvements, including the building footprint, utilities, and access... (previous 95.30.6b)~~

a. **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 subject property is entitled to maintain the total aggregate maximum Floor Area Ratio (FAR) and Maximum Lot Coverage that would otherwise be permitted for the subject property under a conventional short plat or subdivision. The maximum FAR and/or Maximum Lot Coverage requirements may be adjusted proportionate to the Lot Size reduction(s), provided there is no net increase in the aggregate FAR and/or aggregate Lot Coverage otherwise allowed for the subject property.

~~The applicant shall submit a Tree Retention Plan that includes the components identified in the following chart based on the proposed development activity...prior to short plat or subdivision recording (previous 95.30.5(5))...~~**The variations and resultant restrictions shall be included in a recorded agreement and binding on future owners of the lots.**

b. ~~Modifications. Modifications to Tree Retention Plan for Short Plats and Subdivisions. A Tree Retention Plan modification request shall contain information as determined by the Planning Official based on the requirements in subsection (5) of this section, Tree Retention Plan.~~ **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.

c. ~~Public Notice for Modifications. The Hearing Examiner~~ **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 ~~Hearing Examiner~~ **Planning Director**. Said comment period shall not be less than 14 calendar days *(previous 95.30.6b(3))*. The fee for processing a modification request shall be established by City ordinance *(previous 95.30.6b)*.

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. **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.
2. ~~Protective Barrier~~ **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 ~~along~~ **at** the approved ~~Limits of Disturbance~~ **TPZ** 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 ~~place~~ **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 ~~protected zone~~ **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.
3. **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 **in compliance to ANSI A300 Part 5 Standard Practices for the Management of Trees and Shrubs During Site Planning, Site Development and Construction.** ~~The Planning Official may allow coverage of up to one-half (1/2) of the area of the tree’s critical root zone 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.
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.**

95.33 95.34 ~~Tree and Soil Protection during Development Activity~~ **Tree Density-Planting Requirements Related to Development Activity**

~~The required minimum tree density is 30 tree credits per acre for...The tree density may consist of existing trees pursuant to the tree’s retention value, supplemental trees or a combination of existing and supplemental trees pursuant to subsection (2) of this section. 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. ~~Tree Density Calculation.~~ **Applicability of Tree Credits.** The tree credit value that corresponds with DBH shall be found in Table 95.33-134. ~~The maximum number of credits awarded to any one individual tree is 11 credits.~~ Existing native conifers (or other conifer species as listed by the ~~Urban Forester~~ **Planning Department**) shall count 1.5 times credits for retention). ~~For the purpose of calculating required minimum tree density...~~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 (*current code 95.30.5*). ~~Supplemental Trees Planted to Meet Minimum Density Requirement. For sites and activities requiring a minimum tree density and where the existing trees to be retained do not meet the minimum tree density requirement, supplemental trees shall be planted to achieve the required minimum tree density (current code 95.33.2 0).~~ 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 ~~shall not count toward the required density~~ unless approved by the ~~Urban Forester~~ **Planning Official** based on transplant specifications provided by a Qualified Professional that will ensure a good probability for survival (*current code 95.33*)

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

DBH	Tree Credits	DBH	Tree Credits	DBH	Tree Credits
3 – 5"	0.5			38"	15
6 – 10"	1	24"	8	40"	16
12"	2	26"	9	42"	17
14"	3	28"	10	44"	18
16"	4	30"	11	46"	19
18"	5	32"	12	48"	20
20"	6	34"	13	50"	21
22"	7	36"	14		

3. Tree Density Credit Calculation. In calculating tree density credits...**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 and Tree Density Value for Supplemental Trees~~ **Replacement Trees.** The required minimum size of a ~~supplemental~~ **replacement** tree worth one (1) tree credit shall be ~~six (6) feet tall for Thuja/Arborvitae four (4) feet tall for native or other conifers and 2-inch Caliper for deciduous or broad-leaf evergreen trees. (Placeholder for Landmark tree replacement standards).~~ 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 as listed by the Planning Department) 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 ~~minimum~~ 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 shall be subject to a 5 Year Maintenance Agreement.**
6. ~~City Forestry Account~~**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 ~~approximating the current market value of the supplemental trees~~ **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 (reorganized/consolidated with 95.41)

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. Supplement. 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 supplemental 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.

95.41 Supplemental Plantings (deleted/consolidated with 95.40)

95.42 Minimum 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.

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.
LANDSCAPING CATEGORY				
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 PC recommends that the City Council put more robust parking lot requirements on the 2020 Planning Work Program)*

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

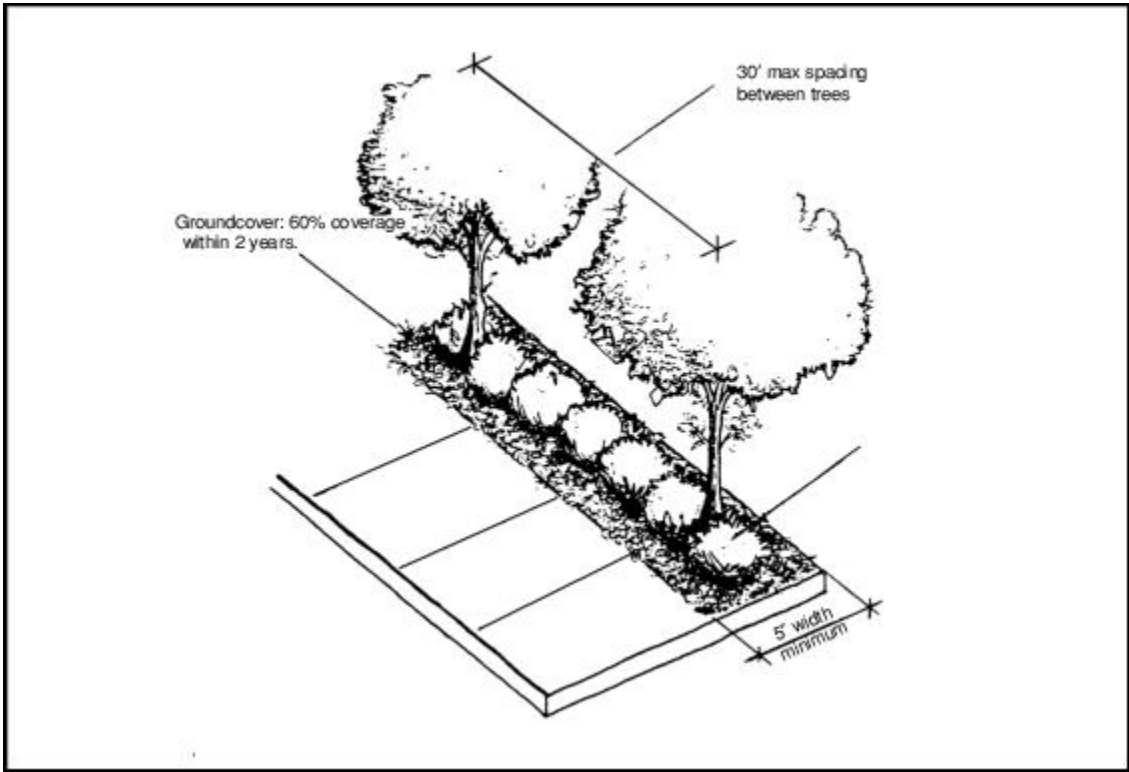


FIGURE 95.45.A

Perimeter Parking – Examples of Various Screen Wall Designs

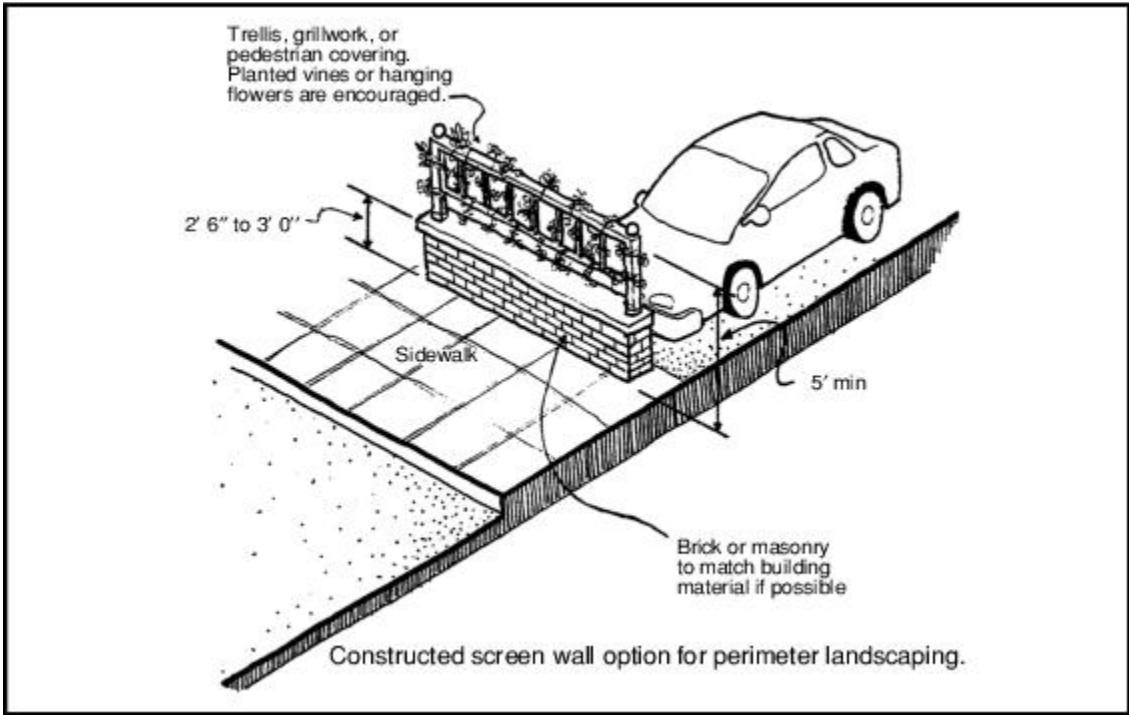


FIGURE 95.45.B

Perimeter Parking – Examples of Various Screen Wall Designs

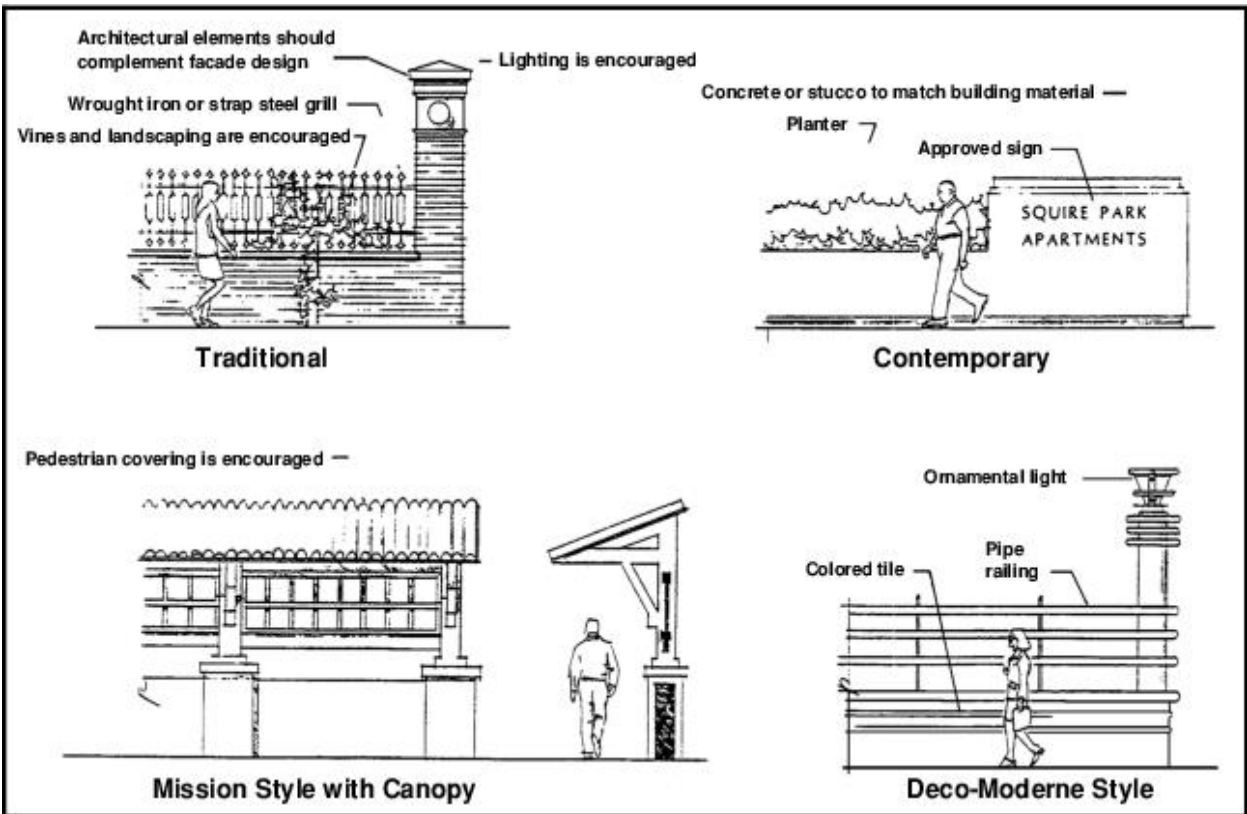


FIGURE 95.45.C

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.
 - a. Plant selection shall be consistent with the appropriate Kirkland Plant Lists, which is ~~produced by the City's Natural Resource Management Team~~ **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. ~~Prohibited Materials.~~ 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 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.

- 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. These requirements shall be completed prior to final inspection.**

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. ~~Plants that die must be replaced in kind (moved below).~~ 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~~ *(remove per recent grove covenant revisions)* 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~~ **Regulated** 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 ~~will not harm the tree~~ **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 Code 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.

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
- 95.25 Sustainable Site Development
- 95.30 Tree Retention Associated with Development Activity
- 95.32 Incentives and Variations to Development Standards
- 95.32 Tree and Soil Protection during Development Activity
- 95.33 Tree Density Requirement
- 95.34 Tree Planting Requirements Related to Development Activity
- 95.40 Required Landscaping Based on Zoning District
- 95.41 Supplemental Plantings
- 95.42 Minimum 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 ~~which is~~ 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 ~~from the ground~~ above average grade. For trees with multiple trunks at 4.5 feet height, only trunks 3” DBH or greater shall be included. Where a tree splits into several trunks close to ground level, the DBH for the tree is the square root of the sum of the DBH for each individual stem squared (example with 3 trunks: DBH = square root [(stem1)² + (stem2)² + (stem3)²]). 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.
 - 6. Impact – A condition or activity that adversely affects any part of a tree, including, but not limited to, the trunk, branches, or CRZ.
 - 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. 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.

9. 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.
10. Significantly Wooded Site – A subject property that has a number of ~~significant~~ trees with Crowns that, when outlined in aerial imagery, cover at least 40 percent of the total area of the property.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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, each with a minimum 12-inches DBH, in excellent or good condition per KZC.95.30.3; provided, that groves preserved through development per KZC 95.51.3 shall not be removed as hedges.
 - 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 and trees within a hedge will not be deemed regulated trees.
 - 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 or from naturally-occurring events such as wind, ice or snow-loading.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 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).
16. Wildlife Snag – The remaining trunk of a tree that is intentionally reduced in height and usually stripped of its live branches.
17. 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 ~~and/or require that~~.
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, 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 and a half (1.5)-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 and a half-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 ~~Not Associated with~~ 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.

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 within a 12-or 24-month period based on the table below without having to apply for a tree removal permit; provided, that:

a. The trees are not Landmark Trees;

b. The removal of a Landmark Tree has not occurred within 24 months;

c. 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; 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;

d. There is no active application for development activity for the subject property;

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

f. All the additional standards for tree replacement described in KZC 95.23.8 are met.

Lot Size	Maximum number of allowed Regulated Tree removal every 12 months	Minimum number of Regulated Trees that must remain (see also 95.30.9.e)
Lots up to 10,000 sq. ft.	2	2
Lots 10,000 to 20,000 sq. ft.	3	3
Lots 20,000 sq. ft. or greater	4	4
Lots greater than 35,000 sq. ft	May remove more than 6 trees with a Forest Management Plan	To be determined through review of the 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, to remove Landmark trees 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 or a period of 24 months following the most recent removal of a Landmark 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 three (3) 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 four (4) 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 circumstance, 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. 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 in 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 footprint 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 ~~type~~-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 may be required of Regulated Trees on the subject property. The site plan must also show the approximate trunk location of Regulated Trees with 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 by 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 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 addition to 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).

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;
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- 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:

MAXIMUM FRONT FAÇADE WIDTH = (DISTANCE BETWEEN REQUIRED YARDS) - (DISTANCE BETWEEN REQUIRED YARDS X 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.

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. 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 subject property is entitled to maintain the total aggregate maximum Floor Area Ratio (FAR) and Maximum Lot Coverage that would otherwise be permitted for the subject property under a conventional short plat or subdivision. The maximum FAR and/or Maximum Lot Coverage requirements may be adjusted proportionate to the Lot Size reduction(s), provided there is no net increase in the aggregate 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.

b. 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.

c. 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.

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. 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.
2. 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 TPZ 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.
3. 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 in compliance to ANSI A300 Part 5 Standard Practices for the Management of Trees and Shrubs During Site Planning, Site Development and Construction.

- 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.
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 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 listed by the Planning Department) shall count 1.5 times credits for retention). 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 Regulated Trees
(Credits per minimum diameter – DBH)

DBH	Tree Credits	DBH	Tree Credits	DBH	Tree Credits
3 – 5"	0.5			38"	15
6 – 10"	1	24"	8	40"	16
12"	2	26"	9	42"	17
14"	3	28"	10	44"	18
16"	4	30"	11	46"	19
18"	5	32"	12	48"	20
20"	6	34"	13	50"	21
22"	7	36"	14		

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 X 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 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 as listed by the Planning Department) 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 shall be subject to a 5 Year Maintenance Agreement.

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
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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.

95.41 Supplemental Plantings *(deleted/consolidated with 95.40)*

95.42 Minimum 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.

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.
LANDSCAPING CATEGORY				
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

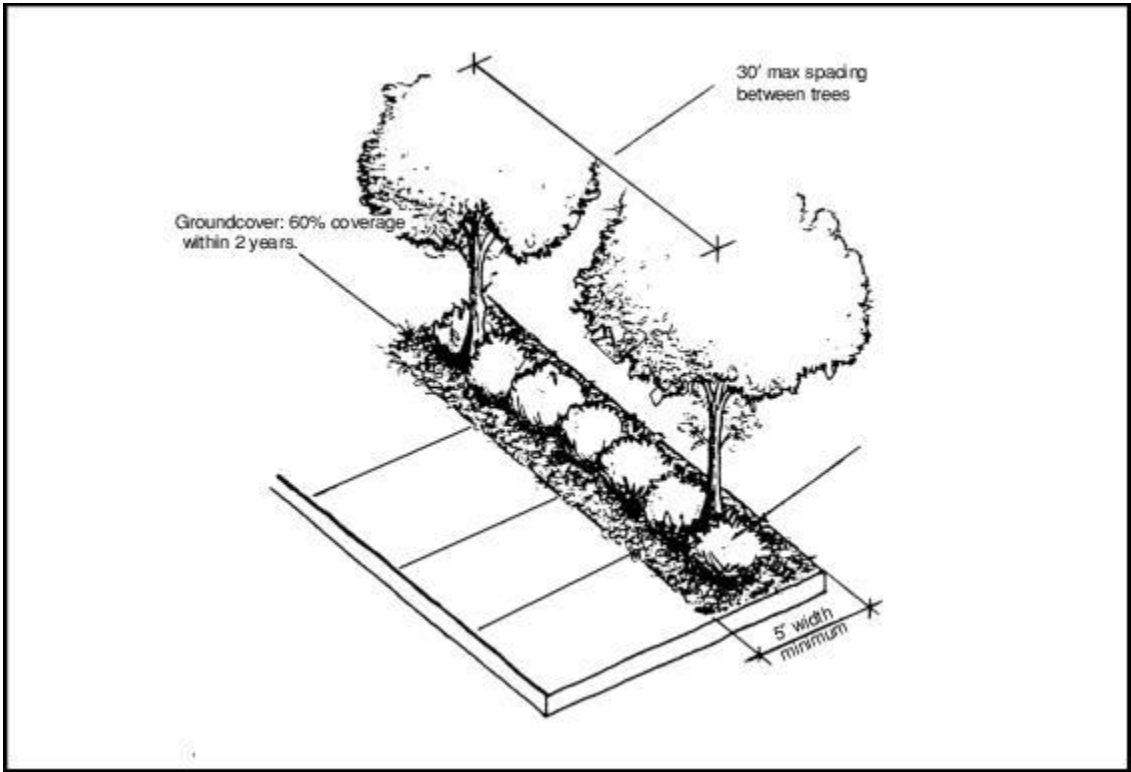


FIGURE 95.45.A

Perimeter Parking – Examples of Various Screen Wall Designs

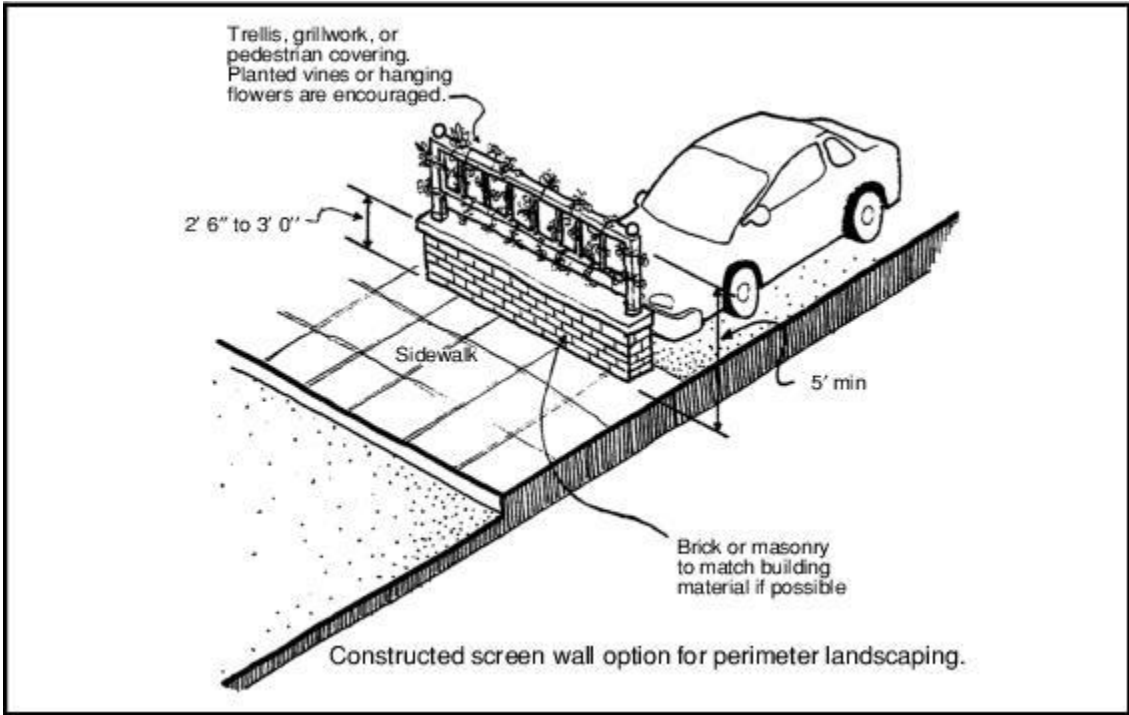


FIGURE 95.45.B

Perimeter Parking – Examples of Various Screen Wall Designs

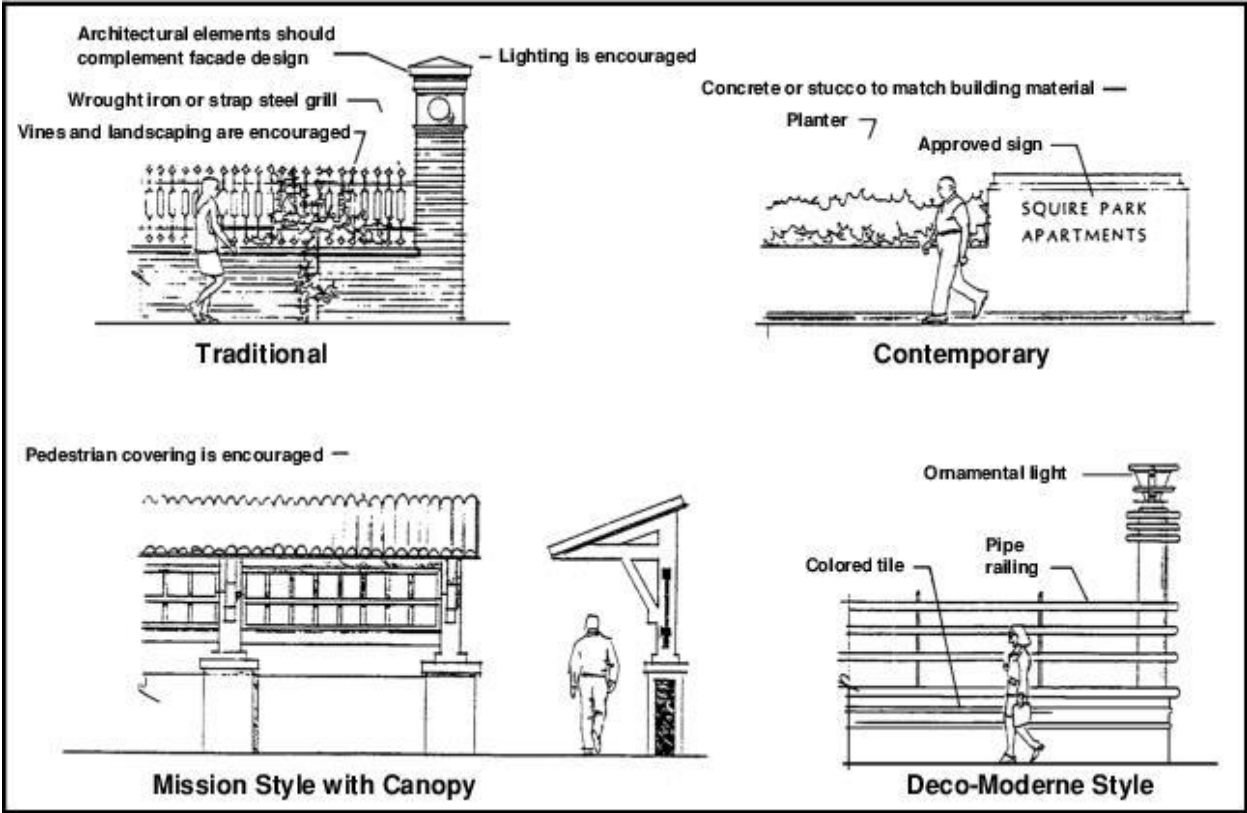


FIGURE 95.45.C

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.
 - a. Plant selection shall be consistent with the appropriate Kirkland Plant Lists, which is 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 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.

- 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. These requirements shall be completed prior to final inspection.

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 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 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). Regulated 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 Code 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.



December 10, 2019

Planning Commission
Kirkland City Hall
123 Fifth Avenue
Kirkland WA 98033

Amendments to Kirkland Tree Ordinance, Zoning Code Chapter 95

Dear Planning Commissioners:

The Finn Hill Neighborhood Alliance (“FHNA”) submits these comments on proposed amendments to the City of Kirkland’s tree ordinance, Chapter 95 of the Kirkland Zoning Code. Much has already been submitted to the Planning Commission in regard to the code. FHNA will therefore attempt to present its views briefly.

As a general matter, FHNA believes that the City should do its utmost to preserve healthy, mature trees of exceptional quality and that it should design its tree code to support Kirkland’s adopted objective of a resilient urban tree canopy of 40% coverage citywide. These principles support the following recommendations:

Tree retention and supplemental planting in connection with development activity

- ***Landmark tree definition: FHNA recommends that the definition of a Landmark tree be extended to include trees with trunk diameters of 26” DBH.***

Rationale: The Planning Department staff produced data earlier this year showing that only 11% of the trees standing on parcels that were developed between 2009 and 2013 were 30” DBH or more; another 10% of trees on those parcels were between 24” and 30” DBH. Setting the Landmark tree definition at 26” DBH would therefore provide the highest standard of tree protection to approximately 18-19% of Kirkland’s trees. FHNA understands that all of the trees with trunk diameters of 26” DBH are at least 40 years old; the loss of such trees will not soon be replaced. Furthermore, it should be noted that the highest standard of protection does not guarantee the preservation of Landmark trees. It is likely that most Landmark trees will be removed during development, a fact that makes it very important to broaden the class of trees warranting special protection.

- ***Tier 2 tree retention: FHNA supports the proposed code amendments presented in the staff’s memorandum relating to the retention of Tier 2 trees.***

Rationale: For various reasons, FHNA regards these amendments as imperfect, but they represent the best proposal that is likely to be adopted by the City. The Tier 2 retention proposals in the staff recommendation accommodate some of the “predictability” concerns raised by builders: they remove current provisions that seek the retention of trees in only “fair” condition and guarantee building pad dimensions, lot coverage, FAR, and the density of units allowed by applicable zoning. Builders have objected that the City would retain the right to require that building plans be flipped or patios be redesigned, but they haven’t sought to narrow or refine the language they object to.

Builders have instead advocated that tree preservation efforts be capped at 50 credits per acre. While FHNA supported the notion of limiting tree preservation efforts to a cap that preserved a significant tree canopy over a building lot (e.g. 25-30%), it is now clear to FHNA that 50 credits per acre for retained trees does not approach that level of canopy protection. It appears that a much higher cap – between 80 to 100 credits per acre – would be required, but there seems to be no political support for a tree credit based retention framework that is tied to preservation of a meaningful tree canopy. In consequence, FHNA supports the tree retention language in the draft ordinance prepared by staff as the most acceptable option for retaining trees.

- ***Integrated development plans (IDPs): FHNA strongly supports the adoption of mandatory of IDPs throughout the City.***

Rationale: This recommendation appears to have the support of the HCC as well. Our only additional comment is that all tree retention plans required to be submitted in conjunction with applications undergoing IPD review should be posted online, so that neighbors have a meaningful opportunity to review and comment on proposed tree removals and supplemental tree plantings.

- ***Supplemental tree plantings: FHNA recommends that the standard for supplemental tree planting be raised to 50 credits per acre, with a requirement that native species constitute a meaningful percentage of new plantings.***

Rationale: Kirkland’s urban tree canopy goal is 40%. The tree code cannot protect a 40% canopy cover through tree retention alone. It is therefore imperative that the code promote the planting of new trees on developed properties such that they conceivably could support a 40% canopy cover within a reasonable time frame, such as 20 years.

Unfortunately, no serious effort has been made during this tree code amendment proceeding to measure the City’s supplemental tree planting rules against its 40% canopy objective. There is no evidence in the record to support a finding that a supplemental planting requirement pegged to 30 tree credits

per acre will achieve a 40% canopy cover within two decades. To the contrary, the City's Urban Forester, Deb Powers, stated during a City Council review of the tree code on October 1, 2019, that planting trees at a density of 30 credits per acre over bare ground would produce a canopy of only 20% over a period of 20 years. If this assessment is correct, FHNA infers that the 30 credit standard will yield an even lower canopy percentage when applied to lots on which some existing trees remain (and for which credits will be awarded). FHNA has repeatedly requested reliable data correlating credits with long-term canopy results. Absent such data, FHNA can only conclude that, if a 30 credit standard will yield no more than a 20% canopy coverage in 20 years, a planting standard of 50 credits per acre is a conservative estimate of what will be required to achieve a 40% canopy cover, in line with the City's stated (and reasonable) canopy objective.

Some opponents of raising the supplemental planting standard to 50 credits argue that it would result in too many trees being on a newly developed property. However, this argument overlooks the fact that homeowners have a right to remove trees on their properties. They can judge how many trees are too many. Furthermore, FHNA would support language giving the City's arborist discretion to pare back on supplemental plantings to the extent that application of the 50 credits standard would result in overplanting. (In the event a waiver is granted, a developer should pay for the planting "excess" trees in areas of the City specified by City staff.)

Finally, FHNA urges the Planning Commission to specify endorse a requirement in the tree code that new plantings include a significant number of native species, preferably trees that will produce meaningful crowns over time. It will do little toward achieving the City's 40% canopy goal if tree planting requirements can be met with the installation of small ornamental trees.

Tree retention in non-development contexts

- ***Removal of regulated trees without a permit: FHNA supports the proposed code amendments forwarded by staff with respect to the number and type of trees that can be removed by homeowners annually without a permit.***
 - ***In particular, FHNA agrees that Landmark trees should not qualify for removal without a permit and that removals on larger lots be limited to 3 or 4 trees per year (as specified in the staff's proposal), with the proviso that the tree retention minimums for lots match the annual removal quotas (i.e. lots for which 3 regulated trees can be removed each year be required to retain the last 3 regulated trees on the lot, subject to removals allowed by permit)***
- ***FHNA recommends staff be instructed to establish standards for permit-based tree removals, so that homeowners will have the ability to seek approval for tree removals***

that exceed the standard annual quota of tree removals, based on a commitment to replant

- ***FHNA also recommends that tree removals that do not require a permit be allowed only if preceded by notice to the City.***

Rationale: FHNA supports staff's recommendation that relaxed allowances for tree removals "of right" be limited to 3 or 4 trees annually (depending on lot size) rather than 4 to 6 trees annually. The lower limit will slow the removal of trees that are needed to support the City's canopy objective. However, FHNA would support the creation of a permit scheme, with tree retention and tree removal standards, that would allow homeowners to remove more than the stated quota of regulated trees upon a showing of need and a replanting plan. (A permit process is referenced in the tree code, but standards for the issuance of permits are not specified.)

FHNA also supports staff's position that Landmark trees should not be subject to removal as a matter of right. To allow such cutting would create perverse incentives for homeowners to chop down Landmark trees before selling their properties to developers. This would undermine the goal of tree code amendments to preserve these exceptional trees.

FHNA also advocates that homeowners be required to give a simple notice to staff of their intent to remove regulated trees. Unless notification is required, the City cannot enforce its annual removal quotas or gather information on the rate at which existing regulated trees are being removed in non-development contexts.

Conclusion

As noted above, FHNA has based its recommendations on the belief that the tree code should be an effective instrument – if not the sole instrument – for enabling the City to achieve its 40% canopy coverage goal. During the HCC discussions, some HCC members have asked about the origins of this goal and even suggested that it should not take precedence over other desires, such as the desire for a garden or for solar panels.

In response, FHNA notes that the City's canopy goal is already part of the Comprehensive Plan, which is not under review in this proceeding. The canopy goal is, more importantly, rational and if, anything modest, relative to the potential for a robust tree canopy in this portion of the country. The American Forest organization proposed an urban canopy goal of 40% for North American cities many years ago. It has since abandoned a singular 40% goal for all US cities because it may be too ambitious for desert or grasslands communities (e.g. Phoenix or Des Moines); however, it has never suggested that a 40% objective would be aggressive for a suburban community in the Pacific Northwest.

Letter to Planning Commission

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December 10, 2019

Now is no time for complacency in regard to Kirkland's canopy. Data presented in the Kirkland Urban Tree Canopy Assessment of 2018 show that the city's canopy has fallen from 40.7% to 38.3% between 2010 and 2017. This should not be viewed as a minor decrease of just 2.4%. In fact, it represents a 5.9% reduction of the urban canopy throughout the city ($2.4/40.7 = 5.9\%$). In areas that have experienced significant development, the loss of canopy reduction has been striking. In Kingsgate, the canopy reduction has been 14% (a loss of 71 acres out of 510 acres) and in the Holmes Point area, the reduction has been 10% (a loss of 30 acres out of 305 acres). These are serious declines and while FHNA supports the effort to balance retention and predictability, any revision to the code must be assessed in terms of whether it helps the City regain and retain its canopy goals or impairs its ability to meet that objective.

Respectfully submitted,

FINN HILL NEIGHBORHOOD ALLIANCE



Scott Morris, President

Cc: Adam Weinstein

Jeremy McMahan

Deborah Powers

Kurt Triplett

City Council

FHNA Board of Directors

Gina Clark, Master Builders Association of King and Snohomish Counties

KIRKLAND ZONING CODE CHAPTER 95 – TREE RETENTION AND SUPPLEMENTAL REPLANTING**Sections:**

- 95.05 Purpose and Intent**
- 95.10 Definitions**
- 95.22 Tree Removal Permit Exemptions**
- 95.24 Public Tree Removal and Pruning**
- 95.26 Tree Retention Associated with Development Activity**
- 95.28 Supplemental Tree Planting Requirements Related to Development Activity**
- 95.30 Tree Location Prioritization**
- 95.32 Retention Incentives**
- 95.34 Tree and Soil Protection During Development Activity**
- 95.36 Off-Site Tree Planting or Fee In-Lieu**
- 95.38 Enforcement and Penalties**
- 95.50 City Forestry Account**

95.05 Purpose and Intent.

The purpose of this chapter is to establish process and standards for the preservation of trees, to retain or plant viable trees in the right location on development sites, and to maintain a sustainable urban canopy in the City of Kirkland. Specifically, it is the intent of this chapter to:

- Promote the public health, safety, and welfare of the citizens of Kirkland without preventing the reasonable development of land;
- Ensure equitable access to trees and the benefits they provide to all the citizens of Kirkland;
- Implement the goals and objectives of the City's Comprehensive Plan, the City's Urban Forest Strategic Management Plan, the City's Urban Tree Canopy Assessment, and the State Environmental Policy Act (SEPA);
- Promote flexible site planning and building practices that maintain the City's natural topography, soils, and vegetation features;
- Provide an appropriate amount and quality of tree retention related to future land uses;
- Improve the aesthetic quality of the built environment by reducing impacts on wetlands, streams and the natural environment
- Minimize surface and ground water runoff, soil erosion, land instability, sedimentation, siltation, and pollution of waterways;
- Provide for increased permeable surfaces that allow for infiltration of surface water into ground water resources, reduction in the quantity of storm water discharge, and improve the quality of storm water discharge;
- Improve noise and air pollution, mitigate urban heat islands, and decrease the overall impacts of climate change;
- Provide visual relief, screening buffers, and insulating protection from severe weather conditions;
- Providing habitat, cover, food supply and corridors for a diversity of fish and wildlife, and recreational uses for citizens;

- Provide for regulations that are clear, understandable, user friendly, easy to administer, and cost effective to enforce.

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 – Caliper of the trunk shall be the trunk diameter measured six (6) inches above the ground for up to and including 4-inch caliper size and 12-inches above the ground for larger sizes.
2. Critical Root Zone (CRZ) – The area surrounding a tree at a distance from the trunk, which is equal to one (1) foot for every inch of trunk diameter measured at 4.5 feet from grade or otherwise determined by a qualified professional. Example: a 24-inch DBH tree has a 24-foot radius CRZ encircling 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. Trees whose stems diverge below ground level are considered separate trees. A tree that has one stem at ground level but that splits into two or more stems above ground level use the following method to determine DBH. Where a tree splits into several trunks below typical DBH, the DBH for the tree is the square root of the sum of the DBH for each individual stem squared (example with three stems: $DBH = \text{square root of } [(stem\ 1)^2 + (stem\ 2)^2 + (stem\ 3)^2]$).
5. Dripline – The distance from the tree trunk that is equal to the furthest extent of the tree's crown.
6. Group of Trees – A group of three (3) or more significant trees with overlapping or touching crowns, one of which is a minimum 30-inch DBH, or a group of five (5) or more significant trees, one of which is a minimum 24-inch DBH. A Group of Trees is considered a Tier 1 tree.
7. Hazard Tree – A tree assessed by a qualified arborist 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.XX.XX.
8. Heavily Wooded Site: A subject property that has a number of trees with crowns that cover at least 40 percent of the property
9. Hedge – Five (5) or more trees of the same species planted in linear formation, typically to function as a screen or barrier. Hedges are not Tier 1 trees or Groups of Trees.
10. Inner Critical Root Zone – An area half the distance of the Critical Root Zone. Example: a 24-inch DBH tree has a 12-foot radius Inner Critical Root Zone encircling the trunk.
11. ISA – International Society of Arboriculture
12. Impact – A condition or activity that affects any part of a tree including the trunk, branches, and Critical Root Zone.
13. Landmark Tree – A significant tree with a minimum single trunk 30-inch DBH in excellent-good condition per KZC 95 XX.XX, likely to survive at least additional years, and does not qualify for removal as a hazard, nuisance, or emergency according to this chapter.
14. Limits of Disturbance (LOD) - The boundary between the area of minimum protection around a tree and the allowable site disturbance as determined by a qualified professional.
15. Minimum Tree Density – The minimum number of trees per acre a development site must achieve through tree retention or supplemental planting measured in tree unit credits.
16. Nuisance Tree -A tree that meets any of the following criteria:
 - a. Is causing obvious physical damage to private or public structures, including but not limited to: sidewalk, curb, road, driveway, parking lot, building foundation, utilities or roof; or
 - b. Has sustained irreversible damage from past maintenance practices; or

- c. Causes increased maintenance or potential safety hazard such as from thorns, roots or fruit.
- 17. Planning Official – Designee of the City of Kirkland’s Planning and Building Director.
- 18. Public Works Official – Designee of the City of Kirkland’s Public Works Director.
- 19. Qualified Professional – An individual with relevant education and training in arboriculture or urban forestry, having two (2) or more of the following credentials:
 - a. International Society of Arboriculture (ISA) Certified Arborist;
 - b. Tree Risk Assessor Qualification (TRAQ) as established by the ISA (or equivalent);
 - c. American Society of Consulting Arborists (ASCA) registered Consulting Arborist;
 - d. Society of American Foresters (SAF) Certified Forester for Forest Management Plans; or
 - e. Board Certified Master Arborist as established by the ISA.
- 20. Significant Tree – A tree that is at least six (6) inches in diameter at breast height (DBH) as measured at 4.5 feet from the ground.
- 21. Street Tree – A 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.
- 22. Tier 1 – Level of tree retention and supplemental planting standards applied to Landmark trees and a Group of Trees associated with development.
- 23. Tier 2 – Level of retention and supplemental planting standards applied to significant trees associated with development.
- 24. Tree Topping – The severe cutting back of limbs to stubs larger than three inches in diameter within the tree’s crown to such a degree as to remove the normal canopy and disfigure the tree.
- 25. Tree Removal – The removal of a tree, through either direct or indirect actions, including but not limited to: (1) clearing, damaging, girdling or poisoning resulting in an unhealthy or dead tree; (2) 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.
- 26. Tree Density Credit (TDC) – The measurement for assessing existing trees, retention thereof, and planting of new trees. Expressed per 1,000 square feet site area.
- 27. Public Tree – A tree located in parks, along public rights-of-way, on City property.
- 28. 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 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 the emergency tree removal with evidence of the imminent threat. If the Planning Official determines the emergency was not warranted, the removal will be subject to code enforcement including fines and restoration pursuant to section 95.XX.XX.
- 2. Utility Maintenance. If pruning cannot first solve an interruption of service, trees may be removed by the City or utility provider. 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.

95.22 Public Tree Removal and Pruning.

The purpose of this section is to establish process and standards for tree removal and pruning on public property.

1. **Public Tree Removal.** Other than City crews, no person, directly or indirectly, shall remove any tree on any City property, or any tree in the public right-of-way, without first obtaining a tree removal permit unless the tree is determined to be a hazard or nuisance.
2. **Public Tree Pruning.** Any public tree pruning shall conform to the most recent version of the American National Standards Institute (ANSI) A300 - Part 1 pruning standards or as outlined in an approved Utility Vegetation Management Plan.
 - 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 tree in a public park or on any other City property without first obtaining a Public Tree Pruning permit as provided in this chapter.
 - b. **Street Trees.** It is the responsibility of the adjacent property owner to maintain street trees abutting their property, which may include minor pruning. The City reserves the right to have City or utility crews perform routine pruning and maintenance of street trees.

95.24 Private Property Tree Removal and Pruning with No Development Activity.

The purpose of this section is to establish process and standards for private property tree removal and pruning with no development activity.

1. **Tree Pruning on Private Property.** Any private property owner may prune trees on their property without a permit, except authorization from the City is required for work in critical areas or buffers.
2. **Tree Removal Exceptions.** Property owners may remove a maximum number of significant trees in one twelve-month period based on lot size, with the following exceptions:
 - a. Property owners may not remove trees that are not protected under a Voluntary Tree Conservation Easement;
 - b. Trees that are within the '5-Year Maintenance Covenant' period following development activity may not be cut;
 - c. An application for development has been filed;
 - d. Per Table 95.24.1, based on lot size, a private property owner may borrow against the maximum number of trees that may be removed in one twelve-month period with notice provided to the Planning Official. No permit is required. The owner may borrow up to two (2) years of future removal allowances. The property owner may not remove additional trees until the future years have expired.
3. **Removal of Significant Trees with Permit Required.** Removal beyond the provisions of .1 and .2 in this section requires a permit.

Table 95.24.1
TREE REMOVAL ALLOWANCES WITHIN A 12-MONTH PERIOD

LOT SIZE	MAXIMUM NUMBER OF SIGNIFICANT TREES ALLOWED TO BE REMOVED EVERY 12 MONTHS WITHOUT PERMIT
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 over 35,000 square feet with a Forest Management Plan	>6
<i>Landowner may borrow against two (2) future years' removal allowances</i>	

4. Significant Tree Removal Permit. Private property owners requesting to remove trees exceeding allowances in Table 95.24.1 shall submit a completed permit application to the Planning Official, including:
 - a. A site plan showing the approximate location of significant trees, size (DBH) and 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 95.36, Supplemental Tree Planting Requirements.
5. Tree Removal Permit Application Review and Appeals.
 - a. For requests exceeding Table 95.24.1, the City shall review the application within 21 calendar days and either approve, approve with conditions or modifications, deny, or request additional information. Any decision to deny shall be in writing along with the reasons for the denial and the appeal process.
 - b. The decision of the Planning Official is appealable per KZC 145.
 - c. Tree removal shall be completed within one (1) year from the date of permit approval.
6. Removal of Hazard or Nuisance Trees. Any private property owner seeking to remove any number of significant trees which are a hazard or nuisance in excess of their standard allowance from private property or the public right-of-way shall first obtain approval of a tree removal permit and meet the requirements of this subsection.
 - a. Tree Risk Assessment. If the nuisance or hazard condition is not obvious, a tree risk assessment prepared by a qualified professional explaining how the tree(s) meet the definition of a nuisance or hazard tree is required. Removal of nuisance or hazard trees does not count toward the tree removal limit if the nuisance or hazard is verified.
 - b. Trees in Critical Areas or Critical Areas Buffers. See Chapter 90 KZC.
 - c. 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 proximity to where the removed tree was located. Selection of native species and timing of installation shall be approved by the Planning Official.
 - d. Removal of Unreasonable Obstruction. The unreasonable obstruction of views, sunlight or solar access by planting, uncontrolled growth or maintenance of trees satisfying the

minimum requirements for relief in KZC XX.XX.X constitutes a private nuisance subject to redress as provided in KZC XX.XX.X. If a person shall plant, maintain or permit to grow any tree which unreasonably obstructs the view from, sunlight from reaching, or access to solar power to the primary living or entertainment area of any other parcel of property within the City of Kirkland as set forth in KZC XX.XX.XX, then a complainant shall have rights set forth in this chapter. *(This will require writing and adoption of a new code section acknowledging the importance, and sometimes conflicts, that arise between trees, solar, light and views, and neighboring properties/individual properties. Please reference Medina Municipal Code, Chapter 18.16)*

7. Forest Management Plan. A private property owner seeking to remove trees on developed, heavily wooded sites of at least 35,000 square feet in size where tree removal exceeds the allowances of KZC 95.24 and is not exempt under Table 95.24.1, shall submit a Forest Management Plan.
 - a. Forest Management Plan Requirements. 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 significant (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 (DBH), species, and condition of each tree;
 - ii. Identification of trees to be removed, including reasons for their removal and a description of pursuant to subsection (11)(b) of this section;
 - iii. A reforestation plan that includes location, size, species, and timing of installation.
 - b. Forest Management Plan Standards. The following Forest Plan Management 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 critical areas and buffers, unless otherwise permitted.
 - iii. No removal of Landmark trees or dedicated Group of Trees, unless otherwise permitted.
 - 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 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.
 - ix. The Planning Official may require performance security pursuant to KZC 175 in order to assure reforestation requirements of the approved forest management plan.

95.26 Tree Retention Associated with Development Activity.

1. Tree Retention Purpose. The City and applicant shall work collaboratively to retain trees, comply with private property rights, toward a balanced retention plan.
2. Tree Retention Plan. For all development, a Tree Retention Plan shall be submitted with the initial land use and/or development application. The qualified professional arborist and surveyor shall work together to identify, tag, and survey all significant trees. The city shall work with the applicant in the early planning stages to assist as possible.
3. Modifications to the Tree Retention Plan. Modifications may be approved pursuant to the following criteria:
 - a. Modification Prior to Development or Construction Activity - The Director may approve a modification request to remove Tier 1 or Tier 2 trees previously identified for retention if:
 - i. Tier 1 or Tier 2 trees inventoried in the original Tree Retention Plan have not yet been removed;
 - ii. An updated arborist report and site development plan is submitted to the Director outlining the reasons retention onsite is untenable as proposed in the original plan.
 - iii. The updated arborist report provides alternatives for tree retention and/or planting of Tier 1 or Tier 2 previously identified for retention.
 - iv. The modified, alternative plan is approved by the City within twenty-one (21) business days and shall be approved by the Director.
 - v. The updated arborist report and alternative plan, once approved by the Director, shall be posted on the project website that is maintained by the Planning Official, and available to the public.
 - b. Modification During Development or Construction –
 - i. Significant trees may be identified for retention during plan development phases that present potential conflicts with utilities, driveways, home footprints, excavations, and other planned improvements.
 - ii. These trees, planned to retain in good faith, may be found during construction activities to present such conflicts.
 - iii. If conflicts between construction and trees arise that present a potential challenge to retention, the City-designated and applicant arborists, as well as the City's site inspector, shall schedule a field meeting within seven (7) business days.
 - iv. The field meeting shall determine whether agreed upon measures to retain the originally proposed tree(s) are possible within approved site design parameters. If no such agreement is possible within 10 business days of conflict notice, the tree(s) may be removed. If removal is required, replanting may be required, according to this title.
4. Tree Retention Plan Components. The tree retention plan shall contain the following, unless waived by the Planning Official:
 - a. A tree inventory and report containing the following:
 - i. A numbering system of all existing significant trees on the subject property (with corresponding tags on trees); the inventory must also include significant trees on adjacent property with driplines extending over the subject property line;
 - ii. Limits of disturbance (LOD) of all existing significant trees (including approximate LOD of off-site trees with overhanging driplines);
 - iii. Brief general health or condition rating of these trees (i.e.: poor, fair, good, excellent, etc.);

- iv. Proposed tree status (retained or removed);
 - v. Tree type or species, DBH, assessment of health and structural viability, windfirmness following development, and tree unit credit pursuant to this chapter; and
- b. A site plan depicting the following:
- i. Location of all proposed improvements, including building footprint, access, utilities, applicable setbacks, buffers, and required landscaped areas clearly identified. If a short plat or subdivision is being proposed and the location of all proposed improvements cannot be established, a phased tree retention plan review is required as described in subsection (6)(a) of this section;
 - ii. Accurate location of significant trees on the subject property (surveyed locations may be required). The site plan must also include the approximate trunk location and critical root zone of significant trees that are on adjacent property with driplines extending over the subject property line;
 - iii. Trees labeled corresponding to the tree inventory numbering system;
 - iv. Location of tree protection measures;
 - v. Indicate LOD drawn to scale around all trees potentially impacted by site disturbances resulting from grading, demolition, or construction activities (including approximate LOD of off-site trees with overhanging driplines);
 - vi. Proposed tree status (trees to be removed or retained) noted by an 'X' or by ghosting out; and
 - vii. Proposed locations of any supplemental trees and any required trees to meet tree density or minimum tree unit credits as outlined in KZC 95.33.
- c. An arborist report containing the following:
- i. A complete description of each tree's health, condition, and viability;
 - ii. A description of the method(s) used to determine the limits of disturbance (i.e., critical root zone, root plate diameter, or a case-by-case basis description for individual trees);
 - iii. Any special instructions specifically outlining any work proposed within the limits of the disturbance protection area (i.e., hand-digging, tunneling, root pruning, any grade changes, clearing, monitoring, and aftercare);
 - iv. For trees not viable for retention, a description of the reason(s) for removal based on poor health, high risk of failure due to structure, defects, unavoidable isolation (windfirmness), or unsuitability of species, etc., and for which no reasonable alternative action is possible must be given (pruning, cabling, etc.);
 - v. Describe the impact of necessary tree removal to the remaining trees, including those in a Group of Trees or on adjacent properties;
 - vi. For development applications, a discussion of timing and installation of tree protection measures that must include fencing and be in accordance with the tree protection standards as outlined in KZC XX.XX; and
 - vii. The suggested location and species of supplemental trees to be used when required. The report shall include planting and maintenance specifications pursuant to KZC 95.XX and 95.XX.

5. Lot Clustering to Retain Tier 1 or Tier 2 Trees. With short plats and subdivisions, the Director may approve variations to minimum Lot Size, maximum Floor Area Ratio, and Lot Coverage requirements to facilitate retention of Tier 1 and Tier 2 trees in protective tracts or where lot sizes are averaged in order to retain trees. If approved, the following standards shall apply:
 - a. 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;
 - b. The maximum Floor Area Ratio 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 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.
 - c. Tier 1 and Tier 2 Tree Retention Priorities. The City may authorize the removal of Tier 1 and Tier 2 trees required for retention if:
 - i. After utilizing the required site plan alterations and allowed variations to development standards listed in KZC and 95.30.5, encroachment into the CRZ would result in either of the following:
 - a) Tree(s) that are unsuitable for retention per the condition ratings in KZC 95.XX.X
 - b) The retention of a Tier 2 tree compromises a Tier 1 tree's suitability for retention.
6. Retention and Supplemental Planting for Tier 1 Trees. Tier 1 trees consist of Landmark trees and Groups of Trees. Tier 1 trees shall be retained, unless otherwise allowed.
 - a. Landmark Trees: Are recognized as having exceptional value adding to the character of the community because of their age, size, and condition.
 - b. Groups of Trees share community-definitional characteristics to Landmarks, and are given similar protections.
 - i. If a tree is designated a Tier 1 tree it shall be retained, provided that such retention cannot:
 - ii. Reduce maximum allowed density or number of lots; or
 - iii. Reduce maximum allowed Floor Area Ratio (FAR) or Lot Coverage; or
 - iv. Reduce building pads to no less than 40' wide at any point of the building design, or
 - v. Interfere with access and utility connections.
 - c. To retain Tier 1 trees, an applicant shall submit a development proposal that avoids Tier 1 trees. Tier 1 trees shall be retained through primary building location including flip or mirroring of the primary building and driveway, and relocation of decks, patios, and walkways.
 - d. To treat projects, properties, and applicants fairly and equitably, to reduce City staff and applicant time and resources, and to help provide community clarity over potential Tier 1 tree retention, a Tier 1 Tree Mitigation and Site Design Conference (Conference) shall be scheduled between the applicant, the applicant and City's arborists, and the Planning Official after survey and arborist reviews are complete, and as early as possible under preliminary review.
 - e. The Conference purpose is to approve a site design with Tier 1 retention measures that prioritize avoidance of Tier 1 trees. All parties involved with the Conference shall complete Tier 1 retention measures within twenty-one (21) business days. Once agreement on Tier 1 measures is obtained, it shall be posted on an online project site and maintained by the City's Planning Official.
 - f. If agreement cannot be reached within twenty-one (21) business days that balances the site's primary building footprint with retention of Tier 1 tree(s), then:

- i. The primary building footprint is maintained;
- ii. The applicant shall plant first on-site, if possible, outside the building footprint and pursuant to the on-site planting requirements of this section, or off-site, pursuant to the off-site planting requirements of this section, and at the discretion of the Planning Official, at a rate of three new trees for every removed Tier 1 tree (3:1);
- iii. Supplemental planting, location prioritization, and maintenance standards of this chapter shall apply to Tier 1 trees;
- iv. It is the intent of the City that Tier 1 trees be replaced with high quality trees that shall have the best chance of long-term health and condition when located in the right place; and
- v. Applicant's shall pay \$2200 into the City's Tree Forestry Account for every Tier 1 tree removed.

7. Retention and Supplemental Planting Requirements of Tier 2 Significant Trees.

- a. Tree Density Per Acre. A minimum tree density per 1,000 square feet of site area shall be required to retain or plant following development activities. Unless otherwise exempted, the requirement to meet a minimum tree density applies to all development activities in various zones, including new single-family homes; residential subdivisions and short subdivisions; mixed-use developments; commercial and industrial developments; municipal and institutional developments; and utility developments.
 - i. Tree retention or a combination of retention and supplemental planting shall be required to meet minimum tree density for development in each land use zone, as adopted in the City of Kirkland's updated Comprehensive Plan.
 - ii. Tree Credit Density for retained trees is calculated to determine if supplemental trees are required to be planted to meet the minimum.
 - iii. If Tree Density Credits are met through retention of significant trees, planting supplemental trees is not required, and the applicant has fully fulfilled the City's requirements. No further trees need to be retained on the lot once TDC have been met. The City shall not require any additional tree retention or planting measures once the minimum per acre tree densities are met.
 - iv. Location prioritization for both retained and planted trees is established.
 - v. The City shall not require tree retention or planting efforts that would:
 - a) Reduce maximum allowed density or number of lots; or
 - b) Reduce maximum allowed Floor Area Ratio (FAR) or Lot Coverage; or
 - c) Reduce a 50-foot wide by 50-foot deep building footprint; or
 - d) For front building facades wider than 50 feet, the maximum building footprint shall not be reduced less 10 percent of the distance between side required yards. For example: a 70-foot wide lot with two 5-foot side required yards results in a 60-foot wide building pad which can then be reduced by 10 percent, or 6-foot reduction to the building pad, which totals a 54' wide building envelope; or
 - e) Interfere with access and utility connections; or

- f) Exceed specified credit requirements.
 - In exceptional cases, the Planning Official may allow for removal of existing trees beyond the retention standards if the applicant demonstrates the proposed activity is the only reasonable alternative that will accomplish the applicant's objectives.
 - Incentives are provided for retention beyond minimum tree densities, and outside of location prioritization areas, as defined in section 95.XX.XX
- b. Tree Density Credit Requirement. The required minimum Tree Density Credits (TDC) varies by land use zoning designation and are calculated as a fraction of required minimum per 1000 square feet of site area. The minimum TDC per acre are provided in Table 95.X.XX.XX.
 - i. Tree density may consist of retained trees, supplemental trees, or a combination of both.
 - ii. Retained trees transplanted to an area on-site may count toward required TDC if approved by the Planning Official based on specifications provided by the applicant's qualified professional arborist that will ensure a good probability for survival. Trees transplanted off-site do not count toward the required density.
 - iii. TDC requirements shall be based on the full site area, excluding retained trees in wetlands, streams, landslide hazard areas, and/or associated critical areas buffers.
 - iv. If a development site falls below the minimum TDC with retained trees, supplemental tree planting is required to requirement per Table 95.26.2.
 - v. The applicant has met the requirements of Tier 2 once the minimum per acre tree densities are obtained through retention, planting, or a combination of retention and planting. The City shall not require any additional tree retention or planting measures once the minimum per acre tree densities are met.
 - vi. Where supplemental trees are required to be planted, a minimum size requirement is established to meet the required TDC.
 - vii. The DBH of the tree shall be measured in inches. The tree credit value that corresponds with DBH values is found in Table XX.XX.XX.
 - viii. If the site allows, TDC on a lot shall not be achieved through the retention or replanting of only one large tree that achieves TDC minimum.
 - ix. Retained cottonwood, vine maple, and alder trees shall not count toward the tree density requirement.

Table 95.26.2
TREE DENSITY CREDITS BY ZONE

LAND USE TYPE	USE INTENSITY	REQUIRED MIN TREE CREDITS PER 1000 SQ. FT.
Single-Family Residential* *If lots smaller than 7,200 sf and/or the proposal is a short subdivision in the DC or CR zone the required credit may be reduced in half	Low/Moderate	1
Multifamily	Moderate	.40
Industrial Commercial Mixed-Use	High	.35
Public Facilities* *Including schools, public hospitals, municipal buildings, institutional	High	.35
Public Parks and Open Space	Low/Moderate	.75
Downtown Commercial	High	.20

- a. Tree Density Credit Calculation. For the purpose of calculating required minimum tree density, public right-of-way, areas to be dedicated as public right-of-way, and vehicular access easements are not included as lot area within an improved plat shall be excluded from the area used for calculation of tree density. Critical areas and associated buffers to be maintained by the development shall be excluded from the area used for calculation of Tree Density Credits, but supplemental plantings may occur in those areas.
- b. Tree Density Credit Calculation for Retained Trees.
 - i. Diameter at breast height (DBH) of the tree shall be measured in inches.

- ii. The TDC value that corresponds with DBH values shall be found in Table 95.24.2. These credits shall be multiplied by one and one-half for existing native conifers (or other conifer species as approved by the Planning Official).
 - iii. Retained alder, cottonwood, and vine maple trees shall not count toward TDC. No credits shall be given for retention of arborvitae.
 - iv. Existing trees located in critical areas and those protected within the native growth protection area tract or easement to be established by the proposal shall not count toward TDC requirement.
 - v. In calculating tree density credits, TDC shall be rounded up to the next whole number from a one-half or greater value.
- c. Supplemental Trees Planted to Meet Minimum Tree Density Requirement.
 - i. For sites where existing (predevelopment) TDC is insufficient to meet TDC minimums, retention of existing identified trees consistent with KZC 95.XX.XX shall be a top priority of the site design. Additional TDC shall be achieved through supplemental planting on site.
 - ii. The Planning Official may allow for removal of trees beyond these retention standards only when the applicant demonstrates that the proposed activity requiring additional removal of existing trees is the only reasonable alternative that will accomplish the applicant's objectives, and only when supplemental trees are provided to meet tree density credit requirements. In such instances, the City may require additional on-site supplemental tree planting and/or a fee in lieu of additional supplemental tree planting to achieve higher tree density credit than the minimum required by Table 95.26.2.
- d. Minimum Size and TDC Value for Supplemental Trees. The required minimum size of a supplemental tree worth one credit for six (6) feet tall for native or other conifers and two-inch caliper for deciduous or broad-leaf evergreen trees. The installation and maintenance shall be pursuant to KZC 95.XX.XX, Landscaping Regulations.

Table 95.26.3
Tree Density Credits for Retained or Supplemental Planted Trees

DBH	Tree Density Credits
Planted 6' Conifer, or 2" cal. Deciduous	1
Planted 8' Conifer, or 3" cal. Deciduous	2
6" – < 8"	1
8" – < "12	2
12" – < 18"	3
18" – < 22"	5
22" – < 26"	7
26" – >	9
Conifer over deciduous	1.5 x Tree Credit Above
Landmark Tree (30" and above)	1.5 x Tree Credit above

Tree Density Credit Calculation Examples using Table XX.XX.XX and Table XX.XXX.XX

Example: An 8,000-square-foot single family lot would need 8 tree credits ($8,000/1000 = 8$). The tree density credits on the lot could be retained by one 12-inch to 18-inch tree (3 credits) and one 18-inch to 22-inch or one 8-inch (5 credits). Another option would be one 10-inch (2 credits), one 18-inch(5 credits), and one 6-inch (1 credit) existing tree for a total of 8 credits. Another option would be to retain one 20" tree (5 credits) and plant one 8' conifer ($1.5 \times 2 \text{ credits} = 3 \text{ credits}$) for a total of 8 credits.

Example: A two-acre industrial site would need 30 tree credits ($87,120 \text{ square feet}/1,000 = 87.12 \times .35 = 30.49$ or 30). TDC could be met by a retaining three 24-inch trees (21 credits), and planting nine 2" caliper deciduous trees (9 credits) for a total of 30 credits.

95.28 Supplemental Tree Planting Requirements Related to Development Activity.

1. The minimum size for supplemental trees shall be six (6) feet for conifer, two-inch caliper for deciduous.
2. In some circumstances the Planning Official may consider smaller-sized supplemental trees if the applicant can demonstrate they are more suited to the site conditions, to the species, and will be planted in quantities to meet the intent of this section.
3. The planting of native and/or species diverse trees is encouraged to help ensure the health, longevity, and age diversity of Kirkland's tree canopy.
4. A ten (10%) reduction in required Tree Credit Density shall be given to the applicant for the planting of all native trees or combination of all native or drought tolerant trees from a City approved list of

drought tolerant trees.

5. No credits shall be given or count towards minimum TDC for supplemental planting of arborvitae, alder, cottonwood, or vine maple.

95.30 Tree Location Prioritization.

It is the preference of the City to retain and plant trees on-site, with the right tree in the right place. Right tree, right place minimizes negative impacts to the environment, building footprint, use and enjoyment of private property, maintenance and intended function of buildings, and gives retained and planted trees the best chance to establish and thrive as a healthy part of a diverse canopy.

The City shall approve design and landscape plans that retain and/or plant trees in the following on-site locations (in order of priority):

1. Required site perimeter or rear or front yard setbacks;
2. Adjacent to critical areas, associated buffers, and near trees or corridors that provide habitat value;
3. Significant trees that form a continuous, healthy canopy;
4. Significant trees on slopes greater than 20%;
5. Locations that do not interfere with the use and enjoyment of private property, or the maintenance and intended function of buildings on the development site (exceptions are made for Landmark trees and Groups pursuant to KZC 95.26.6)
6. Provide a screening function, enhance privacy between existing and new neighborhoods, help add to or preserve community character, provide relief from blight or harsh light, or screen uses with adjacent zoning;
7. Adjacent to stormwater facilities as approved by public works;
8. Within required common open spaces and recreation spaces as established by the approved site plans; and
9. Incorporated into the development site's approved landscape plans.

95.32 Incentive Measures.

It is the intent of the City to retain trees on site while allowing for flexible site and building design, providing visual buffers, and improving environmental and esthetic quality. Bonuses may be earned by the applicant by providing site development and building standards or retention or planting measures that better the requirements of this section or incorporate standards and methods found in other chapters of KZC and KMC.

1. Incentive measures may include but are not limited to:
 - a. Retention or replanting of additional significant trees that enhance slope stability and reduce potential for soil erosion;
 - i. Planting of native understory landscaping within the canopy area of each significant tree that must include shrubs that will mature to a full range of understory plant heights, that would be supported by the development site's soil and tree canopy, as determined by the qualified City and applicant arborists;
 - ii. Sustainable site development strategies and qualifying sustainability certifications such as:
 - a) Low Impact Development (LID) standards within the Public Works Pre-Approved Plans and Policies and King County Stormwater Manual;
 - b) International Living Futures Institute (ILFI) Living Building Challenge;
 - c) Leadership in Energy and Environmental Design (LEED);
 - d) Built Green Net Zero;

- e) Salmon Safe, ILFI Net Zero or Passive House programs that will be equal or superior to the provisions of KZC 95; or
 - f) The installation of renewable energy system hardware such as solar panels or wind turbines.
- iii. Site design such as lot clustering that allows for the retention of, but not limited to, habitat corridors, heavily wooded sites, additional buffers between critical areas, wetlands or streams, and visual buffers between new and existing neighborhoods.
- iv. Significant tree(s) retained on the interior of the lot that provides energy savings through winter wind protection or summer shading;
- v. Retention of an additional twenty (20%) of significant TDC on the interior of the lot above Table 95.24.2.
- b. Incentives provided to the applicant may include:
 - i. Tree density credits up to a maximum of eight (8) credits for incentive measure provided;
 - ii. Expedited permit review;
 - iii. Reduction of permit fees;
 - iv. Additional FAR or Lot Coverage, or density bonus;
 - v. A reduction in on-site or off-site parking requirements;
 - vi. Setback adjustments; or
 - vii. Other bonuses at the discretion of the Planning Official.

95.34 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 as follows:

1. All minimum required tree protection measures shall be shown on the tree retention plan and the site grading plan. Project site plans shall include a summary of the project-specific tree protection measures;
2. Tree Protection Fence. Before development, land clearing, filling or any land alteration, the applicant shall:
 - a. Erect and maintain readily visible temporary protective tree fencing at the approved Limits of Disturbance which 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 tree protection area signs spaced no further than 25 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. Install Site plans showing approved tree retention/protection 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.
2. Prohibit placing materials near trees. No person may conduct any activity within the 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.

- a. If any disturbance is proposed within the Inner Critical Root Zone of 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 can demonstrate, through non-injurious methods such as pneumatic root excavations, that there are no roots within the Inner Critical Root Zone.
 - b. Maintain the Tree Protection Fence in its approved location for the duration of the project until the Planning Official authorizes its removal.
 - c. 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.
 - d. In addition to the above, the Planning Official may require the following:
 - i. If equipment is authorized to operate within the Critical Root Zone, the soil and critical root zone 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.
 - ii. Minimize root damage by hand-excavating a 2-foot-deep trench, at edge of Critical Root Zone, to cleanly sever the roots of trees to be retained. Never rip or shred roots with heavy equipment.
 - iii. Corrective pruning performed on protected trees in order to avoid damage from machinery or building activity.
 - iv. Maintenance of trees throughout construction period by watering and fertilizing.
3. Grade.
- a. The grade shall not be elevated or reduced within the Critical Root Zone 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 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, 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 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 of trees to be retained. If tree roots must be disturbed within the critical root zone, a qualified professional report recommending the best construction method will be required.
 - e. Trees to be retained shall be protected from erosion and sedimentation. Clearing operations shall be conducted 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.

95.36 Off-Site Tree Planting or Fee In-Lieu.

1. When an applicant can demonstrate through a qualified arborist analysis that the base tree densities required under Table 95.24.2 for on-site tree retention and planting cannot be reasonably achieved, and no other on-site planting options are available, the Director may approve off-site planting or fee in-lieu paid directly into the City's Tree Forestry Account.
 - a. Allowable sites for off-site plantings may include, but are not limited to, sites within City limits:
 - i. City-owned properties;
 - ii. Private open space such as critical areas or Native Growth Protected Areas (NGPA), parks, or street rights-of-way;
 - iii. Private property with written consent and agreement of the owner;
 - iv. Residential neighborhoods that have, as identified by the Kirkland Urban Tree Canopy Assessment (2018), the lowest Urban Tree Canopy and greatest need for increased tree canopy based on Census tract data;
 - v. Institutional (hospitals, mental health facilities), municipal (including K-12 educational facilities), government, or non-profit properties with written consent and agreement of the parties; or
 - vi. Other properties as determined by the Director.
 - b. Cost of tree planting shall be at the expense of the applicant. The amount of the fee for planting shall cover the cost of the tree(s) at current market value, installation (labor, transportation, equipment, staking, mulching), maintenance for five years (watering, warranty, and monitoring), and fund administration.
 - c. Fees for installation and maintenance shall be determined by the average of three (3) bids obtained by the City and agreed upon by the City and applicant.
 - d. Fees shall be paid to the City at the time of:
 - i. Recording for single detached homes in a subdivision or short subdivision and townhome developments; or
 - ii. Prior to issuance of building permits for all other development.

95.38 Enforcement and Penalties

Upon determination 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. 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 topped must be replaced pursuant to the standards in Chapter 1.12 KMC.
2. Restoration. For topped trees greater than six (6) inches DBH, property owners must have a qualified professional develop and implement a restoration pruning plan.
3. Fines. If restoration of a topped tree is impossible, the City shall impose a monetary fine of \$250 (?) per tree payable directly into the City Forestry Account.

95.40 City Forestry Account

1. Funding Sources. All civil penalties received under this chapter and all money received pursuant to KZC 95.XX 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 under KZC 95.XX or settlements in lieu of penalties;
 - b. Agreed upon payment in lieu of planting required trees under KZC 95.36;
 - 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 treed areas within the City;
 - b. Planting and maintaining trees within the City;
 - c. Establishment of a holding public tree nursery;
 - d. Urban forestry education, public outreach and communication that includes establishment of an Environmental Justice Fund to broaden community engagement and input;
 - e. Implementation of a tree canopy monitoring program, including data collection and establishment of measures;
 - f. Assist to fully staff, fund, and implement an Urban Forestry Management Department within the City of Kirkland which shall include a Public Tree Retention, Replacement, and Monitoring Program pursuant to the Urban Forestry Strategic Management Plan and the Urban Tree Canopy Assessment; and
 - g. Other purposes relating to trees as determined by the City Council.



KZC 95 Code Amendments

Public Feedback Phase I

August-October 2018



Juanita Farmer's Market 8/31/18
Crossing Kirkland City-wide Block Party 9/8/18
City Hall for All Event/Presentation 10/6/18

Question: if you were in charge of trees in Kirkland, what kind of rules would you make?

No hurting [trees] unless [they're] weak and going to [be removed] anyway

Kirkland's assets are its tall, mature trees – keep our neighborhoods green!

Grow More [trees]!

More compost bins available ☺

I would every time you cut down 1 tree you have to plant 2 native trees

I wouldn't cut any of them down!

[Plant] as many trees as possible

Increase tree canopy coverage goal, [and] maintain, don't cut down mature trees, especially for construction of new mansions. Study urban heat island effect, health data & localized cooling. Lift up sidewalks & trim roots that have heaved the pavement instead of removing and replacing trees.

Balance growth/tree retention, [better coordinate] different [City] departments' interests with trees [There should be more] equity between homeowners' [tree removal] allowances vs. developers [tree retention requirements]

We need trees for privacy and sound/dust barrier

More trees [for their] benefits

[Unless] potentially hazardous, save for squirrel habitat

Preserve the large old growth, replace with greater than what is taken away (trees)

Be more diligent with street/park tree maintenance, especially street/sidewalk clearance

I'm all for preservation of trees, but please be open minded that in certain situations, pruning and/or cutting is necessary

[Allow] payment in lieu of replacement trees on private property [so that replacements can go somewhere void of trees] like Spinney Park

Trees/veg cleared from sidewalk

Cut down trees & sell 'em for City \$ funds

Allow in critical areas [tree] prun[ing] for light

If a tree blocks my view, I want it cut down

Tree code enforcement [should be] part of the tree code update. [Require] stop work order for people who break code. Suspend or revoke their business license. Fix loopholes

[] indicates additions to clarify the original comment



KZC 95 Code Amendments

Public Feedback Phase I

August-October 2018



More trees and understory plants everywhere. Preserve large trees
Clarify the process by which you can have a tree declared unhealthy or unsafe, and therefore you can cut it down without affecting your annual limit

Finn Hill Residents Stakeholder Meeting, September 17, 2018

1. Question: What are your concerns with the current tree code?

Tree credit [requirement is] inconsistent with goals for canopy coverage. It incentivizes native forest conversion into a non-native forest. Only way it works is with non-native deciduous trees.
Credits/rules don't align with tree growth/biology. Should be using PNW data and survival rate
Sidewalk planting strip longevity messing up sidewalk
Unfair processes/double standard between residents and developers
Statistics on canopy cover [should] only come from [what's within] City jurisdiction or boundary lines
[That] developers [don't] know their role in city-wide canopy goals
Developing [occurring] despite consequences of fines, etc. Up front work [occurs such as tree retention plans] but [there's] no follow-through with code enforcement.
No protection for adjacent property owners' trees
Need better signage for tree protection
[Concerned with] preserving trees with trail systems. Walkability and root zone [conflict]
[Code is] onerous and expensive for residents [and small contractors] specifically re: [tree protection] fencing. Doesn't make sense. [Even with fencing, there are] impacts [to] tree/plant health
[Code] too specific, doesn't achieve general goals
There is a lack of:

- Developer awareness on tree canopy maximization
- Tree categories (significant, heritage, etc.) and incentives to save them
- Maintenance bond
- Enforcement and fines correlated to tree size
- Understanding of [protected tree] maintenance responsibility of developer/owner
- IDP [requirement on a citywide basis]
- Financial support from City for resident tree preservation

Tree Preservation isn't coordinated between various agencies/utilities
Where in the process the tree standard is created and applied?
Interpretation of code language [too lax] ("if feasible" etc.)
Notice of development doesn't have tree plan, [is] not online.

[] indicates additions to clarify the original comment



KZC 95 Code Amendments

Public Feedback Phase I

August-October 2018



More equality with 2-per 12 months tree removal, specifically regarding larger properties

2. Complete this statement: A "good tree code" in Kirkland is...

One that helps homeowners plant, replace, manage trees depending on where they are [located]

One that provides construction solutions to owners when they have a tree [retention] problem

One that consistently meets with 40% canopy goal for City boundaries only

One that incentivizes native tree usage via tree credit [requirements]

Integrated with rest of development code

Accommodating of different neighborhoods' character

Integral, connected to policy goal of healthy, sustainable urban forest/tree canopy goals

Correlated between lot size and tree code policy with balance between simple and cost effective

3. Complete this statement: A "good tree code" in Kirkland has...

Contractors sign [an] affidavit for tree responsibilities over time [after development]

Precedence over other development processes

Ongoing financial responsibility through HOA or similar [legal] vehicle for maintenance of PNA/required [tree] replanting or a bond for x years [after development]

Mandatory education for developers, including [required trees] follow up

Clear [tree protection] plans included on [public] notices, [job sites] with [code] enforcement [contact #]

Economic incentives for public to do the right thing

Acknowledgment of "downstream" consequences of [tree] removal, [tree] removals included in stormwater assessment

A proactive city-wide education campaign and partnership with Lake Washington Technical College

Clear online resource to identify tree problem and Next Steps [for permits]

Maintenance requirements for City-owned property and conservation easements

Different tree classifications [for] species, cultural [significance] and heritage [trees], etc.

Development Community Stakeholder Meeting, September 21, 2018

1. Question: What are your concerns with the current tree code?

[Code is] inflexible for atypical lot dimensions

[Code is] unpredictable:

[It's an] outlier from other building codes

Updates [are unpredictable]

Interpretation/implementation [is not consistent] between different staff and over time

[] indicates additions to clarify the original comment



KZC 95 Code Amendments

Public Feedback Phase I

August-October 2018



[In how tree] credits [are] practice[d]

[There's] no objective measure

[Needs] clearer definitions and environmental connection [to] "significant" and "exceptional"

[Too] subjective standards, especially staff consistency [over time]/training [for new staff]

Lack of "grove" definition

[Code] minimum[s are] subjective, [result in] additional requirements as opposed to other building code minimums. [Results in unnecessary] one-sided negotiation [that favors staff].

Process timing too swift, not enough time for review

[In regards to] "canopy" [cover] vs. [trunk diameter at] breast height:

DBH is easier to measure

Canopy can be manipulated

[Concerned with] implementation of [increased] tree replacement [requirements] and [having] arborist on site during [construction]

2. Complete this statement: A "good tree code" in Kirkland is...

Objective

Accommodating of the original intention of a plat layout

Respectful of property rights

Takes into account other advancements in environmental tech [such as] water and solar

Predictable and consistent

Flexible [with a] transparent process to [address] problematic anomalies of code [that are] not really working

Equitable

Balanced between predictable and flexible

Accommodating of a fee program in lieu of [tree] replanting [on site]

Accommodating of tree replanting [vs. tree retention]

Consistent [with] meaning/definitions for decision-making rationale and construction methods (root zones)

Not requiring an on-site arborist

3. Complete this statement: A "good tree code" in Kirkland has...

A clear process flowchart similar to LID process, especially for "flexible" situations [such as] difficult lots

Third party appeals/arbitration process with option for Hearing Examiner

An IDP option [as opposed to requiring it for all shortplat/subdivisions citywide]

[] indicates additions to clarify the original comment



KZC 95 Code Amendments

Public Feedback Phase I

August-October 2018



No IDP requirement [would rather it be an option]

"Black and white" clear definitions, standards

A better definition of "grove"

Science-based qualifications

[Has a] legal protection [mechanism that's] not [an] easement

When [is it] applied?

Requests for information and additional responses to policy-related questions

1. *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.
2. *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.
3. *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 PC/CC to consider, not whether to change the policy goals in the Comprehensive Plan.
4. *Will the code amendments help us meet our 40 percent tree canopy cover goal? Why don't we use canopy cover as a code requirement instead of tree credits?* A tree density "credit" is a code requirement metric originally based on timber stocking models. Tree credits equate to increasing inches of trunk diameter and are a general indicator of tree size which generally translates, albeit indirectly, to tree canopy cover. Tree canopy cover is the outline of leaves as seen from above, usually derived from aerial imagery for the purpose of planning and goal-setting. After thoroughly examining the use of canopy cover as a regulatory metric, the PC made a decision that developing a more precise credit-to-canopy cover formula or converting entirely to canopy cover-based requirements is not a consideration at this time, mainly because it would be overly burdensome on property owners and City staff to attempt to measure or enforce canopy cover on a lot-by-lot basis.
5. *What are the tree removal rules for condominium properties with Homeowners 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; tree removal requests are required to come from the HOA board 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.
6. *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.

7. *Does the draft code provide enough predictability for the development review process?*
 Predictability is a term that has been used to describe a high level of consistency and certainty when code requirements are applied (synonymous with "prescriptive"). KZC 95 was written to provide flexibility for various development scenarios, using code language such as retain trees "if feasible" or to "the maximum extent possible." Consequently, the Planning Official's authority to require site plan alterations to retain trees often results in lengthy negotiations between applicants and staff. The MBAKS stakeholders were instrumental in specifying regulatory expectations and the extent of the measures for tree retention. Code changes to increase predictability include:
 - Eliminating the "if feasible/maximum extent possible" and other subjective language
 - Eliminating the Low, Moderate and High Retention Value tree definitions
 - Specific tree condition ratings
 - Tier 1/Tier 2 guaranteed building envelope dimensions
 - Eliminating phased review (IDP)
 - Establishing a clear order of priorities for tree retention and replanting
8. *How do applicants know they've exhausted their options to try to retain trees in setbacks?*
 When they've run through the Tier 2 "menu" developed by the stakeholders.
9. *How many review cycles can applicants expect?* Revisions depend on whether the proposed improvements/permit application follows the code. We've spent a lot of time collaborating on a draft code that adds clarity and predictability to the development review process. Depending on the number of revisions it takes the applicant to achieve code compliance, the City can't issue a permit.
10. *How is it determined whether the house or tree "wins?"* By using the clear regulatory expectations that were developed by the stakeholders: the specific site plan alterations, variations to development standards etc. which need to be used first to retain existing Tier 1/Tier 2 trees. If no trees or less than the equivalent of 30 credits per acre can be retained, then planting is required to bring the credits up to the minimum required. With the exception of Tier 1 trees, that's how Kirkland's current code works...to meet or exceed the minimum tree density. As we reviewed in our tabletop exercises with the stakeholder group, the tree "loses" when impacts are too great to the critical root zone.
11. *Can an applicant remove trees anywhere on the property if they are not Tier 1 or 2?* Yes. *Within a critical area (or similarly protected area)?* No – KZC 70, 83, 85 etc. still apply. *How will anyone know ahead of time what trees may likely be retained or not?* You'd know by applying Tier 1/Tier 2 criteria in the draft code for building envelopes, site plans, etc. that was developed with the stakeholders.
12. *Why doesn't the proposed ordinance give builders the option to pay an in-lieu fee if retention onsite is not possible?* We checked with the City Attorney on the stakeholders' proposal to assess a \$2,000 penalty for the authorized removal of a landmark tree. The CAO's response is that the City requiring payment for legal tree removal would be interpreted as a tax not specifically authorized by State law and case law.

13. *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.
14. *Why doesn't Kirkland use (x) tree code 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 regarding specific code issues, many of which are noted in the November 8, 2018 PC meeting memo and the January 21, 2020 City Council memo. In most cases, such as requirements that mandate tree species, the objective to streamline the code was a higher priority than to increase flexibility or take a customized approach that increased code complexity.
15. *Should replacement tree planting requirements specify appropriate distances from property lines so tree branches do not grow to encroach on a neighboring property?* 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 a predictable manner - 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, administer with permits, and enforce.
 - Final tree planting locations and species are often made by builders in the field.
 - Planting new trees toward the center of a lot will not result in long term viability.
 Tree growth over impervious surfaces and property and city boundary lines collectively contributes to overall canopy cover. Note: conversely, neighbors may welcome an adjacent property's tree growing over a property line.
16. *Are there circumstances where "topping" trees is okay?* Topping can result in branch or whole tree failure and so many other issues that it's not considered an acceptable practice under industry standards for pruning.
17. *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.
18. *Why grant City authority to order the removal of severely diseased trees?* The primary purpose is to minimize the City's cost for public tree removal from Emerald Ash Borer (EAB). Having no code provision puts the City in a vulnerable position if EAB infects private trees first.