



CITY OF KIRKLAND
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MEMORANDUM

To: Kurt Triplett, City Manager

From: Adam Weinstein, AICP, Planning and Building Director
Jeremy McMahan, Planning and Building Deputy Director
Katie Hogan, Urban Forester

Date: January 20, 2022

Subject: DRAFT CODE AMENDMENTS – PART 3, KIRKLAND ZONING CODE CHAPTER 95; TREE MANAGEMENT AND REQUIRED LANDSCAPING; FILE NUMBER CAM18-00408

I. RECOMMENDATION:

It is recommended that City Council review Part 3 of the draft amendments to Kirkland Zoning Code Chapter 95 (KZC 95), included as Attachment 1, and confirm the following framework for completing the code amendments:

- **January 18:** Postponed due to full Council agenda
- **February 1:** Review Part 3 of the draft code, including the third round of moderate/major amendments comprising Tree Retention and Replacement Standards Associated with Development Activity;
- **February 15:** Review Part 4 of the draft code, including miscellaneous code amendments responding to Council direction from review of Parts 1, 2, and 3 received during the November 16, January 4, and February 1 Council Meetings;
- **March 1:** Review final draft of the consolidated KZC 95 and consider final adoption.

This discussion was originally scheduled for the January 18th Council meeting but was deferred to February 1st due to the length of the meeting. The memo and attachments are nearly the same, but this memo does include a section that responds to the January 18th letter sent to the Council by the Finn Hill Neighborhood Alliance (FHNA). FHNA comments and the staff response may be found starting on Page 16 of the memo in the section titled [FHNA Comments/Questions](#).

II. BACKGROUND INFORMATION:

At the [November 16, 2021](#) and [January 4, 2022](#) City Council meetings, staff presented Parts 1 and 2 of the proposed draft code. Minimal comments were received from Council during review of the Part 1 amendments, which consisted of either no impact or minor impact amendments and 18 total code sections. More extensive comments were received during review of the Part 2 amendments, which focused on two code sections: KZC 95.23 – Landmark Tree – Mitigation

Standards and KZC 95.25 – Private Property - Tree Removal, Not Associated with Development Activity.

Due to the volume of comments received from Council, staff is proposing one additional Council meeting (Part 4) to ensure thorough review the combined code, including staff's responses to Council direction on the three parts.

Attachment 2 includes a status summary matrix illustrating Council direction on each section of the draft code from the November 16 and January 4 meetings.

Additional background information on the evolution of KZC 95 can be found through the links below:

Date/Link		Meeting 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 Planning Commission (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.
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
Jan 21, 2020	CC	Review PC recommendations and focus on key issues of code amendments
Feb 4, 2020	CC	Review PC recommendations and discuss KZC 95.23
Feb 18, 2020	CC	Review PC recommendations and provide direction for staff for continued code amendments
May 18, 2021	CC	Discuss general policy direction and desired outcomes of the code amendment project

July 6, 2021	CC	Study session to review high-level policy questions to guide code amendments
Nov 16, 2021	CC	Resume City Council review of no impact/minor impact code amendments and confirm Council position on high-level policy to guide code amendments
Jan 4, 2022	CC	Resume City Council review of moderate/major impact code amendments, including review of KZC 95.23 – Landmark Tree Mitigation and 95.25 – Private Property - Tree Removals, Not Associated with Development Activity

III. COUNCIL DIRECTION ON KZC 95.25 – TREE REMOVAL, NOT ASSOCIATED WITH DEVELOPMENT ACTIVITY

During the January 4 City Council meeting, staff presented Council with the proposed amendments to KZC 95.25 (Part 2). Staff then presented Council with a series of questions related to the proposed major amendments, followed by Council comments and direction. Based on these comments and direction, staff is working on revising this code section to reflect Council's desired outcome. The questions presented to Council and a summary of staff's understanding of Council direction are included below. Staff requests that Council review the summary responses below and advise staff if they disagree or require additional clarification on these issues during the February 1 meeting. Staff will use this additional clarification to continue revising KZC 95.25 - to be presented at the February 15 meeting.

Question 1: Does Council support allowing Landmark Trees to be removed under the 12-month Tree Removal Allowances?

Council Direction: Limit Landmark Tree removals to one Landmark Tree every 12 months, with the ability to bank one additional future Landmark Tree removal if desired.

Question 2: Does Council approve of the proposed Landmark Tree Mitigation provisions?

Council Direction: Yes, Council supports the 3:1 mitigation ratio with trees selected from the City-approved large tree species list.

Question 3: Does Council support applying the fee-in-lieu of on-site mitigation provisions to private property tree removals not associated with development activity?

Council Direction: Yes, Council supports requiring homeowners to pay the fee-in-lieu amount for mitigation trees that cannot feasibly be planted on the subject property. The majority of Councilmembers expressed the desire to ensure the funding from fee-in-lieu is allocated directly toward City-led tree planting efforts and that the use of funding be clearly outlined.

Question 4: Does Council support increasing the number of trees allowed for removal within the 12-month Tree Removal Allowances based on property size?

Council Direction: Yes, Council supports increasing the 12-month Tree Removal Allowances based on increased property sizes, with the caveat that Landmark Tree removals are limited as

noted above. Council requested an update to the chart to clarify how combined removal of Regulated and Landmark Trees will be regulated.

Question 5: Does Council agree with requiring more robust mitigation standards when a property owner submits a permit to remove one or more of the last trees required to remain on the property?

Council Direction: Yes, Council supports requiring increased mitigation standards (1:1, 2:1, or 3:1 based on tree size). Further, Council also expressed a desire to allow homeowners to remove the last remaining trees on their property without meeting the City's hazard or nuisance criteria, as long as the removed trees are robustly mitigated.

Question 6: Does Council support the proposed development wait periods of 12-months for Regulated trees and 24-months for Landmark trees?

Council Direction: Council's position was partially divided on this provision; however, generally Council showed support for the proposed development wait periods (12-months for Regulated trees and 24-months for Landmark trees), with the condition that a hardship clause be added.

Additional topic: The City Council discussed the concept of mandating the Tree Removal Notification process. Staff explained the benefits of mandating this process, including better tracking of tree removals on private properties and reduced time spent researching potential code enforcement violations and the constraints in terms of new obligations for property owners and additional staff resources necessary to manage the increased volume.

Council Direction: Council was supportive of this requirement considering the benefits noted by staff and the additional benefits of better data tracking tree removal and the City's 40% canopy goal.

IV. OVERVIEW OF PART 3 CODE AMENDMENTS:

For the January 18 City Council meeting, staff is proposing to present Council with Part 3 of the code amendments – *moderate to major* amendments consisting of regulations that govern tree retention and replanting standards related to development activity (KZC 95.30, 95.34). Staff has prepared an in-depth review of draft code revisions related to development activity, including examples of applicability. One additional code section, Enforcement and Penalties (KZC 95.55) will be presented at this meeting as well.

Staff will be presenting the following key code changes reflecting the most recent guidance from City Council, results of the public hearing, Houghton Community Council (HCC) and Planning Commission (PC) recommendations:

1. Tree Retention Associated with Development Activity [KZC 95.30], including:
 - a) Tree Condition and Viability Ratings
 - b) Definitions - High Retention Value Trees
 - c) Tree Retention Plan Standards - High Retention Value Trees
 1. Single-Family Dwellings, Short Plats, Subdivisions, Two/Three-Unit Homes and Cottage/Carriage Dwellings
 2. Multi-family, Commercial, and Mixed-Use

- d) Incentives - Moderate Retention Value Trees
 - e) Clustering of Lots – High Retention Value Trees
 - f) Eliminate Phased Development Review and Mandatory Integrated Development Plans (IDPs)
 - g) Applicability of KZC 95.23 to Development Standards – Landmark Tree Mitigation
2. Tree Replacement Standards Related to Development Activity [KZC 95.34]
 3. Enforcement and Penalties [KZC 95.55]

Attachment 1 contains a draft of KZC 95, including a high-level inline summary of each moderate/major code amendment.

V. KZC 95.30: TREE RETENTION ASSOCIATED WITH DEVELOPMENT ACTIVITY:

These code provisions are intended to “promote site planning, building, and development practices that work to avoid removal or destruction of trees and vegetation, avoid unnecessary disturbance to the City’s natural vegetation, and provide landscaping to buffer the effects of built and paved areas” (KZC 95.05(2)(c)). The Planning Commission’s recommendations on KZC 95 reflect significant work with staff and stakeholders to provide greater predictability and certainty with the application of KZC 95. This memo will walk through each of the moderate and/or major code amendments proposed to support these goals and objectives.

A. Tree Condition and Viability Ratings

The proposed draft code includes a new table for assessing the existing condition of trees. This table is intended to be used by Qualified Professional Arborists conducting tree inventories associated with development permits. The condition ratings were written based on industry standards and are abridged from the [Guide for Plant Appraisal, 10th Edition](#) and the [Purdue Extension for Tree Appraisal](#). The goal of these revisions is to improve consistency and predictability when designating condition ratings and viability status by providing a common framework to be used by an applicant’s arborist and the City’s Development Review Arborist. Because viability plays a large role in determining whether the tree meets the City’s High Retention Value Tree criteria (meaning that the tree is a candidate for retention efforts), improving the process for determining these ratings is instrumental to successfully implementing the proposed KZC 95.



Table 1. Tree condition rating system for determining viability status (KZC 95.30)

Condition Rating	Tree Health <i>Twig and leaf density, size and growth, pest/pathogen issues</i>	Tree Structure <i>Root flare, trunk condition, branch assembly</i>
Excellent	High or above average vigor with little or no twig dieback, discoloration or defoliation.	Trunk and root flare exhibit no visible defects or cavities. Branch structure and attachments are normal for species and free of defects.
Good	Vigor is normal for species. No significant damage due to diseases or pests. Any twig dieback, defoliation or discoloration is minor (up to 10% of the crown).	Well-developed structure. Defects are minor and can be corrected. Codominant stem formation may be present. Trees in groves may have asymmetries/deviations from an open-grown form of the same species.



Fair	Reduced vigor. Twig dieback, defoliation, discoloration, and/or dead branches up to 30% of the crown. Obvious signs of pest problems contribute to a lesser condition but is not likely to be fatal.	Visible evidence of trunk damage or cavities, large girdling roots or branch attachments that require moderate corrections.
Poor	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.	Structural problems cannot be corrected, such as recent change in tree orientation, extensive trunk decay or poor branch attachments. Tree/tree part failure may occur at any time

The draft code has a viability matrix to be used in conjunction with the condition ratings assigned per Table 1 above. The purpose of this matrix is to ensure viability directly correlates to tree conditions and to minimize subjectivity. This chart was created based on staff experience and current procedures for determining viability status based on site inspections during development review. The matrix was created as a tool for arborists to utilize when determining whether existing trees are in stable condition. The applicability of this system is to determine the viability of trees in their current state and is not intended to be used to predict future conditions following construction impacts, as survivability greatly depends on tree protection measures and impacts throughout construction.

Table 2. Tree viability matrix (KZC 95.30)

		Tree Health 			
Tree Structure 		Excellent	Good	Fair	Poor
	Excellent	Viable	Viable	Viable	Not viable
	Good	Viable	Viable	Viable	Not viable
	Fair	Viable	Viable	Not viable	Not viable
	Poor	Not viable	Not viable	Not viable	Not viable

Example 1: A Douglas-fir tree that is determined by a Qualified Professional Arborist to be in 'good' health condition and 'fair' structural condition has an overall rating of 'viable'. See exhibit below.

		Tree Health 			
Tree Structure 		Excellent	Good	Fair	Poor
	Excellent	Viable	Viable	Viable	Not viable
	Good	Viable	Viable	Viable	Not viable
	Fair	Viable	Viable	Not viable	Not viable

Note: In the original image, the 'Good' header and the 'Fair' row are highlighted with red boxes. A red arrow points from the 'Good' header to the 'Viable' cell in the 'Fair' row, and another red arrow points from the 'Fair' row header to the same 'Viable' cell.

Poor	Not viable	Not viable	Not viable	Not viable
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Staff has received public and stakeholder feedback expressing concern that this system for determining viability will result in less retention of trees rated as both 'fair' health and structure. To ensure that viability ratings are assigned to City standards, the City conducts a peer review of arborist reports and condition ratings. This reflects current practices and will continue to be the standard procedure moving forward.

Current City procedure involves the Development Review Arborist visiting each site proposed for redevelopment and either confirming or disapproving the condition ratings and viability status assigned to individual trees in the Arborist Report submitted by the applicant. In both the current and existing tree code, the City has ultimate jurisdiction over final tree viability and retention value designations.

If condition ratings are correctly assigned, a tree that is in fair health would have overall reduced vigor, exhibit twig dieback, defoliation, discoloration, and/or dead branches in up to 30-percent of the canopy combined with a structural condition which includes visible trunk damage or cavities, large girdling roots or branch attachments that require corrections. A tree with a combination of these health and structural issues is likely to be a tree with a reduced [Safe and Useful Life Expectancy](#).¹

As per current practices, trees that are designated as 'not viable' that are located in critical areas such as wetland or stream buffers, tree protection easements, and/or protected natural areas are required for retention regardless of viability status as long as the trees do not present a hazard to the surrounding area.

B. Definitions - High Retention Value Trees

Staff has received feedback throughout the code amendment project that more predictability is needed for applicants to better understand tree retention regulations. To support this, the proposed KZC 95 clearly defines trees of High Retention Value based on size and/or location, as follows:

- 1) A viable regulated tree with any portion of the trunk located in a required yard, land use buffer, and/or common open space which measures less than 26-inches DBH
- 2) Landmark tree – a viable regulated tree with a minimum 26-inch DBH located anywhere on a property
- 3) Grove – a group of three (3) or more viable regulated trees with overlapping or touching crowns that are located on a proposed development site; one of which is located in a required yard, land use buffer, and/or common open space

C. Tree Retention Plan Standards - High Retention Value Trees

Single-Family Dwellings, Short Plats, Subdivisions, Two/Three-Unit Homes and Cottage/Carriage Dwellings

¹ [Barrell, J. Sule: Its Use and Status into the New Millennium. Paper presented to the NAAA Conference in Sydney: 2001.](#)

In order to provide clarity to tree retention standards and support the City's tree canopy goals, the draft KZC 95 states that trees of High Retention Value, including Landmark Trees and Groves, shall be retained. Applicants are required to pursue site plan alterations, utilize best available science and arboricultural methods, and explore variations to development standards prior to the Planning Official authorizing removal of High Retention Value Trees. The primary objective of this tree retention approach is to focus retention efforts on trees near the perimeter of development sites (with the greatest chance for retention) and trees that provide the greatest canopy/ecological benefit (landmarks and groves) using the highest standards and code flexibility to support protection.

The highest level of tree retention standards applies to Landmark Trees and Groves, with the next highest level of standards applying to trees located in required setbacks/yards. To retain any tree of High Retention Value, applicants shall demonstrate that the following site plan alterations have been pursued:

1) Site Plan Alterations:

- a) Reasonable reductions to the proposed building footprints and driveways;
- b) Shift or flip (mirror) the location of building footprints and driveways;
- c) Select the required front yard on corner lots in the RSA and RSX zones and select the required side yard to meet the 15-foot total required in RS zones;
- d) Reduce required front yard by up to 5 feet;
- e) Reduce required rear yards by up to 5 feet where the rear yard is adjacent to an access easement or tract;
- f) Shift the building footprint on the lot to utilize the variations to development standards allowed in subsection (3) of this section;
- g) Adjust deck, patio, and path designs;
- h) Avoid rockery/retaining walls located within Critical Root Zones (CRZs) to maintain existing grades.

2) In addition to the above alterations, additional retention efforts are specified to retain Landmark Trees and Groves. Applicants shall pursue the following additional site plan alterations:

- a) Relocate utilities when feasible, taking into account gravity and location of existing mains;
- b) Shore basements and other extensive excavations in order to avoid impact within CRZs;
- c) Cantilever structures over CRZs;
- d) With short plats and subdivisions, undertake clustering per KZC 95.30(4)(d)(1), rearrangement of property lines within the applicable short plat or subdivision, relocation of access roads, and relocation of utilities.

In addition to the above-described site plan alterations, applicants shall pursue the following variations to development standards.

3) Additional variations to development standards shall be pursued, including:

- a) Allow required yards to be reduced to 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 to extend access due to building footprint while ensuring that the driveway width does not exceed a width of 20 feet;
- d) Allow minimum 18-foot by 18-foot parking pads;
- e) Allow variations in required parking and driveways;
- f) Modify right-of-way frontage improvement requirements, such as adjusting the location of any required landscape strip;
- g) Allow up to a 5-foot increase in building height where the additional height is clearly related to tree retention (e.g., locating mechanical equipment in the attic, avoiding excavation or fill);
- h) With short plats and subdivisions, undertake clustering per KZC 95.30(4)(d)(1).

In addition, to retain Landmark Trees and Groves, applicants shall pursue the following:

- a) Reduce required side yards to 3-feet where those yards are internal within a proposed short plat or subdivision.

Example 1: Figure 1, below, shows a property proposed for redevelopment with two regulated trees located in the required front yard and one Landmark Tree (26-inch DBH or greater) located in the buildable area. The applicant would be required to pursue site plan alterations listed above in section (1), subsections (a) through (h) and variations to development standards listed above in section (3), subsections (a) through (h) in order to retain the two trees in the required front yard. To retain the Landmark Tree, the applicant would be required to pursue all of the previously-listed alterations and variations as well as those specific to the retention of Landmark Trees and Groves. If retention is still not feasible after demonstrating that all site plan alterations and variations were pursued, the Planning Official may authorize the removal of the one Landmark Tree and two trees located in the front yard. See subsection (H) below for mitigation and/or fee in lieu requirements for the removal of Landmark Trees.

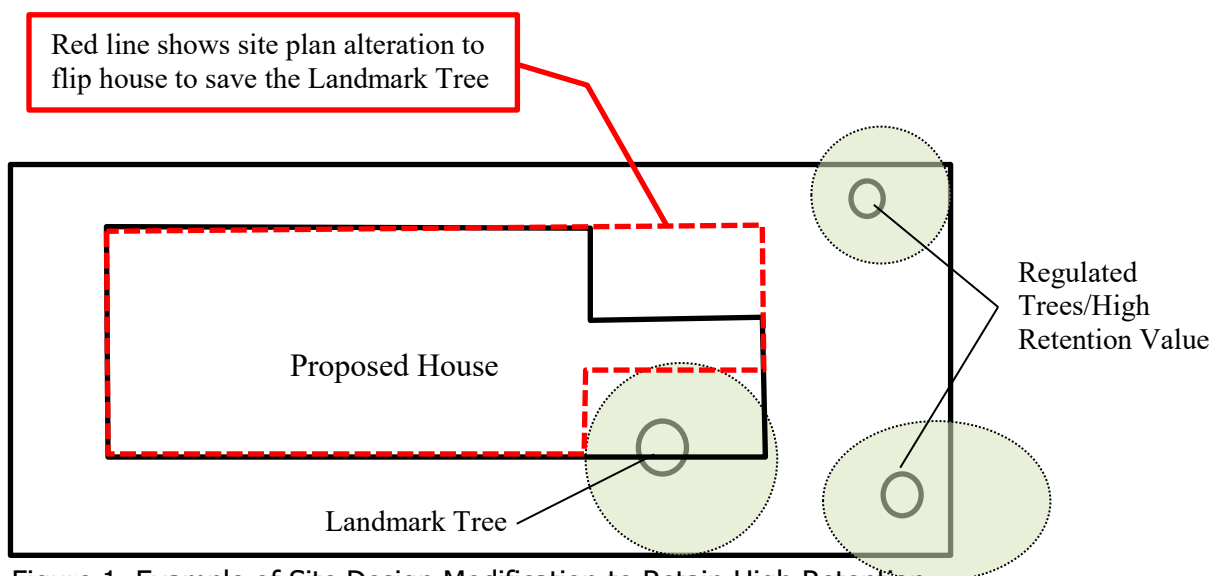


Figure 1. Example of Site Design Modification to Retain High Retention Value Trees

The draft code proposes the same protections for Grove Trees as for Landmark Trees. Based on the definition of Grove Trees previously reviewed by Council, when a Grove exists on a property, one of the trees in the Grove must be located in a setback, yard, land use buffer, and/or common open space in order for all of the trees comprising the Grove to be regulated as such. The rationale for this requirement resulted from challenges associated with retaining trees that were in the center of the buildable lot area. By requiring that the Grove trees partially overlap with required yards, etc. to qualify for Grove status, the City can better work with applicants to explore site plan alterations that support retention. This inclusion into the draft code reflects current practices and interpretations of the existing KZC 95. Figure 2 below shows an example diagram of the buildable area of a property with front, rear, and side yard setbacks and associated Grove.

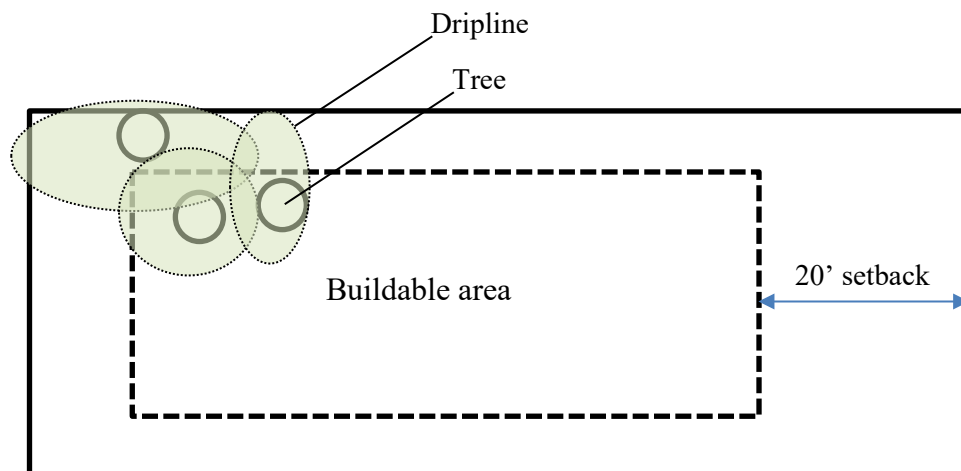


Figure 2. Example of grove designation

Based on previous scenarios and research conducted by staff which explored the complexities of retaining large trees, staff and stakeholders acknowledge the challenge with retaining these High Retention Value trees on typical single-family development sites, and that even with new, more protective code provisions, a large number of trees will continue to be removed with re-development. Even so, the consensus was that standards and variations should be in-place which provide additional efforts to retain larger trees that are important to the community and Urban Forest Canopy Goals. By removing the ambiguous language in the existing KZC 95, applicants will have clear direction on tree retention standards and expectations for High Retention Value Trees and are equipped with the information and tools necessary to support retention and/or removal.

D. Tree Retention Plan Standards - High Retention Value Trees

Multi-family, commercial, and mixed use

Separate site plan alterations and development variation standards were developed specific to higher density development uses in order to retain viable trees located in required yards and/or land use buffers.

The proposed KZC 95.30 requires that applicants shall pursue the following provisions for multi-family, commercial, and mixed-use development projects:

- 1) Adjust deck, patio, and path designs;
- 2) Relocate utilities when gravity and location of existing mains permit;
- 3) Avoid rockery/retaining walls located within CRZs to maintain existing grades;
- 4) Shore basements and other extensive excavations in order to avoid impact within CRZs;
- 5) Cantilever structures over CRZs;
- 6) Employ arboricultural methods such as air excavations, boring under roots instead of trenching, and using additional CRZ protection per KZC 95.34;
- 7) Allow required yards to be reduced to 10-foot front;
- 8) Allow variations to the maximum lot coverage by not more than 10 percent where necessary to extend access due to building footprint location while ensuring that the driveway width does not exceed a width of 20 feet;
- 9) Modify right-of-way frontage improvement requirements, such as adjusting the location of any required landscape strip;
- 10) 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.);
- 9) 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;
- 10) Vary requirements pertaining to stormwater if approved by the Public Works Official under KMC 15.52.060; and
- 11) Reduce or vary the area, width, or composition of any required common recreational open space.

E. Incentives - Moderate Retention Value Trees

Staff has received feedback that the current KZC 95 is too ambiguous regarding Moderate Retention Value Tree protection standards, stating that “trees shall be retained if feasible.” This language has been removed from the proposed code and instead, incentives were added for retaining trees of Moderate Retention Value (i.e., viable regulated trees that are not High Retention Value Trees). When Landmark Trees cannot feasibly be retained after pursuing the site plan alterations and variation standards listed in KZC 95.30(4) and (5), the applicant can propose the retention of a Moderate Retention Value Trees in-place of retaining Landmark Trees. The applicant may request a development waiver and elect to retain a Moderate Retention Value Tree to satisfy the Landmark Tree mitigation requirements and/or associated fee in lieu set forth in KZC 95.23.

As a standard, applicants requesting the removal a Landmark Tree are subject to either mandatory 3:1 mitigation on-site or a payment in lieu into the City’s Urban Forestry account (\$1,050) pursuant to KZC 95.23. By requesting this incentive and retaining a Moderate Retention Value Tree, the mitigation and/or fee in lieu requirements may be reduced. The incentive must be formally requested by the applicant and approved by the Planning Official.

Example 2: An applicant requests to retain one Moderate Retention Value tree in Excellent/Good condition in lieu of retaining one Landmark Tree in the center of the lot. The applicant is proposing to replant 1 of the required 3 mitigation trees on-site for the Landmark Tree removal and requests that the additional 2 mitigation trees are waived due to retaining the Moderate Retention Value Tree. The Planning Official approves the incentive and therefore the applicant is not required to replant the additional two trees or pay the associated fee in lieu (approx. \$700).

F. Clustering of Lots – High Retention Value Trees

Clustered lots was identified by staff and stakeholders as a potentially valuable tool to retain High Retention Value trees for development of short plats/subdivisions and larger lots. While setback reductions and other site alterations and variations addressed above may be less feasible for these larger projects due to density and site constraints, providing code flexibility that allows for developers to cluster proposed homes has the potential for expanded tree retention by creating larger areas of undeveloped open space. This concept has been tested on other low density residential uses throughout the City ([KZC 15.10.050 PLA 3C Zone](#)) as a way for critical areas to be adequately protected.

These variations allow developers to shrink lot sizes without reductions in FAR and lot coverage allowances resulting in no net loss of development potential.

The draft KZC 95 proposes variations to the minimum lot size and maximum Floor Area Ratio and Lot Coverage requirements in order to facilitate High Retention Value Tree protection, including the following:

- 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;
- 3) The variations and resultant restrictions shall be included in a recorded agreement and be binding on future owners of the lots.

G. Eliminated Phased Development Review and Mandatory IDPs

The draft KZC 95 proposes removal of the phased short plat/subdivision development review process and mandating the Integrated Development Plans (IDP) process based on City Council direction. The IDP process was created in 2010 at the time of 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. Another benefit of the IDP process is that it provides more predictability and transparency for community members that monitor tree removal on development sites.

H. Applicability of KZC 95.23 to Development Standards – Landmark Tree Mitigation

Staff discussed the new Landmark Trees – Mitigation Requirements code section (KZC 95.23) at the January 4 City Council meeting as it relates to private property tree removal and replacement. This code section is proposed as an umbrella code section that also applies to development-related standards pursuant to KZC 95.30. This section requires that each Landmark Tree removed shall be mitigated by 3 replacement trees selected from a City-Approved list. If site constraints do not allow for replacement on-site, the applicant can elect to pay a fee in lieu of planting at an amount established by the City for each replacement tree required. Currently, the City's standard fee in lieu cost is \$350 per tree, equating to \$1,050 for each Landmark Tree removed (3 replacement trees X \$350 = \$1,050). This fee (which is being evaluated by staff to ensure it captures all immediate planting and maintenance costs) is required to be directly deposited into the City Forestry Account and used by the City for tree planting and associated efforts. Staff is also evaluating KZC 95.57 to ensure that funds are more narrowly focused on canopy restoration. KZC 95.23 is based on Council feedback that Landmark Trees that are approved for removal shall be mitigated, either through replacement trees at a higher replacement standard, or fee in lieu.

Example 3: An applicant re-developing a property with one viable Landmark Tree is requesting the removal of the subject tree upon demonstrating the tree cannot be feasibly retained after pursuing tree retention standards set forth in KZC 95.30(4) and (5). The applicant and City must work in good faith to replant 3 new trees on the subject site, in addition to replacement tree requirements pursuant to KZC 95.34. If it is determined the mitigation trees cannot be planted on the subject site in a manner that supports a long-term sustainable planting, the applicant shall pay the fee in lieu cost of the Landmark Tree.

VI. KZC 95.34: TREE REPLACEMENT STANDARDS RELATED TO DEVELOPMENT ACTIVITY:

This code section serves to establish the minimum tree planting requirements for development permits based on lot size using a tree credit system. The goals of amending this section, which arose from numerous meetings with staff, stakeholders, and City Council, are the following:

- a) Clarify this code section does not address tree retention standards but rather replacement tree requirements (i.e., that requiring tree retention that exceeds the minimum number of replanting credits is permissible)
- b) Increase tree replacement standards per acre
- c) Provide a cap on the maximum number of density credits an individual retained tree can be awarded
- d) Provide an option for applicants to pay a fee in lieu of replanting on-site
- e) Miscellaneous minor code amendments

A. Code Clarification and Minor Amendments

Code amendments resulting in no impact are proposed to this section in order to clarify existing City practices and clearly state that the purpose of this section is to determine replanting requirements for development permits. The intent was revised to state:

"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."

B. Increased Tree Replacement Standards per Acre

The draft code proposes increasing the minimum tree density credits per lot from 30 to 50 tree credits per acre. This increase is based on prior City Council direction with the long-term goal of increasing City-wide canopy cover and accounting for new tree mortality.

Example 1: Per the existing KZC 95, an average-size 7,500 square foot lot would require 5 tree density credits, satisfied by either existing or proposed trees (7,500 square feet/43,560 square feet (i.e., an acre) X 30 = 5 (rounded down from 5.16)). The proposed code increases the credit per acre requirement to 50 credits, resulting in an increase to 9 required tree credits (7,500/43,560 X 50 = 9 (rounded up from 8.6))

In order to ensure sites are not over-planted with unsustainable plantings, KZC 95.50 – Installation Standards for Required Plantings, was also revised to include specifications for new tree planting locations. These specifications include planting trees at least 3 feet away from property lines, prohibiting planting of large trees under or within proximity to overhead utilities, and planting trees in a manner that allows the tree species to mature to its full height and width.

C. Maximum Number of Tree Density Credits per Tree

For most lots undergoing development, retention of a single tree can easily exceed the tree density credits required for the lot, resulting in no replanting requirements. To ensure new trees are being planted to offset development-related tree removals, draft KZC 95 proposes setting a reduced cap on the maximum number of tree density credits for which an individual tree can be awarded. This cap is proposed to be set at 11 tree density credits for any viable tree measuring 30-inches DBH or greater. Per the existing KZC 95, the maximum number of tree credits awarded is 21 tree credits for a 50-inch DBH or greater tree.

While this amendment is unlikely to substantially increase replanting requirements for most average sized lots, it will likely result in more newly-planted trees on larger properties.

Tree Credits for Existing Regulated Trees

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

D. Payment of Fee in Lieu for Replacement Trees

The fee in lieu option for supplemental trees in the existing KZC 95 has been underutilized due to the low supplemental tree standards and high credits awarded for retained trees. Staff expects that with the new 3:1 mitigation requirement for Landmark Trees, increased per acre tree density requirements, and cap on tree density credits, utilization of the fee in lieu option will likely increase. To ensure sites are not overplanted and to comply with the revised planting standards in KZC 95.50, applicants shall pay a fee in lieu for all supplemental trees that are not planted on the subject property undergoing redevelopment.

E. Miscellaneous Minor Code Amendments

Several miscellaneous code amendments were made which reflect prior Council direction, including the following:

- 1) Trees planted to form a clipped or sheared hedge will not be counted toward tree density credits.
 - 2) Thuja/Arborvitae (or other slow-growing conifers as listed by the Planning and Building Department) planted on development sites shall not count towards tree density credits.
 - 3) Existing trees located on property lines (shared trees) shall count toward half tree credits.
 - 4) Required supplemental tree sizes shall be a minimum of 6-feet tall for conifer species to align with replacement tree sizes in other code sections.
-

VII. KZC 95.55 ENFORCEMENT AND PENALTIES:

Amendments to KZC 95.55 were made to better align code language with the recently revised KMC 1.12.100: "Special provisions relating to enforcement of tree regulations in Chapter 95 KZC." This municipal code section was revised in 2020 and presented to Council on [April 21, 2020](#). Revisions included increased penalty fines and restoration requirements for illegal tree removal.

Proposed amendments to KZC 95.55 are minor in nature and serve the purpose of providing a link between KZC 95 and KMC 1.12.100.

VIII. STAFF RESPONSES TO COUNCIL & STAKEHOLDER QUESTIONS

Leading up to the January 18 City Council meeting, staff received several questions and comments from Councilmembers and the Finn Hill Neighborhood Alliance (FHNA). Staff responses to these questions are discussed below.

A) City Council Comments/Questions

Comment #1: Can you state upfront (or somewhere in the presentation) that these tree retention requirements won't preclude people from building ADUs or cottages as allowed by right (i.e., they wouldn't make someone build only one cottage instead of the two cottages that regulations would allow on one single-family property)?

Staff Response: The proposed tree retention standards for High Retention Value Trees do not require tree retention efforts that would reduce the maximum allowed density, number of allowed lots, maximum allowed Floor Area Ratio (FAR) or Lot Coverage, or that preclude required access and utility connections (see Section 95.30.3). For projects proposing ADUs or cottages, the City will require the applicant to explore site plan alterations and variations required to retain a High Retention Value Tree, while retaining the ADU development allowances provide in the Zoning Code.

Comment #2: When exploring site plan alterations and variations, who determines feasibility?

Staff Response: The applicant is responsible for providing the Planning Official with plans utilizing the site plan alterations and variations to retain High Retention Value Trees. The

applicant shall demonstrate and make the case to the City showing their due diligence and provide a narrative on how, after utilizing these variations, the proposed plans are not feasible and/or would not result in fewer tree removals. The Planning Official (combination of the City's project planner and Development Review Arborist) is the arbiter of feasibility for administrative permits and the Planning Director/Hearing Examiner/Design Review Board decides if the application falls under their authority.

Comment #3: Are there ways to incentivize the creation of groves in planting standards?

Staff Response: If Council is interested in such a standard for new/supplemental plantings, staff could propose additional provisions in KZC 95.34, 95.41, and or 95.50.

Comment #4: Why is 6-inches DBH the minimum for a Regulated Tree? Why not smaller trees or at least smaller trees of certain species?

Staff Response: Six inches DBH is consistent with the regulated tree size for most municipalities and has historically been the threshold in Kirkland tree regulations. The standard simply creates a threshold where tree removal may not have significant implications on canopy loss and resultant canopy loss is easier to mitigate with new planting. Requiring smaller trees to be assessed, inventoried, and protected would result in increased costs to an applicant to survey and inventory all trees of a smaller size threshold, more site constraints to address in design and permitting, and provide limited benefits in fostering a more expansive tree canopy.

Comment #5: Do we allow buildings to increase in height beyond the maximum allowed height to preserve trees?

Staff Response: The proposed code allows for a building height increase of up to 5 feet to preserve trees (KZC 95.30.4). The consideration is that this latitude may allow a project to limit excavation required in a lot or a subdivision in a manner that results in less disturbance of critical root zone, or might allow the installation of HVAC equipment within the building footprint rather than creating additional site disturbance outside the footprint. The allowable height increase was established at 5 feet limit potential view blockage issues.

Comment #6: Is there is a provision for multi-family projects that would cause playgrounds to be eliminated to preserve trees?

Staff Response: The proposed code includes a variation to "reduce or vary the area, width, or composition of any required common recreational open space." (KZC 95.30.5). The common recreational open space provisions require a land set-aside (usually in a front setback) and typically applies within medium density residential zones (not Kirkland's dense urban zones). The common recreational open space regulations have historically yielded lawns rather than playgrounds, so it is highly unlikely that the provision would preclude a playground from being established, and that is not the intent of the regulations

B) FHNA Comments/Questions

Comment #1: Fair/fair trees: Consistent with its previous recommendations to the Council, staff recommends that trees in fair health and fair structure condition be classified as not viable and therefore not eligible for retention. This may constitute a step back from the

protection afforded by the current code – which applies to trees that the City arborist determines are in “good health, with low risk of failure due to structural defects....” We request that Council ask staff if many more trees will be vulnerable to removal because of this possible change in policy.

Staff Response: The goal of the proposed viability matrix is to ensure that viability directly correlates with tree conditions and minimizes subjectivity. Because viability plays a large role in determining the overall retention value and efforts required to retain a tree, using a more formulaic approach is instrumental to implementing the proposed tree code. In scenarios where a tree is rated as both ‘fair’ health and structural condition, the proposed rating system rates a tree with ‘fair’ health as exhibiting reduced vigor with twig or branch dieback up to 30 percent. Trees with this level of canopy decline are unlikely to be good long-term trees and may not be suitable for tree retention efforts. To ensure viability ratings are to City standards, staff conducts a peer review of all arborist reports, including a site inspection, and has the ultimate authority over final viability designations. Staff believes that codifying what has been City practice ensures that the City’s arborist and the applicant’s arborist are conducting their assessment under a defined set of guidelines.

Comment #2: Retention standards for High Retention Value Trees: FHNA recommends that planning officials be authorized not only to flip building footprints and driveways, and to ask developers to “relocate” landscape strips, but also to combine driveways for adjacent homes and to eliminate landscape strips where doing so would preserve a Landmark tree or a Grove.

As well, FHNA recommends that the preservation measures required for High Value Retention Trees include the clustering of utility lines on lots and subdivisions so that trees are not eliminated as a result of multiple entry points for utilities. We have previously recommended that all utilities be brought onto building sites within a 35’ envelope so that right-of-way trees located elsewhere along the right of way can be preserved.

Staff Response: The existing and proposed code allows Public Works and Planning to work together to modify or eliminate landscape strip standards. These kinds of alterations, and further measures such as meandering sidewalks in easements, are currently used by staff and are codified in the proposed draft code.

The City’s ability to require or enforce combined driveways on adjoining properties not owned by the developer is a challenge because property owners have legal rights to access their property and adjoining property owners are reluctant to voluntarily grant access across their properties (or may choose to charge an extraordinary amount for access rights). When the proposed driveway is in relation to a short plat development, the City does have the authority to require combined driveways to protect right of way trees and currently exercises this authority.

If Council desires, staff can explicitly include combining driveways as a standard for short plats. Currently the proposed code states that the Planning Official is authorized to allow reductions and variations in required parking and driveways.

Staff agrees that clustering utilities should be included as a site plan alteration for all High Retention Value Trees, and not just Landmark and Grove Trees as is currently proposed. While

there are spacing requirements between certain utility types that Public Works requires, staff often requires applicants to shift private utilities to reduce disturbances to trees. The proposed code also includes arboriculture practices such as using boring techniques for utilities under a certain size threshold. If Council desires, staff can clarify this in the proposed code and add utility clustering as a requirement for all High Retention Value Trees.

Comment #3: Tree removal in high landslide risk areas: FHNA continues to question whether Chapter 85 provides meaningful protection against tree cutting by homeowners (who appear to have a right to remove trees on steep slopes without a permit and thus forego compliance with Chapter 85) and by developers. Chapter 85 does not prohibit tree removals on steep, unstable slopes so long as geotechnical studies are submitted to the City. The requirement for these studies may be waived by planning officials. On what grounds will staff waive this requirement? Should the requirement ever be waived?

Furthermore, should tree removals be permitted in high landslide hazard areas even with geotech studies? Council members may recall the lot on the lake side of Holmes Point Drive where nearly all trees were cut down to accommodate a new driveway and widening of the public road. The tree removals might have been mitigated had the developer and the adjacent property owner engaged in substantive discussions about a shared driveway. FHNA urges the City to consider adopting ordinance language that would encourage developers to pursue such alternatives when building on steep slopes.

Staff Response: The City only waives the geotechnical study requirement if there are false positives on City mapping indicating a high landslide area (i.e. – retaining walls) or if site improvements are minor, such as installing a post for a new deck. Otherwise, the development potential of a site is very site specific and based on the geotechnical engineer recommendation. In areas where site disturbance, construction, and/or tree removal is identified as hazardous, the applicant's (and City peer review) geotechnical professionals do recommend that these areas be preserved. A large portion of Kirkland is mapped as a high landslide hazard area so prohibiting all tree removal in these areas would be contrary to the intent of KZC 95 and create challenges to accommodating future growth.

Comment #4: Tree removal in right-of-way within Shorelands: The City has previously permitted the removal of trees along the right-of-way within Shorelands (essentially, 200' landward of the ordinary high water mark of Lake Washington and streams that feed it). FHNA urges Council to direct staff to set more rigorous standards for protecting trees in these sensitive areas.

Staff Response: The City currently does not allow right of way trees to be removed unless the frontage improvements supersede tree retention and there are no alternative designs. Staff currently explores all alternate options that would support tree retention in the right of way prior to approving removal.

Comment #5: Movement of fences: Section 95.32(f) (not subject to Council review on January 18) specifies that tree protective fencing must be maintained in its approved location until its "removal" is approved by the planning official. But Section 95.30.3.c.6 (which is subject to Council review on January 18) states that the arborist's tree plan must describe protective fencing "including any anticipated changes to tree protection fence location or other activity within the CRZ of retained trees..." Does this language in

Section 95.30.3.c.6 give developers a carte blanche to move fencing (and compact soil) around a tree without accountability?

FHNA recommends that if fences are not “immoveable” (as was proposed in an earlier draft of the code), developers be required to seek the relevant planning official’s approval when fencing is being moved, that they commit to a date on which fencing will be restored to its original location, and that they describe the steps they are taking to minimize soil compaction or other long-term injury to trees that must be preserved.

Staff Response: The City requires that fencing be as permanent as possible, but also recognizes that there may be times that it needs to be temporarily moved to move equipment or materials through the site. If this is the case, the applicant is required to notify the Planner and provide information on how long it will be moved and what mitigation measures will be implemented to prevent tree damage. The proposed additions to the Code are intended to encourage advance planning of such modifications to fencing so that impacts and mitigations can be addressed with permit review.

Comment #6: Development bond foreclosure: As FHNA stated in its December 8, 2020 letter to the Council concerning Chapter 95 amendments:

“Finn Hill now has several lots and subdivisions from which trees were cleared several years ago but remain undeveloped. They occupy hillsides and in many cases are sited in high landslide areas. On at least one occasion last year, heavy rains caused mud on a Goat Hill lot to block Juanita Drive.

Staff Response: Development bonding and related foreclosure requirements in geologically hazardous areas are currently being developed by Public Works and Planning & Building staff but are not yet finalized.

Comment #7: Relationship to 40% canopy goal: FHNA encourages Council members and staff to discuss the extent to which the revised code will enable the City to preserve its tree canopy and, with new plantings, to restore the Kirkland’s canopy to 40% coverage. In that regard, we hope that the Council will continue to support the staff in creating a program for planting trees (with an emphasis on coniferous tree species) in public areas that will create a sustainable canopy that is diverse in species and age. FHNA hopes, in particular, that the City’s own tree removal and tree planting activities are documented and reported to the Council on an annual basis.

Staff Response: Council provided staff with a similar comment during the January 4 Council meeting. Staff is currently working on fine-tuning procedures for documenting this information. Staff believes the proposed code will result in more replanting in the long-term with new funding to help with City initiatives focused toward replanting. A comprehensive tree inventory and planting plan is also on the Planning Work Program for 2022 and 2023.

IIX. NEXT STEPS:

Assuming Council can provide a conclusive decision on most of the Phase 3 amendments, staff proposes the following schedule for Council review and adoption of the remaining amendments:

- **February 15:** Review Part 4 of the draft code, including miscellaneous code amendments responding to Council direction from review of Parts 1, 2, and 3 received during the November 16, January 4, and February 1 Council Meetings
- **March 1:** Review final draft of the consolidated KZC 95 and consider final adoption
- **March 2022:** HCC review within disapproval jurisdiction
- **Spring 2022:** Implementation and outreach

KZC code changes will involve comprehensive implementation phases. Prior to the adoption of KZC 95, staff will be seeking additional direction from the City Council on effective dates and options related to the vesting of projects.

Attachments

1. Draft KZC 95 – Part 3 Code Amendments
2. Progress Tracking Matrix

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

KEY:

Plain text not highlighted = current code *without changes*

Bold text not highlighted = indicates a change to the existing code

*Note: **Bold text** that is underlined = section titles that are normally bolded in KZC 95 but that were revised

Grayed-out text = previous amendments reviewed during November 16, 2021 and January 4, 2022 City Council meetings

Orange highlighted text = sections with moderate and major code amendments for review during January 18, 2021 City Council meeting

Moderate Amendments – restructuring of code sections and any of the above that results in new, increased or eliminated requirements that seem relatively uncontroversial.

Major Amendments – controversial and substantially new, increased or eliminated requirements, added procedures or cost to permit applicants. Changes the intent of the code.

Yellow highlighted text = code sections to be reviewed at subsequent Council meetings

REVIEW OF PART 3a DRAFT AMENDMENTS

Overall there are eight code sections that staff believe result in **moderate to major code amendments**. Staff reviewed two of these sections during the January 4 City Council meeting and proposes to return with revisions based on Council feedback at the February 1 meeting. Of the six additional code sections not yet reviewed by Council, staff proposes to present three of these code sections during the January 18 City Council meeting. The additional three code sections will be fully reviewed and presented during the February 1 Council meeting.

For each code amendment, the following information is provided as a brief high-level summary of the amendment:

Update: description of how the code changed from the existing code

Explanation: additional information on the purpose of the update based on Council feedback and main objectives for code amendments

Result: overall high-level outcome of the proposed amendment (e.g. increased tree removals, more tree protection, enhanced property owner rights)

For additional information and explanation of the proposed amendments, please refer to the provided Staff Memo dated January 7, 2022 included in the Council Packet. As we work through each section of the Code, Council will have the opportunity to ask clarifying questions about the amendments. We ask that Councilmembers provide staff with clear direction on the presented amendments for inclusion in a final draft code.

[DRAFT] KIRKLAND ZONING CODE CHAPTER 95 – TREE MANAGEMENT AND REQUIRED LANDSCAPING

Sections:

- 95.05 Purpose and Intent
- 95.10 Definitions
- 95.15 **Exempt Tree Removal Activities**
- 95.20 **Public Tree – Pruning and Removal**
- 95.21 **Private Property - Tree Pruning**
- 95.23 **Landmark Trees – Mitigation Requirements**
- 95.25 **Private Property - Tree Removal, Not Associated with Development Activity**
- 95.30 **Tree Retention Associated with Development Activity**
- 95.32 Tree and Soil Protection during Development Activity
- 95.34 **Tree Replacement Standards Related to Development Activity**
- 95.40 Required Landscaping Based on Zoning District
- 95.41 Supplemental Plantings
- 95.42 **Land Use Buffer Requirements**
- 95.43 Outdoor Use, Activity, and Storage
- 95.44 **Internal Parking Lot Landscaping Requirements**
- 95.45 **Perimeter Landscape Buffering for Driving and Parking Areas**
- 95.46 Modifications to Required Landscaping and Buffer Standards
- 95.47 Nonconforming Landscaping and Buffers
- 95.50 Installation Standards for Required Plantings
- 95.51 **Tree and Landscape Maintenance Requirements**
- 95.52 Prohibited Vegetation
- 95.55 **Enforcement and Penalties**
- 95.57 City Forestry Account

95.05 Purpose and Intent

1. Trees and other vegetation are important elements of the physical environment. They are integral to Kirkland's community character and protect public health, safety and general welfare. Protecting, enhancing, and maintaining healthy trees and vegetation are key community values. Comprehensive Plan Policy NE-3.1 describes working towards achieving a **healthy, resilient urban forest with a City-wide tree canopy coverage of at least 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 **regulated** 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 the **benefits** 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 **at least** 40 percent City-wide over time;
- e. Encourage tree retention efforts by providing flexibility with respect to certain other development requirements;
- f. **Balance tree protection with other major citywide interests;**
- g. Implement the goals and objectives of the City's Comprehensive Plan **and Sustainability Master Plan;**
- h. Implement the goals and objectives of the State Environmental Policy Act (SEPA); and
- i. 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.**
- j. 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. **Arborist Report** – written review and recommendations, submitted by a **Qualified Professional Arborist** for the purpose of meeting the requirements set forth in this Chapter.
- 2. **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.
- 3. **Critical Root Zone (CRZ)** –The area **encircling** the trunk of a tree equal to one (1) foot radius for every inch of DBH **Example: a 24-inch DBH tree has a 24-foot radius CRZ measured from the face of the trunk.**
- 4. **Crown** – The area of a tree containing leaf- or needle-bearing branches.
- 5. **Diameter at Breast Height (DBH)** – The diameter or thickness of a tree trunk measured at 4.5 feet above average grade. **For trees with multiple 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 +**

$(\text{stem2})^2 + (\text{stem3})^2$). 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.

6. **Dripline** – The distance from the tree trunk that is equal to the furthest extent of the tree's crown. **For trees with asymmetrical crowns, the dripline shall be measured in all four cardinal directions (North, South, East, West).**

7. **Impact** – A condition or activity that **adversely** affects **any** part of a tree, including, **but not limited to**, the trunk, branches, or **CRZ**.

8. **Inner Critical Root Zone (Inner CRZ)** – an area half the distance of the CRZ that, when impacted, may compromise the structural integrity of the tree. **Example: a 24-inch DBH tree has a 12-foot radius Inner Critical Root Zone measured from the face of the trunk.**

9. **Prohibited Plant List** – A list of trees and vegetation published by the Planning and Building Department that are invasive, noxious, or inappropriate species for retention or replacement trees.

10. **Qualified Professional Arborist** – 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.**

A Qualified Professional Arborist must have the TRAQ or equivalent qualification for the submittal of Tree Risk Assessment reports related to hazard tree removal. For tree retention associated with a development permit, a Qualified Professional **Arborist** 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 **ascertaining** tree survival after construction. A Qualified Professional **Arborist** must also be able to prescribe appropriate measures for the preservation of trees during land development.

11. **Pruning** – the practice of selectively removing branches (or roots) from a tree or other plant, using approved practices, to achieve a specified objective.

12. **Significantly Wooded Site** – **for a Forest Stewardship Plan;** a subject property that has numerous trees with crowns that, **when outlined in aerial imagery**, cover at least 40 percent of the **total area of the property**.

13. **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.

14. **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.**

15. **Tree Protection Zone (TPZ)** – A defined area within and including an outer boundary, as determined by a Qualified Professional Arborist, in which certain activities are prohibited or restricted to prevent or minimize potential impacts from construction or development, applicable to individual trees or groups of tree trunks, roots and soil. 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.

16. **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 the 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.

17. **Trees** – A tree or a group of trees may fall under one (1) of the following definitions for purposes of this chapter:

- a. **Grove** – A group of three (3) or more **viable regulated** trees with overlapping or touching crowns **that are located on a proposed development site; one of which is located in a required yard.**
- b. **Hazard Tree** – A tree/tree part assessed by a Qualified Professional Arborist as having an **Extreme or High Overall Risk Rating** using the **ISA Tree Risk Assessment Qualification (TRAQ) method in its most current form, as applied in KZC 95.25** that meets all the following criteria:

- 1) A tree with a combination of structural defects and/or disease which makes it subject to a high probability of failure;
- 2) Is in proximity to moderate to high frequency-occupied targets, persons or property that can be damaged by tree failure; and
- 3) The hazard condition of the tree cannot be lessened with reasonable and proper arboricultural practices nor can the target be removed.

c. **Hedge Trees** – **Five (5) or more trees of the same species with overlapping or touching crowns that are in fair or poor condition; have been planted and maintained in a linear formation at maximum eight (8) foot spacing, typically to function as a screen or barrier.**

d. **Landmark Tree** – a **regulated tree with a minimum 26-inch DBH.**

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, 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. **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:

1) **High** – any of the following trees:

- a. **Grove**
- b. **Landmark Tree**
- c. **A viable tree with any portion of the trunk located in a required yard, land use buffer, and/or common open space**

2) **Moderate** – A viable tree that is not a High Retention Value Tree

i. **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.

j. **Viable Tree** – A **regulated tree on proposed development sites that fits the viable criteria in Table 95.30.2 based on the tree condition ratings pursuant to KZC 95.30. A tree that is not viable is also a tree in an area where removal is unavoidable due to the anticipated development activity after having applied the provisions in this Chapter.**

18. Wildlife Snag – The remaining trunk of a tree that is intentionally reduced in height and usually stripped of its branches **with the intent of providing habitat**.

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

95.15 Exempt Tree Removal Activities

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

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

95.20 Public Tree - Pruning and Removal

1. **Public Tree Pruning, including the pruning of Street Trees, shall conform to the following:**
 - a. **Permit Requirements.** 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 falls under the Exempt Tree Removal Activities per KZC 95.15 or falls within the maintenance exceptions set forth in subsection (b) of this section.
 - b. **Pruning.** It is the responsibility of the adjacent property owner to maintain Street Trees abutting their property, including watering and mulching. Maintenance may include minor pruning of up to 1.5-inch diameter branches for sidewalk clearance. A Public Tree Pruning Permit is required to trim, modify, alter, or substantially prune Street Tree branches more than 1.5-inches in diameter. The City reserves the right to have City or utility crews perform routine pruning and maintenance of Street Trees.
 - c. **Pruning Standards.** The most recent version of the American National Standards Institute (ANSI) A300 Pruning Standards apply, or as outlined in a City-approved Utility Vegetation Management Plan. Tree topping is not allowed. **Pruning which results in the removal of more than 25% of the live crown is not an acceptable pruning practice.**
2. **Public Tree Removal.** Other than City crews and City-authorized contractors, no person, directly or indirectly, shall remove any Public Tree without first obtaining a tree removal permit as provided in this chapter, unless the activity falls under the Tree Removal Exemptions per KZC 95.20. **The City will not authorize any Public Tree removal by any private party unless the tree is determined to be a Hazard Tree or Nuisance Tree pursuant to KZC 95.25.**

95.21 Private Property - Tree Pruning

To ensure that trees function well in their intended landscape, the City of Kirkland promotes the proper care of trees on private property to ensure trees reach their normal life expectancy and contribute optimal benefits to the community. For that reason, tree topping is prohibited and may be considered tree removal per KZC 95.10(14).

A permit is not required to prune trees on private property, however, pruning of the following categories of trees does require prior written approval from the City:

1. Located within Natural Greenbelt Protective Easements and wetlands, streams, or their buffers; or
2. Grove trees preserved pursuant to KZC 95.51(3).

Pruning shall conform to the most recent version of the ANSI A300 Pruning Standards.

95.23 Landmark Trees – Mitigation Requirements

Removal of Landmark Trees results in immediate loss of significant canopy and associated functions and values. Replacement of canopy loss and associated impacts to the City-wide 40 percent canopy goal requires a long-term strategy for replanting large trees in areas where they can successfully reach mature size.

1. No person, directly or indirectly, shall remove any Landmark Tree from public or private property without first meeting the standards as provided in this chapter. In addition to the application requirements established in this chapter, the permit application shall include a Landmark Tree mitigation plan consistent with the standards in this section.
 - a. Landmark Trees on private properties pursuant to KZC 95.25 shall not be removed without first obtaining a tree removal permit as provided in this chapter.
 - b. Landmark Trees associated with a development permit pursuant to KZC 95.30 shall constitute a tree removal permit for purposes of this section.
2. The Planning Official shall review the tree removal permit or the associated development permit for compliance with the applicable retention standards of KZC 95.25 or 95.30.
3. If a Landmark Tree(s) is approved for removal based on compliance with KZC 95.25 and 95.30, the applicant shall install mitigation plantings on the subject property consistent with the following standards:
 - a. **Mitigation ratio.** For each Landmark Tree removed, the applicant shall plant three large species selected from the City's Approved Landmark Tree Mitigation List. Mitigation trees shall be a minimum of 6-feet tall for a conifer or a minimum of 2-inch caliper for a deciduous or broad-leaf evergreen tree at the time of planting.
 - b. **Location of mitigation trees.** Mitigation trees shall be planted in a location on the subject property that will allow the trees to reach mature height and width without significant conflicts with existing or proposed improvements on the subject or adjoining properties.
 - c. **Timing of Plantings and Inspection.** Mitigation trees shall be installed within 12-months of the associated tree removal reviewed pursuant to KZC 95.25, or prior to final inspection of a development permit reviewed pursuant to KZC 95.30. Upon completion of the plantings, the applicant shall schedule an inspection by the Planning Official for consistency with the approved mitigation plan.
 - d. The applicant shall sign a 5-year maintenance agreement, on a form provided by the City and approved by the City Attorney, to maintain the mitigation trees for a period of 5 years from final inspection.
 - e. The mitigation tree plantings shall be in addition to tree planting otherwise required pursuant to Kirkland Zoning Code or Kirkland Municipal Code.
4. If a Landmark Tree(s) is obviously dead, dying, and/or hazardous, as evident in a photograph provided to the Planning Official, it will not be subject to a tree removal permit or mitigation requirements.

5. The applicant may elect to not plant mitigation trees on the subject property and pay a fee in lieu of planting. The fee in lieu shall be determined by the City based on the formula outlined in the most recent edition of the Guide for Plant Appraisal, published by the Council of Tree and Landscape Appraisers. The fee in lieu shall be multiplied by the number of required mitigation trees. All fee in lieu payments shall be paid into the City Forestry Account pursuant to KZC 95.57 and shall be used by the City to fund canopy restoration efforts elsewhere in the City.

95.25 Private Property - Tree Removal, Not Associated with 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 policy goals for a healthy, sustainable urban forest **with at least 40 percent tree canopy cover. To slow the loss of canopy cover, the City of Kirkland allows the limited removal of regulated trees on private property.**

1. Tree Removal Allowances. Any private property owner of developed property may remove up to a **specified number of regulated trees based on property size shown in Table 95.25.1** within a 12-month period, without having to apply for a tree removal permit; provided that:
 - a. The tree is not a Landmark Tree pursuant to KZC 95.10(17)(d) and 95.23;
 - b. The tree removal does not result in less than the minimum number of regulated trees to remain on the subject property shown in Table 95.25.1. Trees that qualify as hazard or nuisance trees may be permitted for removal pursuant to subsection (6) of this section with approval of a tree removal permit and tree replacements based on the size of the removed trees shown in Table 95.25.2 below;
 - c. There is no active application for development activity for the subject property. Development activity within 12- or 24-months following tree removal may be subject to the limitations of subsection (4) of this section;
 - d. All of the additional standards for tree removal and tree removal permits as described in subsections (3) through (9) of this section are met.

Table 95.25.1 Regulated Tree Removal Allowances, No Permit Required

Property Size	Maximum Allowance for Tree Removals per 12 Months	Minimum Number of Regulated Trees to Remain on Subject Property
Up to 10,000 sq. ft.	2	2
10,001 to 20,000 sq. ft.	3	3
20,001 sq. ft. or greater	4	4

Table 95.25.2 Tree Replacement Standards for Property Owner Removal of the Last Remaining Trees

Diameter of Removed Tree	Number of Replacement Trees Required
6 to 15 inches DBH	1
16 to 26 inches DBH	2
26 inches DBH or greater	3 (see KZC 95.23)

For example: A property owner of a 15,000 square foot lot with three (3) existing trees would like to remove a 25-inch DBH maple tree due to its meeting the hazard tree criteria. Because the maple tree is one of the minimum number of trees required on that size property, tree replacements are required. Because of the size of the removed tree, two (2) replacement trees would be required.

2. Tree Removal Allowance **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.
3. **Tree Removal Permit Required**. No person, directly or indirectly, shall remove any regulated tree from private property without first obtaining a tree removal permit as provided in this chapter, unless the activity falls under the exempted tree removal activities per KZC 95.15 or is within the tree removal allowances per subsection one (1) of this section. If any of the below conditions apply, trees must qualify as hazard or nuisance to be permitted for removal:

A Tree Removal Permit is required if:

- a. The property owner is requesting to remove trees located within:
 - 1) A public park or adjacent City Right-of-Way pursuant to KZC 95.20;
 - 2) Wetlands, streams and associated buffers. See Chapter 90 KZC for additional permit requirements;
 - 3) High landslide susceptibility areas. See Chapter 85 KZC for additional permit requirements;
 - 4) Properties in the Holmes Point Overlay Zone. See Chapter 70 KZC for additional permit requirements; or
 - 5) Shoreline setbacks. See Chapter 83 KZC for additional permit requirements.
- b. The trees were required to be retained, planted or preserved as a grove as a condition of previous development activity;
- c. The trees were required to be retained or planted pursuant to KZC 95.40 through 95.50
- d. The trees are hedge trees and removals are proposed in excess of the Maximum Allowance for Tree Removals per 12 Months established in Table 95.25.1;
- e. The trees are protected under a voluntary Tree Preservation Covenant; and

Prior to approving a tree removal permit, the Planning Official shall find that all of the additional standards for tree removal and tree removal permits as described in sections (4) through (9) are met.

4. **Tree Removal on Private Property Prior to Development Permit Submittal**. With the exception of approved removals of hazard trees or nuisance trees, the City will not accept any development permit application with a pending tree removal permit or tree removal notification. In addition, the City will not accept a development permit for detached dwelling units, cottages, carriage units, two/three-unit homes short plats or subdivisions for a property 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.
5. **Removal of Hazard or Nuisance Trees**. Removal of hazard or nuisance trees, including hedge trees, does not count toward the tree removal allowances if the nuisance or hazard is evident in a photograph or supported by a Tree Risk Assessment report prepared by a Qualified Professional Arborist and approved by the City. Tree Risk Assessment reports shall follow the method for developing a tree risk rating set forth in the most current edition of the ISA Tree Risk Assessment (TRAQ) Manual and include the following:

- a. Explanation of how the tree or tree parts meet the definition of a hazard pursuant to KZC 95.10(15)(b); and
- b. Overall tree risk rating with correlating mitigation measures as follows:
 - 1) If a potential target does not exist, applicants should consider routine pruning and maintenance to abate the tree issue;
 - 2) If a tree/tree part is found to have a Low or Moderate Overall Risk Rating, the Planning Official may approve mitigation measures to reduce the risk; or
 - 3) If a tree/tree part is found to have a High or Extreme Overall Risk Rating and mitigation of the risk through pruning or moving potential targets is not feasible, the Planning Official shall approve the removal of the tree as a hazard tree.

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.

6. Tree Removal Permit Application Form. The City shall provide 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 shall require, at a minimum, submittal of the following:
 - a. A site plan, map, or aerial photograph 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. Property owners requesting to remove adjacent street trees must indicate the location of the hazard or nuisance tree in the right-of-way.
 - 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 subsection (7) of this section.
7. Tree Replacement Requirements. To mitigate the consequences of tree removal unrelated to development activity, for tree removal permits the City requires the planting of replacement trees in suitable locations appropriate to the subject property. Replacement trees shall be a minimum 6-foot tall conifer or a minimum 2-inch caliper deciduous or broad-leaf evergreen tree. Trees planted to form a clipped or sheared hedge or Thuja/Arborvitae (or other slow-growing conifers as listed by the Planning Department) shall not count towards tree replacement requirements.
 - a. Tree removal and replacement standards for tree removal permits pursuant to subsection (3) of this section are subject to the following:

Table 95.25.3 Tree Replacement Standards

Location of Tree Removal	Tree Replacement Standards
Public trees in parks or City Right-of-Way per KZC 95.21(2)	Minimum 1:1 tree replacement
Significantly wooded properties 25,000 sq. ft. or greater	Determined in approved Forest Stewardship Plan
Hedge Trees on Private Property	1:1 tree replacement ¹
Holmes Point Overlay Zone - species selection and timing of installation shall be approved by the Planning Official	1:1 tree replacement with native trees. See KZC Chapter 70
Shoreline setbacks	See KZC Chapter 83 for tree replacement standards
Streams, wetlands and associated buffers – the Planning Official shall determine the required number of replacement trees	1:1 to 3:1 tree replacement with native trees. See KZC Chapter 90
Required landscaping pursuant to KZC 95.40 through 95.50	Replant to the required landscaping standards of KZC 95.40 through 95.50

Notes:

1. Planning Official may allow reduced replanting requirements for hedge trees based on available space to provide a sustainable planting

8. Tree Removal Permit Decision and Appeals.
 - a. The City shall review each tree removal permit application for consistency with the applicable regulations and other standards adopted by reference. Tree removal permits shall be reviewed within 21 calendar days and either approve, approve with conditions or modifications, deny, or request additional information. The Planning Official shall review required mitigation trees and has the discretion to modify or waive applicable standards when the subject property has significant canopy that precludes successful mitigation planting or similar unique conditions. Any decision to deny the application shall be in writing along with the reasons for the denial and the appeal process. The decision of the Planning Official is appealable using the applicable appeal provisions of Chapter 145 KZC.
 - b. Time Limit. Tree removal by felling shall be completed within one (1) year from the date of permit approval or the permit is void. Approved tree removals shall not be combined or accumulated.
9. Forest Stewardship Plan. To support sustainable, stewardship-focused forest management of developed, significantly wooded sites that are at least 25,000 square feet in size, a Forest Stewardship Plan may be submitted where tree removal exceeds the allowances in KZC 95.25. The purpose of a forest stewardship plan is to manage objectives in order to improve the long-term health and condition of existing trees and vegetation. Applicants for a Forest Stewardship Plan are encouraged to seek the technical assistance, incentives and resources available through local and state agencies that promote forestland best management practices. Property owners shall submit a completed permit application for City review for compliance with applicable City regulations.
 - a. A Forest Stewardship Plan shall be developed by a Qualified Professional Arborist and include the following:
 - 1) A site plan depicting the location of all existing regulated trees with a numbering system of the trees (with corresponding tags on trees in the field). A survey identifying tree locations is not required. The site plan or additional documentation shall include:
 - a) The DBH, species, and condition of each regulated tree; and
 - b) Identification of trees proposed to be removed, the reasons for their removal and a description of low impact removal techniques pursuant to subsection (b)(4) of this section.
 - 2) A reforestation plan that addresses the installation and establishment of trees and vegetation, including tree location, size, species; and
 - 3) A prescribed maintenance plan that ensures perpetuity of the wooded areas, with the sequence of tree removals and reforestation activities specified over a minimum five (5) year timeline.
 - b. The following Forest Stewardship Plan standards shall apply:
 - 1) Trees to remain should be dominant or co-dominant in the stand, healthy and windfirm;
 - 2) Unless otherwise permitted by this chapter, there shall be no removal of:
 - a) Landmark Trees or preserved groves;

- b) Trees located in critical areas and associated buffers;
 - c) Trees located in high landslide susceptibility areas; and
 - d) Trees that would cause trees on adjacent properties to become hazardous.
- 3) The size of planted trees for reforestation shall be a minimum of six (6) feet tall for a conifer and 2-inch caliper for deciduous or broad-leaf evergreen tree, unless approved otherwise by the City;
 - 4) Logging operations shall be conducted 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;
 - 5) Removal of debris shall be done pursuant to Kirkland Fire Department standards; and
 - 6) The Planning Official may require a performance security pursuant to KZC 175 in order to ensure that the reforestation requirements of the approved Forest Stewardship 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 for planting and maintenance of new trees.**

This section includes provisions that establish tree retention priorities, incentives, and variations to development standards in order to retain viable trees on development sites. 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 retention and planting 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 **Applicability**. A Tree Retention Plan is required for 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, unless:

- a. **Otherwise exempted pursuant to KZC 95.15**

- a. The permit is 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 where **no development activity is proposed within the CRZ of regulated trees.**

2. Tree Retention Plan Review Authority. The authority to make decisions under this chapter resides with the Planning Official **for 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. To retain regulated trees, the City shall review for consistency with the provisions set forth in this chapter.**

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 **viable High Retention Value Trees, including Landmark Trees and Groves, and/or trees with a Moderate Retention Value** based on KZC 95.10, Definitions, for application towards the regulations in this chapter.

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

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

- a. Inventory **with the following information:**

- 1) All existing **regulated** trees on the subject property **identified by a numbering system that is consistent throughout the Arborist Report, site plan** and onsite tree tags. The inventory must also include **regulated** trees that are on adjacent properties **that appear to have CRZs** extending onto the subject property;
- 2) **Identification of all existing trees in the public right-of-way adjacent to the subject property, regardless of tree size;**
- 3) **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 on adjoining properties** that appear to have **CRZs** extending onto the subject property;
- 4) **DBH of all existing regulated trees;**
- 5) **Proposed tree removals;**
- 6) **Viability status of each regulated tree based on the combined condition ratings pursuant to KZC 95.30(3)(c);**
- 7) **Tree species and/or common name;** and
- 8) **Potential Landmark Trees and Groves.**

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

- 1) Location of all proposed improvements, including building footprint, access, utilities, applicable **required yards**, buffers, and required landscaped areas clearly identified;
- 2) Surveyed location of **regulated** trees on the subject property. The site plan must also show the approximate trunk location of **regulated** trees that are **potentially impacted** on adjacent properties;
- 3) Trees labeled corresponding to the tree inventory numbering system **per subsection (a) of this section;**
- 4) **CRZs** drawn to scale around all trees potentially impacted by site disturbance resulting from grading, demolition, or construction activities (including approximate **CRZs** of all trees that are potentially impacted on adjacent properties). **Site plans shall include site disturbances associated with over-excavation of foundations, retaining walls, and similar improvements;**
- 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, as described in KZC 95.32 or recommended by the Qualified Professional Arborist, shown on demolition, grading, and building permit plans;**
- 6) Trees proposed to be removed, noted by an 'X' or by ghosting out; and
- 7) Proposed locations of any **replacement** trees to be planted to meet tree density **credits or mitigation requirements, including the proposed size and species, as outlined in KZC 95.34.**

- ✓ **Update:** Minor revisions to Inventory and Site Plan requirements
- ✓ **Explanation:** Revisions update terminology and clarify requirements based on current City practices
- ✓ **Result:** No impact to intent of code

- c. **Qualified Professional Arborist Report with the following:**

- 1) **A combined overall viability status based on the condition ratings of both health and structure for each regulated tree, including regulated trees on adjoining properties that appear to have CRZs extending onto the subject property. The condition ratings for each regulated tree shall be assessed using the following criteria:**

Table 95.30.1 Tree Condition Ratings

Condition Rating	Tree Health <i>Twig and leaf density, size and growth, pest/pathogen issues</i>	Tree Structure <i>Root flare, trunk condition, branch assembly</i>
Excellent	High or above average vigor with little or no twig dieback, discoloration or defoliation.	Trunk and root flare exhibit no visible defects or cavities. Branch structure and attachments are normal for species and free of defects.
Good	Vigor is normal for species. No significant damage due to diseases or pests. Any twig dieback, defoliation or discoloration is minor (up to 10% of the crown).	Well-developed structure. Defects are minor and can be corrected. Codominant stem formation may be present. Trees in groves may have asymmetries/deviations from an open-grown form of the same species.
Fair	Reduced vigor. Twig dieback, defoliation, discoloration, and/or dead branches up to 30% of the crown. Obvious signs of pest problems contribute to a lesser condition but is not likely to be fatal.	Visible evidence of trunk damage or cavities, large girdling roots or branch attachments that require moderate corrections.
Poor	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.	Structural problems cannot be corrected, such as recent change in tree orientation, extensive trunk decay or poor branch attachments. Tree/tree part failure may occur at any time

- ✓ **Update:** Tree condition table included in code
- ✓ **Explanation:** Ensure standard is used by Qualified Professional Arborist when rating health and structural condition of trees
- ✓ **Result:** Improves predictability of tree code and viability status of trees

Based on the condition ratings for health and structure in Table 95.30.1, the tree's overall viability shall be assessed as follows in Table 95.30.2:

Table 95.30.2 Tree Viability

Tree Health →					
Tree Structure ↓		Excellent	Good	Fair	Poor
	Excellent	Viable	Viable	Viable	Not viable
	Good	Viable	Viable	Viable	Not viable
	Fair	Viable	Viable	Not viable	Not viable
	Poor	Not viable	Not viable	Not viable	Not viable

For example: an oak tree on a proposed development site rated as 'Fair' tree structure and 'Good' tree health has an overall viability status based on the tree condition ratings of 'Viable.'

- ✓ **Update:** Tree viability matrix added
- ✓ **Explanation:** Provides a metric for Qualified Professional Arborists to use when determining tree viability to reduce subjectivity
- ✓ **Result:** Improves predictability of tree code and viability status of trees; ensure retention values of trees are being applied in a consistent manner

- 2) For trees rated as not viable, a description of the reason(s) for removal **must be given** based on **the existing health condition**; high risk of failure due to **existing** structure, **other** defects, or unavoidable isolation (windfirmness); or unsuitability of species, etc., and for which no reasonable alternative action is possible (pruning, cabling, etc.). **The City shall review the viability ratings for consistency with the condition ratings in Table 95.30.1 and Table 95.30.2;**
 - 3) The **Qualified Professional Arborist'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, watering during summer and aftercare**), **including potentially impacted trees on adjacent properties;**
 - 5) **If development proposals result in the retention and/or removal of High Retention Value Trees (including Landmark Trees and Groves) provide an explanation of how tree retention was prioritized based on retention feasibility and proposed construction impacts;**
 - 6) 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 (e.g., material delivery, equipment access, landscaping);**
 - 7) Describe the impact of necessary tree removal on the trees to be retained, including those on adjacent properties;
 - 8) 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;** and
 - 9) **Arborist reports that are based on field work collected three (3) or more years prior to submittal shall be updated with current tree data.**
- d. A description of additional tree retention and protection requirements that apply to properties with development projects proposed within:
- 1) Shoreline setbacks as set forth in Chapter 83 KZC;
 - 2) **Critical Areas and Associated Buffers** as set forth in Chapters 85 and 90 KZC; and
 - 3) Holmes Point Overlay Zone areas as set forth in Chapter 70 KZC.
4. Development of Single-Family Dwellings, Short Plats, Subdivisions, Two/Three-Unit Homes, **Cottage/Carriage Dwellings, and Accessory Structures.** Tree Retention Plan review and approval shall be based on compliance with the following provisions:
- a. **High Retention Value Trees.** In order to retain trees located in required yards, land use buffers, and/or common open spaces, and to retain Landmark Trees and Groves located anywhere on the subject property, the applicant shall pursue, and the Planning Official is authorized to require, compliance with the following standards:
 - 1) Site Plan Alterations, including the following:
 - a) Shift or flip (mirror) the location of proposed 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;
 - d) Reduce required rear yards by up to 5 feet where the rear yard is adjacent to an access easement or tract;
 - e) Shift the building footprint on the lot to utilize the variations to development standards allowed in subsection (3) of this section;
 - f) Adjust deck, patio, and path designs;
 - g) Avoid rockery/retaining walls located within CRZs to maintain existing grades;
- 2) **Arboricultural Methods.** The applicant shall employ arboriculture methods to retain trees such as air excavations, boring under roots instead of trenching within TPZs for utilities less than 2 inches diameter, and using additional CRZ protection per KZC 95.32.
- 3) **Variations to Development Standards.** The applicant shall pursue the following variations and the Planning Official (or Public Works Official, where applicable) is authorized to require these variations to development standards:
 - a) Allow required yards to be reduced to 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 to extend access due to building footprint location while ensuring that the driveway width does not exceed a width of 20 feet;
 - d) Allow minimum 18-foot by 18-foot parking pads;
 - e) Modify right-of-way frontage improvement requirements, such as adjusting the location of 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 (e.g., locating mechanical equipment in the attic, avoiding excavation or fill); and
 - g) With short plats and subdivisions, allow clustering per subsection (d) of this section.
- b. **In order to retain Landmark Trees and Groves** located anywhere on the subject property, in addition to the site plan alterations and variations to development standards listed above in subsection (a) of this section, the applicant shall pursue, and the Planning Official is authorized to require the following additional standards:
 - 1) **Site plan alterations, as follows:**
 - a) Reasonable modifications to the proposed building footprints and driveways;
 - b) Relocate utilities when feasible, taking into account gravity and location of existing mains;
 - b) Shore basements and other extensive excavations in order to avoid impact within CRZs;
 - c) Cantilever structures over CRZs; and
 - d) With short plats and subdivisions, clustering per subsection (d) of this section, rearrangement of property lines within the applicable short plat or subdivision, relocation of access roads, and relocation of utilities.
 - 2) **Arboricultural Methods.** The applicant shall employ arboricultural methods to retain Landmark Trees and groves such as air excavations, boring under roots instead of trenching, and using additional CRZ protection per KZC 95.32.
 - 3) **Variations to Development Standards.** The applicant shall pursue and the Planning Official is authorized to require variations allowing required side yards to be reduced to 3 feet where those yards are internal within a proposed short plat or subdivision. In addition, the applicant may pursue, and the Planning Official is authorized to allow, reductions and variations in required parking and driveways.

- ✓ **Update:** Alterations, standards, and development variations added for the retention of High Retention Value Trees, including Landmark Trees and Groves
- ✓ **Explanation:** Clearly outlines the standards applicants shall pursue when there is an existing High Retention Value tree on the subject property; provides developers with a tool-kit of acceptable measures that shall be pursued in order to retain high value trees
- ✓ **Result:** Improves consistency and predictability of tree code; ensures measures are being taken to retain large trees and trees located in required yards, etc. prior to removal being authorized; overall will result in greater tree protection on sites undergoing redevelopment

- c. **Moderate Retention Value Trees.** The following incentives are available in order to protect Moderate Retention Value Trees:
 - 1) An applicant may propose to modify their development proposal in the same manner as provided for High Retention Value Trees in subsections (a) and (b) of this section and the Planning Official (or Public Works Official, where applicable) is authorized to approve these variations to development standards for viable trees that are deemed to have Excellent/Good health and structure per the Tree Condition Table 95.30.1.
 - 2) When Landmark Trees cannot be feasibly retained after pursuing the variations in subsections (a) and (b), the applicant may propose to retain Moderate Retention Value Trees to satisfy Landmark Tree mitigation requirements and/or pay associated fees-in-lieu pursuant to KZC 95.23. The applicant shall indicate tree protection areas on site plans and clearly indicate a request for this incentive.
 - 3) When viable trees located in required yards, land use buffers, and/or common open spaces cannot be feasibly retained after pursuing the variations in subsections (a) and (b), the applicant may propose to retain Moderate Retention Value Trees instead. The Planning Official may approve this incentive provided that the size and condition of the Moderate Retention Value Tree(s) are equal or superior to that of the tree removed in the required yard, land use buffer, and/or common open space.

- ✓ **Update:** Incentives added for the retention of Moderate Retention Value Trees
- ✓ **Explanation:** Provides developers with the option to retain other trees on the site in exchange for a reduction to the mitigation requirements for Landmark Trees
- ✓ **Result:** Provides an opportunity for other trees on development sites to be retained that are not Landmark-sized, located in Groves, or located in required yards, etc; overall outcome may result in greater tree protection on sites undergoing development

- d. **Additional Tree Retention Standards for Short Plats and Subdivisions:**
 - 1) **Clustering of Lots.** The Planning Director (for short plat applications) or Hearing Examiner (for preliminary plat applications) may approve variations to minimum lot size, maximum Floor Area Ratio, and Lot Coverage requirements in order to facilitate retention of High Retention Value 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:
 - 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 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;

- c) The variations and resultant restrictions shall be included in a recorded agreement and be binding on future owners of the lots.

- ✓ **Update:** Option added for lot clustering with short plats and subdivisions
- ✓ **Explanation:** Allows code flexibility for adjusting lot layouts to support retention of High Retention Value Trees without restricting development potential
- ✓ **Result:** Overall more retention of trees on short plats and subdivisions

- 2) Modifications to Tree Retention Plans for Short Plats and Subdivisions. **Modifications to an approved Tree Retention Plan may be approved by the Planning Director pursuant to the following criteria:**

- a) The need for the modification was not known and could not reasonably have been known before the Tree Retention Plan was approved;
 - b) 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
 - c) There is no practicable or feasible alternative development proposal that results in fewer additional tree removals.
- 3) Public Notice for Modifications. The **Planning Director** shall not approve or deny a modification pursuant to this subsection without first providing notice of the modification request consistent with the noticing requirements for the short plat **or subdivision** and providing opportunity for comments for consideration by the **Planning Director**. Said comment period shall not be less than 14 calendar days. The fee for processing a modification request shall be established by City ordinance.

5. Development of Multifamily, Commercial and Mixed Use. Tree Retention Plan review and approval shall be based on compliance with the following provisions:

- a. **High Retention Value Trees.** In order to retain trees located in required yards and/or land use buffers, the applicant shall pursue, and the Planning Official is authorized to require compliance with the following standards:

- 1) Site Plan Alterations, including the following:

- a) Adjust deck, patio, and path designs;
- b) Relocate utilities when feasible, taking into account gravity and location of existing mains;
- c) Avoid rockery/retaining walls located within CRZs to maintain existing grades;
- d) Shore basements and other extensive excavations in order to avoid impact within CRZs;
- e) Cantilever structures over CRZs;

- 2) Arboricultural Methods. The applicant shall employ arboriculture methods to retain trees such as air excavations, boring under roots instead of trenching within TPZs for utilities less than 2 inches diameter, and using additional CRZ protection per KZC 95.32.

- 3) Variations to Development Standards. The applicant shall pursue the following variations and the Planning Official (or Public Works Official, where applicable) is authorized to require these variations to development standards:

- a) Allow required yards to be reduced to 10-foot front;
- b) Allow variations to the maximum lot coverage by not more than 10 percent where necessary to extend access due to building footprint location while ensuring that the driveway width does not exceed a width of 20 feet;
- c) Modify right-of-way frontage improvement requirements, such as adjusting the location of any required landscape strip;
- d) Allow up to a 5-foot increase in building height where the additional height is clearly related to tree retention (e.g., locating mechanical equipment in the attic, avoiding excavation or fill);
- e) 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;
- f) Vary requirements pertaining to stormwater if approved by the Public Works Official under KMC 15.52.060; and
- g) Reduce or vary the area, width, or composition of any required common recreational open space.

- ✓ **Update:** Alterations, standards, and development variations added for the retention of trees located in required yards and/or land use buffers on commercial, multi family, and mixed use sites
- ✓ **Explanation:** Clearly outlines the standards applicants shall pursue when there are trees located in required yards and/or land use buffers on the subject property; provides developers with a tool-kit of acceptable measures that shall be pursued in order to retain high value trees
- ✓ **Result:** Improves consistency and predictability of tree; ensures measures are being taken to retain trees located in required yards, etc. prior to removal being authorized; overall outcome expected to result in greater tree protection on sites undergoing redevelopment

- b. **Moderate Retention Value Trees.** The following incentives are available in order to protect Moderate Retention Value Trees:

- 1) An applicant may propose to modify their development proposal in the same manner as provided for High Retention Value Trees in subsection (a) of this section and the Planning Official (or Public Works Official, where applicable) is authorized to approve these variations to development standards for viable trees that are deemed to have Excellent/Good health and structure per the Tree Condition Table 95.30.1.
- 2) The applicant may propose to retain Moderate Retention Value Trees to satisfy Landmark Tree mitigation requirements and/or associated fees-in-lieu pursuant to KZC 95.23. The applicant shall indicate tree protection areas on site plans and clearly indicate a request for this incentive.

- ✓ **Update:** Incentives added for the retention of Moderate Retention Value Trees with commercial, mixed use, multi family developments
- ✓ **Explanation:** Provides developers with the option to retain other trees on the site in exchange for a reduction to the mitigation requirements for Landmark Trees
- ✓ **Result:** Provides an opportunity for other trees on development sites to be retained that are not Landmark-sized, located in Groves, or located in required yards, etc; overall result may result in greater tree protection on sites undergoing development

6. The Planning Official may authorize the removal of High Retention Value Trees otherwise required by this chapter to be retained provided that the following conditions are met:

- a. After utilizing the required site plan alterations and allowed variations to development standards listed in KZC 95.30(4) and (5), there is no practicable or feasible alternative development proposal that results in fewer tree removals; and/or

- ✓ **Update:** Subsection added that clearly outlines when the Planning Official will authorize the removal of High Retention Value Trees
- ✓ **Explanation:** Requires that applicants pursue all of the available alterations, standards, and development variations prior to the Planning Official authorizing removal
- ✓ **Result:** Improves predictability of the tree code by providing an outline for the process applicants must follow prior to being allowed to removal trees of High Retention Value

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 another 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 signage 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 with 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 Replacement Standards 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. Required tree retention may exceed the standards in subsection (1) of this code section. Single-Family Dwellings, Short Plats, Subdivisions, Two/Three-Unit Homes, Cottage/Carriage Dwellings, and Accessory Structures

1. **Trees Required to be Planted to Meet Tree Density Requirements.** The required minimum tree density for replanting is **50 tree credits per acre for Single-Family Dwellings, Short Plats, Subdivisions, Two/Three-Unit Homes, Cottage/Carriage Dwellings, and/or Accessory Structures and associated demolition and land surface modification.**

- ✓ **Update:** Per acre tree density increased from 30 to 50 credits
- ✓ **Explanation:** Provides opportunity for more supplemental trees to be planted on private properties undergoing redevelopment
- ✓ **Result:** Aligns with City's Urban Forest Canopy goals; accounts for tree mortality during establishment period

2. **Applicability of Tree Credits.** The tree credit value that corresponds with DBH is 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 at 1.5 times

credits for retention. **Trees located on property lines shall count for half tree density credits. For trees that fall between size categories listed in Table 95.34, credits shall be rounded down.** For individual lots in a short plat or subdivision with an approved Tree Retention Plan, the required tree density shall be calculated for 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 high probability for survival.

**Table 95.34
Tree Credits for Existing Regulated Trees**

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

- ✓ **Update:** Tree credit cap of 11 density credits added for any tree greater than 30-inches DBH
- ✓ **Explanation:** Simplifies calculations for existing tree density on sites undergoing development; leads to more replanting
- ✓ **Result:** Aligns with City's Urban Forest Canopy goals for more new tree planting on private properties undergoing redevelopment

3. **Tree Credit Calculation.** To calculate required tree credits, divide the square footage of the subject lot by 43,560 (the square footage of one acre). The resulting number is then multiplied by 50, the minimum tree credit requirement for one acre. In calculating required tree 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 **ten (10) tree credits** ($8,500/43,560 = 0.195 \times 50 = 9.75$, or **ten (10) credits**). The tree density for the lot would be met by retaining one (1) 16-inch DBH native conifer tree (4 credits X 1.5) and two (2) 12-inch DBH non-native trees (worth 2 credits each) for a total of ten (10) tree credits, resulting in no required supplemental trees. Tree densities may be exceeded to retain Landmark and High Retention Value Trees.

4. **Minimum Size Replacement Trees.** The required minimum size of a replacement tree worth one (1) tree credit shall be **six (6) 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 **as decided by the Planning Official**. Trees planted to form a clipped or sheared hedge will not be counted toward tree density credits. Supplemental Thuja/Arborvitae (or other slow-growing conifers as listed by the Planning and Building 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.

- ✓ **Update:** Hedges, Thuja/arborvitae, and other slow growing conifers do not count toward tree density credits for lot
- ✓ **Explanation:** Dissuades planting of small trees that contribute little to urban canopy cover
- ✓ **Result:** Aligns with City's Urban Forest Canopy goals of increasing canopy cover on private properties

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, **in order of priority**, for new trees are:
 - 1) On the subject property
 - 2) **Site perimeter – the area of the subject property that is within 10 feet from the property line;**
 - 3) In preserved Groves, Critical Areas or Critical Area Buffers, **or required land use buffers;**
 - 4) Adjacent to stormwater facilities as approved by Public Works under KMC 15.52.060;
 - 5) Entrance landscaping, traffic islands, and other common areas **within the residential subdivision development.**
- 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. The value shall be established according to the formula outlined in the most recent edition of the **Guide for Plant Appraisal**, published by the Council of Tree and Landscape Appraisers. The replacement tree value shall be determined by the City. Unit costs for conifers and deciduous trees shall be multiplied by the number of required tree credits or mitigation trees. All fee in lieu payments shall be paid 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.

Landscaping 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. 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. 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

1. General. The applicant shall provide the supplemental landscaping specified in subsection (2) of this section in any area of the subject property that:
 - a. Is not covered with a building, vehicle circulation area or other improvement; and
 - b. Is not in an area to be planted with required landscaping; and
 - c. Is not committed to and being used for some specific purpose.
2. 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.

95.42 Land Use Buffer Requirements

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

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

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

1. For standard 1, the applicant shall provide a 15-foot-wide landscaped strip with a 6-foot-high solid screening fence or wall. Except for public utilities, the fence or wall must be placed on the outside edge of the land use buffer or on the property line when adjacent to private property. For public utilities, the fence or wall may be placed either on the outside or inside edge of the landscaping strip. A fence or wall is not required when the land use buffer is adjacent and parallel to a public right-of-way that is improved for vehicular use. See KZC 115.40 for additional fence standards. The land use buffer must be planted as follows:
 - a. Trees planted at the rate of one (1) tree per 20 linear feet of land use buffer, with deciduous trees of two and one-half (2-1/2) inch caliper, minimum, and/or coniferous trees eight (8) feet in height, minimum. At least 70 percent of trees shall be evergreen. The trees shall be distributed evenly throughout the buffer, spaced no more than 20 feet apart on center.
 - b. Large shrubs or a mix of shrubs planted to attain coverage of at least 60 percent of the land use buffer area within two (2) years, planted at the following sizes and spacing, depending on type:
 - 1) Low shrub – (mature size under three (3) feet tall), 1- or 2-gallon pot or balled and burlapped equivalent;
 - 2) Medium shrub – (mature size from three (3) to six (6) feet tall), 2- or 3-gallon pot or balled and burlapped equivalent;
 - 3) Large shrub – (mature size over six (6) feet tall), 5-gallon pot or balled and burlapped equivalent.
 - c. Living ground covers planted from either 4-inch pot with 12-inch spacing or 1-gallon pot with 18-inch spacing to cover within two (2) years 60 percent of the land use buffer not needed for viability of the shrubs or trees.
2. For standard 2, the applicant shall provide a 5-foot-wide landscaped strip with a 6-foot-high solid screening fence or wall. Except for public utilities, the fence or wall must be placed on the outside edge of the land use buffer or on the property line when adjacent to private property. For public utilities, the

fence or wall may be placed either on the outside or inside edge of the landscaping strip. A fence or wall is not required when the land use buffer is adjacent and parallel to a public right-of-way that is improved for vehicular use. See KZC 115.40 for additional fence standards. The landscaped strip must be planted as follows:

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

95.43 Outdoor Use, Activity, and Storage

Outdoor use, activity, and storage **uses** (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 if this use 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 PLACEHOLDER - Internal Parking Lot Landscaping Requirements

95.45 PLACEHOLDER - Perimeter Landscape Buffering for Driving and Parking Areas

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 and Building 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**. 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. Large trees shall not be planted under or within proximity to overhead utilities. 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 stimulants.**
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 **for** 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 PLACEHOLDER - Tree and Landscape Maintenance Requirements

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**.

- ✓ **Update:** Code language revised to reference updated provisions on KMC 1.12.100
- ✓ **Explanation:** Only change is updating the reference to KMC 1.12.100
- ✓ **Result:** No impact

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 Tree Code (KZC 95)
Progress Tracking Matrix

Attachment 2

KZC	Section Title	Updates	Council Review	Council Direction	Staff Response
95.05	Purpose and Intent	No impact	November 16, 2021	Revise purpose to "City-wide tree canopy coverage of at least 40 percent "	<input checked="" type="checkbox"/> Completed. See KZC 95.05
95.10	Definitions	Minor	November 16, 2021	Add definition of "Pruning"	<input checked="" type="checkbox"/> Completed. See KZC 95.10(11)
95.15	Exempt Tree Removal Activities (previously 95.20)	Minor	November 16, 2021	Retain proposed language	
95.20	Public Tree – Pruning and Removal (previously 95.21)	Minor	November 16, 2021	Retain proposed language	
95.21	Private Property – Tree Pruning (previously 95.23)	Minor	November 16, 2021	Retain proposed language	
95.23	Landmark Trees – Mitigation Requirements	Moderate/Major	January 4, 2022	Retain proposed language	
95.25	Private Property – Tree Removal, Not Associated with Development Activity	Moderate/Major	January 4, 2022	Revisions required	<input type="checkbox"/> To be reviewed 2/15/2022
95.30	Tree Retention Associated with Development Activity	Moderate/Major	February 1, 2022		
95.32	Tree and Soil Protection during Development Activity	Minor	November 16, 2021	Retain proposed language	
95.34	Tree Replacement Standards Related to Development Activity	Moderate/Major	February 1, 2022		
95.40	Required Landscaping Based on Zoning District	None	November 16, 2021	Retain proposed language	
95.41	Supplemental Plantings	None	November 16, 2021	Retain proposed language	
95.42	Land Use Buffer Requirements	None	November 16, 2021	Retain proposed language	
95.43	Outdoor Use, Activity, and Storage	None	November 16, 2021	Retain proposed language	
95.44	Internal Parking Lot Landscaping Requirements	None	February 15, 2022	Elevate from minor to moderate/major amendments for further discussion	<input type="checkbox"/> To be reviewed 2/15/2022
95.45	Perimeter Landscape Buffering for Driving and Parking Areas	None	February 15, 2022	Elevate from minor to moderate/major amendments for further discussion	<input type="checkbox"/> To be reviewed 2/15/2022
95.46	Modifications to Required Landscaping and Buffer Standards	None	November 16, 2021	Retain proposed language	
95.47	Nonconforming Landscaping and Buffers	None	November 16, 2021	Retain proposed language	
95.50	Installation Standards for Required Plantings	Minor	November 16, 2021	Retain proposed language	
95.51	Tree and Landscape Maintenance Requirements	Moderate/Major	February 15, 2022	Elevate from minor to moderate/major amendments for further discussion	<input type="checkbox"/> To be reviewed 2/15/2022
95.52	Prohibited Vegetation	None	November 16, 2021	Retain proposed language	
95.55	Enforcement and Penalties	Moderate	February 1, 2022		
95.57	City Forestry Account	No impact	November 16, 2021	Retain proposed language	