CITY OF KIRKLAND
Planning and Building Department
123 5th Avenue, Kirkland, WA 98033
425.587.3600 - www.kirklandwa.gov

SHORT PLAT DEVELOPMENT STANDARDS LIST

File: SUB16-01774, K5 Oasis Short Plat

This application must comply with all applicable standards. The listing below outlines those standards in a typical development sequence.
KMC refers to Kirkland Municipal Code, KZC refers to Kirkland Zoning Code

TREE PLAN SUMMARY

KMC 22.28.210 & KZC 95.30 Significant Trees.

A Tree Retention Plan was submitted with the short plat in which the location of all proposed improvements were known. Therefore KZC 95.30.4 & 95.30.5 – known as an Integrated Development Plan, or IDP, applies in regards to tree retention. The approved IDP is included as Attachment 2 of the staff report. There are 93 significant trees on the site, of which 87 are viable. These trees have been assessed by staff and the City's Arborist. They are identified by number in the following chart.

	Lot Area (sf)	PNA Lot Area (sf)	Required Non-PNA Tree Credits	Required PNA Tree Credits	Existing Tree Credits to Remain in Non-PNA	Existing Tree Credits to Remain in PNA	Supplemental Tree Credits to be Planted
Lot #1	8,765	2,191	5	8	4.5	37.5	1 – Outside PNA
Lot #2	8,709	2,177	5	8	0	12	5 – Outside PNA
Lot #3	8,820	2,205	5	8	4.5	22.5	1 – Outside PNA
Lot #4	8,740	2,185	5	8	0	21	5 – Outside PNA
Lot #5	18,707	4,677	10	16	76	114	0

Lot 1 Significant Tree Typing							
Tree #	DBH	High Retention Value	Moderate Retention Value	Low Retention Value	Proposed for Retention	Tree Density Credit	In PNA?
9*	32	X			Yes	18	Yes
10*	35	X			No		Yes
11	11			X – Utility Easement	No		
12	8			X – Utility Easement	No		
13*	25		X		No		

14	10			X – Utility Easement	No		
15	48			X – Utility Easement	No		
16	18, 9		X		No		
17	19	X			No		
20	33		X		No		
21*	19		X		No		
22*	29			X – Utility Easement	No		
23*	34	X			Yes	19.5	Yes
25*	17	X			No		
26	14			X – Utility Easement	No		
33*	9	X			No		
34*	14	X			Yes	4.5	
104	16			X – NV	No		
111	9			X – Utility Easement	No		
113	8		X		No		
* denotes conifer trees which meet 1.5 times tree density credit per 95.33(1)(b)							

Lot 2 Significant Tree Typing							
Tree #	**DBH**	**High Retention Value**	**Moderate Retention Value**	**Low Retention Value**	**Proposed for Retention**	**Tree Density Credit**	**In PNA?**
24*	29				No		Yes
27*	29		X		No		
28*	16			X – Utility Easement	No		
29*	16	X			Yes	6	Yes
30*	26			X – Utility Easement	No		
31	14			X – Utility Easement	No		
32	19		X		No		
36	21	X			No		
39*	13			X – Utility Easement	No		Yes
40*	17	X			Yes	6	Yes
41*	8		X		No		
42	10		X		No		
43*	13		X		No		
44	15		X		No		
45*	22	X			No		
46*	27	X			No		

47	8			X – NV	No		
112	8			X – NV	No		Yes
* denotes conifer trees which meet 1.5 times tree density credit per 95.33(1)(b)							

Lot 3 Significant Tree Typing							
Tree #	**DBH**	**High Retention Value**	**Moderate Retention Value**	**Low Retention Value**	**Proposed for Retention**	**Tree Density Credit**	**In PNA?**
51	45			X – NV	No		
52	29		X		No		
55*	10			X – Drainage easement	No		
56	11, 10 (15)			X – Drainage easement	No		
57	12			X – Drainage easement	No		
59*	12	X			No		
60	14, 27		X		No		
61	42			X – NV	No		
62	10	X			Yes	1	Yes
63	11	X			Yes	1	Yes
64*	34	X			Yes	19.5	Yes
65*	42	X			No		Yes
66*	27		X		No		
67*	24		X		No		
68*	13		X		No		
69*	15	X			Yes	4.5	
70	26, 28			X - NV	No		
106	9	X			No		Yes
114*	17		X		No		
115	8	X			Yes	1	Yes
* denotes conifer trees which meet 1.5 times tree density credit per 95.33(1)(b)							

Lot 4 Significant Tree Typing							
Tree #	**DBH**	**High Retention Value**	**Moderate Retention Value**	**Low Retention Value**	**Proposed for Retention**	**Tree Density Credit**	**In PNA?**
72	40	X			No		
73*	43		X		No		
75	19		X		No		
77*	36	X			No		
78*	32	X			No		

79*	36			X – Utility easement	No		
80*	37	X			Yes	21	Yes
116	7			X – Utility easement	No		
117	8			X – Utility easement	No		
120*	9			X – Utility easement	No		
* denotes conifer trees which meet 1.5 times tree density credit per 95.33(1)(b)							

Lot 5 Significant Tree Typing							
Tree #	**DBH**	**High Retention Value**	**Moderate Retention Value**	**Low Retention Value**	**Proposed for Retention**	**Tree Density Credit**	**In PNA?**
86*	43	X			Yes	25.5	
87	12		X		Yes	2	
90	8		X		Yes	1	
93	8, 4, 3 (9)		X		Yes	1	
94*	45		X		Yes	27	
95*	25	X			Yes	12	
96*	19	X			Yes	7.5	Yes
97*	42	X			Yes	25.5	Yes
98	40	X			Yes	16	Yes
99	11, 12, 8, 6 (19)	X			Yes	5	Yes
100*	43	X			Yes	25.5	Yes
101*	31	X			Yes	16.5	Yes
102*	28	X			Yes	15	Yes
121*	34	X			Yes	19.5	
122	9	X			Yes	1	Yes
123	6	X			Yes	1	Yes
124	9	X			Yes	1	Yes
125	7		X		Yes	1	
126	11		X		Yes	1	
127	5, 5 (7)		X		Yes	1	
128*	14		x		Yes	4.5	
* denotes conifer trees which meet 1.5 times tree density credit per 95.33(1)(b)							

Trees in the area that will be dedicated ROW: #18, 19, 35, 37, 48, 49, 50, 53, 54, 58

No trees are to be removed with an approved short plat or subdivision permit. Based on the approved IDP, the applicant shall retain and protect all viable trees throughout the development of each single family lot except for those trees allowed to be removed for the installation of the

plat infrastructure improvements *and* construction of the residence and associated site improvements. Modifications to the Tree Retention Plan must be approved per KZC 95.30(6)(b).

PRIOR TO RECORDING

KMC 22.20.362 Short Plat - Title Report. The applicant shall submit a title company certification which is not more than 30 calendar days old verifying ownership of the subject property on the date that the property owner(s) (as indicated in the report) sign(s) the short plat documents; containing a legal description of the entire parcel to be subdivided; describing any easements or restrictions affecting the property with a description, purpose and reference by auditor's file number and/or recording number; any encumbrances on the property; and any delinquent taxes or assessments on the property.

KMC 22.20.366 Short Plat - Lot Corners. The exterior short plat boundary and all interior lot corners shall be set by a registered land surveyor. If the applicant submits a bond for construction of short plat improvements and installation of permanent interior lot corners, the City may allow installation of temporary interior lot corners until the short plat improvements are completed.

KMC 22.20.390 Short Plat - Improvements. The owner shall complete or bond all required right-of-way, easement, utility and other similar improvements.

KMC 22.28.110-130 Vehicular Access Easements. Municipal Code sections 22.28.110 and 22.28.130 establish that if vehicular access within the plat is provided by means other than rights-of-way, the plat must establish easements or tracts, compliant with Zoning Code Section 105.10, which will provide the legal right of access to each of the lots served.

KMC 22.32.010 Utility System Improvements. All utility system improvements must be designed and installed in accordance with all standards of the applicable serving utility.

KMC 22.32.020 Water System. The applicant shall install a system to provide potable water, adequate fire flow and all required fire-fighting infrastructure and appurtenances to each lot created.

KMC 22.32.030 Stormwater Control System. The applicant shall comply with the construction phase and permanent stormwater control requirements of the Municipal Code.

KMC 22.32.040 Sanitary Sewer System. The developer shall install a sanitary sewer system to serve each lot created.

KMC 22.32.050 Transmission Line Undergrounding. The applicant shall comply with the utility lines and appurtenances requirements of the Zoning Code.

KMC 22.32.080 Performance Bonds. In lieu of installing all required improvements and components as part of a plat or short plat, the applicant may propose to post a bond, or submit evidence that an adequate security device has been submitted and accepted by the service provider (City of Kirkland and/or Northshore Utility District), for a period of one year to ensure completion of these requirements within one year of plat/short plat approval.

LAND SURFACE MOFICIATION AND/OR BUILDING PERMIT REQUIREMENTS

KZC 85.25.1 Geotechnical Report Recommendations. A written acknowledgment must be added to the face of the plans signed by the architect, engineer, and/or designer that he/she has reviewed the geotechnical recommendations and incorporated these recommendations into the plans.

KZC 85.40 Natural Greenbelt Protective Easement. The applicant shall submit for recording a natural greenbelt protective easement, in a form acceptable to the City Attorney, for recording with King County (see Attachment ___).

KZC 85.45 Liability. The applicant shall enter into an agreement with the City, which runs with the property, in a form acceptable to the City Attorney, indemnifying the City for any

damage resulting from development activity on the subject property which is related to the physical condition of the property (see Attachment ___).

KZC 90.150 Natural Greenbelt Protective Easement. The applicant shall submit for recording a natural greenbelt protective easement, in a form acceptable to the City Attorney, for recording with King County (see Attachment ___).

KZC 90.155 Liability. The applicant shall enter into an agreement with the City which runs with the property, in a form acceptable to the City Attorney, indemnifying the City for any damage resulting from development activity on the subject property which is related to the physical condition of the stream, minor lake, or wetland (see Attachment ___).

KZC 95.35.2.b.(3)(b)i Tree Protection Techniques. A description and location of tree protection measures during construction for trees to be retained must be shown on demolition and grading plans.

KZC 95.34 Tree Protection. Prior to development activity or initiating tree removal on the site, vegetated areas and individual trees to be preserved shall be protected from potentially damaging activities. Protection measures for trees to be retained shall include (1) placing no construction material or equipment within the protected area of any tree to be retained; (2) providing a visible temporary protective chain link fence at least 4 feet in height around the protected area of retained trees or groups of trees until the Planning Official authorizes their removal; (3) installing visible signs spaced no further apart than 15 feet along the protective fence stating "Tree Protection Area, Entrance Prohibited" with the City code enforcement phone number; (4) prohibiting excavation or compaction of earth or other damaging activities within the barriers unless approved by the Planning Official and supervised by a qualified professional; and (5) ensuring that approved landscaping in a protected zone shall be done with light machinery or by hand.

KZC 95.45 Tree Installation Standards. All supplemental trees to be planted shall conform to the Kirkland Plant List. All installation standards shall conform to Kirkland Zoning Code Section 95.45.

KZC 110.60.5 Street Trees. All trees planted in the right-of-way must be approved as to species by the City. All trees must be two inches in diameter at the time of planting as measured using the standards of the American Association of Nurserymen with a canopy that starts at least six feet above finished grade and does not obstruct any adjoining sidewalks or driving lanes.

KZC 95.52 Prohibited Vegetation. Plants listed as prohibited in the Kirkland Plant List shall not be planted in the City.

KZC 105.10 Vehicular Access Easements or Tracts. The access easement or tract shall be ___ feet wide and contain a paved surface ___ feet in width. The access easement or tract shall be screened from the adjacent property to the ___ with a minimum five-foot high sight-obscuring fence; or vegetation that will provide comparable screening to a five-foot fence within two years of planting; along the entire easement or tract outside the required front yard.

105.10.2 Pavement Setbacks. The paved surface in an access easement or tract shall be set back at least 5 feet from any adjacent property which does not receive access from that easement or tract. An access easement or tract that has a paved area greater than 10 feet in width must be screened from any adjacent property that does not receive access from it. Screening standards are outlined in this section.

KZC 105.47 Required Parking Pad. Except for garages accessed from an alley, garages serving detached dwelling units in low density zones shall provide a minimum 20-foot by 20-foot parking pad between the garage and the access easement, tract, or right-of-way providing access to the garage.

KZC 115.25 Work Hours. It is a violation of this Code to engage in any development activity or to operate any heavy equipment before 7:00 am. or after 8:00 pm Monday through Friday, or before 9:00 am or after 6:00 pm Saturday. No development activity or use of heavy equipment may occur on Sundays or on the following holidays: New Year's Day, Memorial Day,

Independence Day, Labor Day, Thanksgiving, and Christmas Day. The applicant will be required to comply with these regulations and any violation of this section will result in enforcement action, unless written permission is obtained from the Planning Official.

KZC 115.40 Fence Location. Fences over 6 feet in height may not be located in a required setback yard. A detached dwelling unit abutting a neighborhood access or collector street may not have a fence over 3.5 feet in height within the required front yard. No fence may be placed within a high waterline setback yard or within any portion of a north or south property line yard, which is coincident with the high waterline setback yard.

KZC 115.42 Floor Area Ratio (F.A.R.) Limits. Floor area for detached dwelling units is limited to a maximum floor area ratio in low density residential zones. See Use Zone charts for the maximum percentages allowed. This regulation does not apply within the disapproval jurisdiction of the Houghton Community Council.

KZC 115.43 Garage Requirements for Detached Dwelling Units in Low Density Zones. Detached dwelling units served by an open public alley, or an easement or tract serving as an alley, shall enter all garages from that alley. Whenever practicable, garage doors shall not be placed on the front façade of the house. Side-entry garages shall minimize blank walls. For garages with garage doors on the front façade, increased setbacks apply, and the garage width shall not exceed 50% of the total width of the front façade. These regulations do not apply within the disapproval jurisdiction of the Houghton Community Council. Section 115.43 lists other exceptions to these requirements.

KZC 115.75.2 Fill Material. All materials used as fill must be non-dissolving and non-decomposing. Fill material must not contain organic or inorganic material that would be detrimental to the water quality, or existing habitat, or create any other significant adverse impacts to the environment.

KZC 115.90 Calculating Lot Coverage. The total area of all structures and pavement and any other impervious surface on the subject property is limited to a maximum percentage of total lot area. See the Use Zone charts for maximum lot coverage percentages allowed. Section 115.90 lists exceptions to total lot coverage calculations See Section 115.90 for a more detailed explanation of these exceptions.

KZC 115.95 Noise Standards. The City of Kirkland adopts by reference the Maximum Environmental Noise Levels established pursuant to the Noise Control Act of 1974, RCW 70.107. See Chapter 173-60 WAC. Any noise, which injures, endangers the comfort, repose, health or safety of persons, or in any way renders persons insecure in life, or in the use of property is a violation of this Code.

KZC 115.115 Required Setback Yards. This section establishes what structures, improvements and activities may be within required setback yards as established for each use in each zone.

KZC 115.115.3.g Rockeries and Retaining Walls. Rockeries and retaining walls are limited to a maximum height of four feet in a required yard unless certain modification criteria in this section are met. The combined height of fences and retaining walls within five feet of each other in a required yard is limited to a maximum height of 6 feet, unless certain modification criteria in this section are met.

KZC 115.115.3.n Covered Entry Porches. In residential zones, covered entry porches on dwelling units may be located within 13 feet of the front property line if certain criteria in this section are met. This incentive is not effective within the disapproval jurisdiction of the Houghton Community Council.

KZC 115.115.3.o Garage Setbacks. In low density residential zones, garages meeting certain criteria in this section can be placed closer to the rear property line than is normally allowed in those zones.

KZC 115.115.3.p HVAC and Similar Equipment: These may be placed no closer than five feet of a side or rear property line, and shall not be located within a required front yard; provided, that HVAC equipment may be located in a storage shed approved pursuant to

subsection (3)(m) of this section or a garage approved pursuant to subsection (3)(o)(2) of this section. All HVAC equipment shall be baffled, shielded, enclosed, or placed on the property in a manner that will ensure compliance with the noise provisions of KZC 115.95.

KZC 115.115.5.a Driveway Width and Setbacks. For a detached dwelling unit, a driveway and/or parking area shall not exceed 20 feet in width in any required front yard, and shall be separated from other hard surfaced areas located in the front yard by a 5-foot wide landscape strip. Driveways shall not be closer than 5 feet to any side property line unless certain standards are met.

KZC 115.135 Sight Distance at Intersection. Areas around all intersections, including the entrance of driveways onto streets, must be kept clear of sight obstruction as described in this section.

KZC 145.22.2 Public Notice Signs. Within seven (7) calendar days after the end of the 21-day period following the City's final decision on the permit, the applicant shall remove all public notice signs.

PRIOR TO OCCUPANCY

KZC 90.145 Bonds. The City may require a bond and/or a perpetual landscape maintenance agreement to ensure compliance with any aspect of the Drainage Basins chapter or any decision or determination made under this chapter. A ___ is required for ___. (see Attachment ___).

KZC 95.40 Bonds. The City may require a maintenance agreement or bond to ensure compliance with any aspect of the Landscaping chapter. A ___ is required for ___ (see Attachment ___).

KZC 95.50.2.b Tree Maintenance. For detached dwelling units, the applicant shall submit a 5-year tree maintenance agreement to the Planning Department to maintain all pre-existing trees designated for preservation and any supplemental trees required to be planted.

KZC 110.60.6 Mailboxes. Mailboxes shall be installed in the development in a location approved by the Postal Service and the Planning Official. The applicant shall, to the maximum extent possible, group mailboxes for units or uses in the development.

KZC 110.75 Bonds. The City may require or permit a bond to ensure compliance with any of the requirements of the Required Public Improvements chapter. A ___ shall be submitted for ___.

DEVELOPMENT STANDARDS

SUB16-01774

BUILDING DEPARTMENT

SUB CONDITIONS
You may contact Tanya Elder at 425-587-3614 for Building Department questions related to this permit.

1. The approved plans shall not be changed, modified, or altered without authorization from the building official. The approved plans are required to be on the job site.

2. This SUB Permit does not authorize any cutting or digging for new footings or foundations. A SEPERATE BUILDING PERMIT MUST BE ISSUED PRIOR TO ANY FOOTING OR FOUNDATION WORK.

3. No excavation or fill is authorized to encroach upon a neighboring property without explicit agreement by the adjoining property owner.

4. Separate demolition permit(s) are required prior to removal of any existing structures.

5. Separate building permit(s) are required for construction of any new buildings.

FIRE DEPARTMENT

FIRE DEPARTMENT COMMENTS

Contact: Grace Steuart at 425-587-3660; or gsteuart@kirklandwa.gov

ACCESS

The house on Lot 4 requires fire sprinklers due to access.

Regarding Lot 5 (existing house), the access is inadequate (both now and under proposed development). As long as the house remains as is, sprinklers are not required.

However, if the house is added on to: Buildings which would be required to be sprinklered due to fire department access, are allowed to add up to five hundred square feet without being required to install fire sprinklers. This exception shall be used one time only, and acknowledgement of its use shall be recorded to run with the property title prior to building permit issuance.

If this house is replaced at any time in the future, fire sprinklers would be required.

HYDRANTS AND FIRE FLOW

An additional hydrant is required to be installed on the NE 129th Street ROW in front of the property. The existing hydrant on the corner of 76th Ave NE and NE 129th shall be equipped with a 5" Storz fitting.

The project is in Northshore Utility District. Fire flow requirement for this project is 1,000 gpm. The project is in Northshore Utility District. A certificate of water availability shall be provided from NUD.

At this stage, there has been no water plan provided to the fire department for review. At the grading permit stage, a water plan showing the above hydrant information is required.

SPRINKLER THRESHOLD

Per Kirkland Municipal Code, all new buildings which are 5,000 gross square feet or larger require fire sprinklers. Included are single family homes, duplexes, and zero lot line townhouses where the aggregate area of all connected townhouses is greater than 5,000 square feet.; garages, porches, covered decks, etc, are included in the gross square footage. (This comment is included in the short plat conditions for information purposes only.)

PUBLIC WORKS DEPARTMENT

Permit #: SUB16-01774
Project Name: K5 Oasis Short Plat
Project Address: 7435 NE 129th St
Date: 12/14/16

PUBLIC WORKS CONDITIONS

General Conditions:

1. All public improvements associated with this project including street and utility improvements, must meet the City of Kirkland Public Works Pre-Approved Plans and Policies Manual. A Public Works Pre-Approved Plans and Policies manual can be purchased from the Public Works Department, or it may be retrieved from the Public Works Department's page at the City of Kirkland's web site.

2. This project will be subject to Public Works Permit and Connection Fees. It is the applicant's responsibility to contact the Public Works Department by phone or in person to determine the fees. The applicant should anticipate the following fees:
o Surface Water Connection Fees (paid with the issuance of a Building Permit)
o Side Sewer Inspection Fee (paid with the issuance of a Building Permit)
o Septic Tank Abandonment Inspection Fee
o Water Meter Fee (paid with the issuance of a Building Permit)
o Right-of-way Fee
o Review and Inspection Fee (for utilities and street improvements).
o Building Permits associated with this proposed project will be subject to the traffic, park, and school impact fees per Chapter 27 of the Kirkland Municipal Code. The impact fees shall be paid prior to issuance of the Building Permit(s). Any existing buildings within this project which are demolished will receive a Traffic Impact Fee credit, Park Impact Fee Credit and School Impact Fee Credit. This credit will be applied to the first Building Permits that are applied for within the project. The credit amount for each demolished building will be equal to the most currently adopted Fee schedule.

3. All street and utility improvements shall be permitted by obtaining a Land Surface Modification (LSM) Permit, including the required LSM Checklist.

4. Submittal of Building Permits within a subdivision prior to recording:

• Submittal of a Building Permit with an existing parcel number prior to subdivision recording: A Building Permit can be submitted prior to recording of the subdivision for each existing parcel number in the subject project, however in order for the Building Permit to be deemed a complete application, all of the utility and street improvements for the new home must be submitted with application. However, the Building Permit will not be eligible for issuance until after the Land Surface Modification Permit is submitted, reviewed, and approved to ensure the comprehensive storm water design required by the subdivision approval is reviewed and approved, and then shown correctly on the Building Permit plans to match the Land Surface Modification Permit.

• Submittal of Building Permits within an Integrated Development Plan (IDP): If this subdivision is using the IDP process, the Building Permits for the new homes can only be applied for after the Land Surface Modification Permit has been submitted, reviewed, and approved.

• Submittal of a Building Permit within a standard subdivision (non IDP): If this subdivision is not using the IDP process, the Building Permits for the new houses can be applied for after the subdivision is recorded and the Land Surface Modification permit has been submitted, reviewed, and approved.

• Review of Expedited or Green Building Permits: A new single family home Building Permit within a subdivision can only be review on an expedited or green building fast track if submitted electronically through MBP and the Land Surface Modification permit has been submitted, reviewed, and approved.

• Review of detached multi-family building permits: Detached multi-family building permits can only be applied for after the Land Surface Modification permit submitted, reviewed, and approved.

5. Subdivision Performance and Maintenance Securities:
• The subdivision can be recorded in advance of installing all the required street and utility improvements by posting a performance security equal to 130% of the value of work. This security amount will be determined by using the City of Kirkland's Improvement Evaluation Packet (available in either Excel or PDF). Contact the Development Engineer assigned to this project to assist with this process.

• If the Developer will be installing the improvements prior to recording of the subdivision, there is a standard right of way restoration security ranging from $10,000.00 to 30,000.00 (value determined based on amount of right-of-way disruption). This security will be held until the project has been completed.

• Once the subdivision has been completed there will be a condition of the permit to establish a two year Maintenance security.

• If a recording Performance Security has not yet been posted, then prior to issuance of the LSM Permit a standard right of way restoration security ranging from $10,000.00 to 30,000.00 (value determined based on amount of ROW disruption) shall be posted with Public Works Department. This security will be held until the project has been completed

6. This project is exempt from concurrency review.

7. All civil engineering plans which are submitted in conjunction with a building, grading, or right-of-way permit must conform to the Public Works Policy G-7, Engineering Plan Requirements. This policy is contained in the Public Works Pre-Approved Plans and Policies manual.

8. All street improvements and underground utility improvements (storm, sewer, and water) must be designed by a Washington State Licensed Engineer; all drawings shall bear the engineers stamp.

9. All plans submitted in conjunction with a building, grading or right-of-way permit must have elevations which are based on the King County datum only (NAVD 88).

10. A completeness check meeting is required prior to submittal of any Building Permit applications.

11. The required tree plan shall include any significant tree in the public right-of-way along the property frontage.

12. All subdivision recording documents shall include the following language:

o Utility Maintenance: Each property owner shall be responsible for maintenance of the sanitary sewer, storm water stub, rain garden, permeable pavement, or any infiltration facilities (known as Low Impact Development) from the point of use on their own property to the point of connection in the City sanitary sewer main or storm water main. Any portion of a sanitary sewer, surface water stub, rain garden, permeable pavement, or any infiltration facilities, which jointly serves more than one property, shall be jointly maintained and repaired by the property owners sharing such stub. The joint use and maintenance shall "run with the land" and will be binding on all property owners within this subdivision, including their heirs, successors and assigns.

o Public Right-of-way Sidewalk and Vegetation Maintenance: Each property owner shall be responsible for keeping the sidewalk abutting the subject property clean and litter free. The property owner shall also be responsible for the maintenance of the vegetation within the abutting landscape strip. The maintenance shall “run with the land” and will be binding on all property owners within this subdivision, including their heirs, successors and assigns.

If the lots have on-site private storm water facilities, include this language on the subdivision recording document:

o Maintenance of On-site Private Stormwater Facilities: Each Lot within the Subdivision has a stormwater facility (infiltration trench, dry wells, dispersion systems, rain garden, and permeable pavement) which is designed to aid storm water flow control for the development. The stormwater facility within the property shall be owned, operated and maintained by the Owner. The City of Kirkland shall have the right to ingress and egress the Property for inspection of and to reasonable monitoring of the performance, operational flows, or defects of the stormwater/flow control facility.
If the City of Kirkland determines related maintenance or repair work of the stormwater facility is required, the City of Kirkland shall give notice to the Owner of the specific maintenance and/or repair work required. If the above required maintenance or repair is not completed within the time set by the City of Kirkland, the City of Kirkland may perform the required maintenance or repair, or contract with a private company capable of performing the stormwater facility maintenance or repair and the Owner will be required to reimburse the City for any such work performed.
The Owner is required to obtain written approval from the City of Kirkland prior to replacing, altering, modifying or maintaining the storm water facility.

If the project contains LID storm improvements that will be installed as a condition of the new home Building Permit, then include this condition on the Short Plat recording documents:

o Installation of Low Impact Development (LID) storm drainage improvements with Building Permits: All LID storm drainage features depicted on Sheet ____ of ____ of issued permit LSM1X-0XXXX shall be installed in conjunction with the construction of each new home on lots X to X. The LID improvements include, but are not limited to the rain gardens and the pervious driveways. The Building Permit for the new signal family home on lots X to X will not receive a final inspection until said LID improvements are installed. The pervious access road/Tract serving lots X and X shall be constructed or secured by a performance bond prior to recording of the short plat

Water and Sanitary Sewer Conditions:

1. Northshore Utility District approval required for water and/or sewer service. A letter of sewer/water availability is required; call N.U.D at 425-398-4400.

2. The existing septic system shall be abandoned per City standards.

Surface Water Conditions:

1. Provide temporary and permanent storm water control per the 2009 King County Surface Water Design Manual and the Kirkland Addendum (Policy D-10). See Policies D-2 and D-3 in the PW Pre-Approved Plans for drainage review information, or contact city of Kirkland Surface Water staff at (425) 587-3800 for help in determining drainage review requirements. The drainage review levels can be determined using the Drainage Review Flow Chart. Summarized below are the levels of drainage review based on site and project characteristics:

• Full Drainage Review
 A full drainage review is required for any proposed project, new or redevelopment, that will:
 Adds 5,000ft2 or more of new impervious surface area or 10,000ft2 or more of new plus replaced impervious surface area,
 Propose 7,000ft2 or more of new pervious surface or,
 Be a redevelopment project on a single or multiple parcel site in which the total of new plus replaced impervious surface area is 5,000ft2 or more and whose valuation of proposed improvements (including interior improvements but excluding required mitigation and frontage improvements) exceeds 50% of the assessed value of the existing site

improvements.

2. Evaluate the feasibility and applicability of dispersion, infiltration, and other stormwater low impact development facilities on-site (per section 5.2 in the 2009 King County Surface Water Design Manual). If feasible, stormwater low impact development facilities are required. See PW Pre-Approved Plan Policy L-1 or L-2 (depending on drainage review) for more information on this requirement.

3. Because this project site is one acre or greater, the following conditions apply:
- Amended soil requirements (per Ecology BMP T5.13) must be used in all landscaped areas.
- If the project meets minimum criteria for water quality treatment (5,000ft2 pollution generating impervious surface area), the enhanced level of treatment is required if the project is multi-family residential, commercial, or industrial. Enhanced treatment targets the removal of metals such as copper and zinc.
- The applicant is responsible to apply for a Construction Stormwater General Permit from Washington State Department of Ecology. Provide the City with a copy of the Notice of Intent for the permit. Permit Information can be found at the following website: http://www.ecy.wa.gov/programs/wq/stormwater/construction/
  - Among other requirements, this permit requires the applicant to prepare a Storm Water Pollution Prevention Plan (SWPPP) and identify a Certified Erosion and Sediment Control Lead (CESCL) prior to the start of construction. The CESCL shall attend the City of Kirkland PW Dept. pre-construction meeting with a completed SWPPP.
- Turbidity monitoring by the developer/contractor is required if a project contains a lake, stream, or wetland.
- A Stormwater Pollution Prevention and Spill (SWPPS) Plan must be kept on site during all phases of construction and shall address construction-related pollution generating activities. Follow the guidelines in the 2009 King County Surface Water Design Manual for plan preparation.

4. If a storm water detention system is required, it shall be designed to Level II standards. Historic (forested) conditions shall be used as the pre-developed modeling condition.

5. This project is creating or replacing more than 5000 square feet of new impervious area that will be used by vehicles (PGIS - pollution generating impervious surface). Provide storm water quality treatment per the 2009 King County Surface Water Design Manual. The enhanced treatment level is encouraged when feasible for multi-family residential, commercial, and industrial projects less than 1 acre in size.

6. Provide a level one off-site analysis (based on the King County Surface Water Design Manual, core requirement #2).

7. It doesn't appear that any work within an existing ditch will be required, however the developer has been given notice that the Army Corps of Engineers (COE) has asserted jurisdiction over upland ditches draining to streams. Either an existing Nationwide COE permit or an Individual COE permit may be necessary for work within ditches, depending on the project activities.
Applicants should obtain the applicable COE permit; information about COE permits can be found at: U.S. Army Corps of Engineers, Seattle District Regulatory Branch
http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx

Specific questions can be directed to: Seattle District, Corps of Engineers, Regulatory Branch, CENWS-OD-RG, Post Office Box 3755, Seattle, WA 98124-3755, Phone: (206) 764-3495

8. A Hydraulic Project Approval (HPA) from WA State Department of Fish and Wildlife (WDFW) may be required for this project. Contact WDFW at 425-313-5681 or Christa.Heller@dfw.wa.gov for determination, obtain an HPA if required, and submit a copy to COK. If an HPA is not required, the applicant may be required to provide written documentation from WDFW as verification. More information on HPAs can be found at the following website: http://wdfw.wa.gov/licensing/hpa/

9. Provide an erosion control report and plan with Building or Land Surface Modification Permit application. The plan shall be in accordance with the 2009 King County Surface Water Design Manual.

10. Construction drainage control shall be maintained by the developer and will be subject to periodic inspections.

During the period from May 1 and September 30, all denuded soils must be covered within 7 days; between October 1 and April 30, all denuded soils must be covered within 12 hours. Additional erosion control measures may be required based on site and weather conditions. Exposed soils shall be stabilized at the end of the workday prior to a weekend, holiday, or predicted rain event.

11. Provide collection and conveyance of right-of-way storm drainage

12. Provide a separate storm drainage connection for each lot. All roof and driveway drainage must be tight-lined to the storm drainage system or utilize low impact development techniques. The tight line connections shall be installed with the individual new houses.

13. A 15’ foot wide storm sewer line easement across the neighboring property for the stormwater outfall must be recorded with the property.

14. Provide a plan and profile design for the storm sewer system.

15. Provide a 15' wide access easement to the storm detention control manhole; easement must be improved with 10' of asphalt and drainage control to protect against erosion.

16. A storm sewer "Joint Maintenance Agreement" must be recorded with the property for the jointly used storm sewer lines.

17. Since the existing home is proposed to remain in this development, there are the following options to address the storm drainage from that house/lot:
a. Evaluate the proposed lot as new/replaced impervious at the required lot coverage as part of the subdivision TIR.
b. Remove the lot from calculations as non-targeted surfaces. If this method is taken, the existing home cannot be demolished and redeveloped within 5 years of the recording of the short plat. If the home is demolished and redeveloped within that time period, a storm drainage analysis must be provided for the entire subdivision including the lot at full lot coverage as part of the building permit. The following note must be included on the subdivision: Redevelopment of Lot __: Since the home currently constructed on the existing parcel that is proposed to remain as Lot _ has not been evaluated as part of the storm drainage analysis, the existing home cannot be demolished and redeveloped within 5 years of the recording of this plat. If the home is demolished and redeveloped within that time period, a storm drainage analysis must be provided for the entire subdivisions including Lot _ at full impervious coverage.

Street and Pedestrian Improvement Conditions:

1. The subject property abuts NE 129th St. This street is a Neighborhood Access type street. Zoning Code sections 110.10 and 110.25 require the applicant to make half-street improvements in rights-of-way abutting the subject property. Section 110.30-110.50 establishes that this street must be improved with the following:

A. Widen the street to 12 ft. from centerline to face of curb.
B. Install storm drainage, curb and gutter, a 4.5 ft. planter strip with street trees 30 ft. on-center, and a 5 ft. wide sidewalk.

2. Provide a public right-of-way dedication along the west property line for both this and the possible neighboring future development. The proposed street must be developed to the following:

A. Total ROW dedication length shall be 200 ft.
B. Provide 20 ft. of paving from curb to curb.
C. Install storm drainage, curb and gutter, and a 4.5 ft. planter strip with street trees 30 ft. on-center.
D. A sidewalk is unnecessary due to the length of the road.
E. A right-of-way dedication of 26 ft. will be required.
F. A turnaround meeting the minimum requirements will be required at the end of the public road.
G. Lots 4 and 5 can be accessed by a shared driveway with 16’ of paving in a 21’ easement on Lot 4.

3. When three or more utility trench crossings occur within 150 lineal ft. of street length or where utility trenches parallel the street centerline, the street shall be overlaid with new asphalt or the existing asphalt shall be removed and replaced per the City of Kirkland Street Asphalt Overlay Policy R-7.

- Existing streets with 4-inches or more of existing asphalt shall receive a 2-inch (minimum thickness) asphalt overlay. Grinding of the existing asphalt to blend in the overlay will be required along all match lines.
- Existing streets with 3-inches or less of existing asphalt shall have the existing asphalt removed and replaced with an asphalt thickness equal or greater than the existing asphalt provided however that no asphalt shall be less than 2-inches thick and the subgrade shall be compacted to 95% density.

4. Meet the requirements of the City of Kirkland Driveway Pre-Approved Policy R-4.

5. The driveway for each lot shall be long enough so that parked cars do not extend into the access easement or right-of-way (20 ft. min. depth) and can park two cars (20 ft. min. width).

6. All street and driveway intersections shall not have any visual obstructions within the sight distance triangle. See Public Works Pre-approved Policy R.13 for the sight distance criteria and specifications.

7. Prior to the final of the building or grading permit, pay for the installation of stop and street signs at the new intersections.

8. Install "NO PARKING ANYTIME" signs along the proposed new roadway.

9. Install new monuments at the intersection of the new road and NE 129th St.

10. It shall be the responsibility of the applicant to relocate any above-ground or below-ground utilities which conflict with the project associated street or utility improvements.

11. Underground all new and existing on-site utility lines and overhead transmission lines.

12. Underground any new off-site transmission lines.

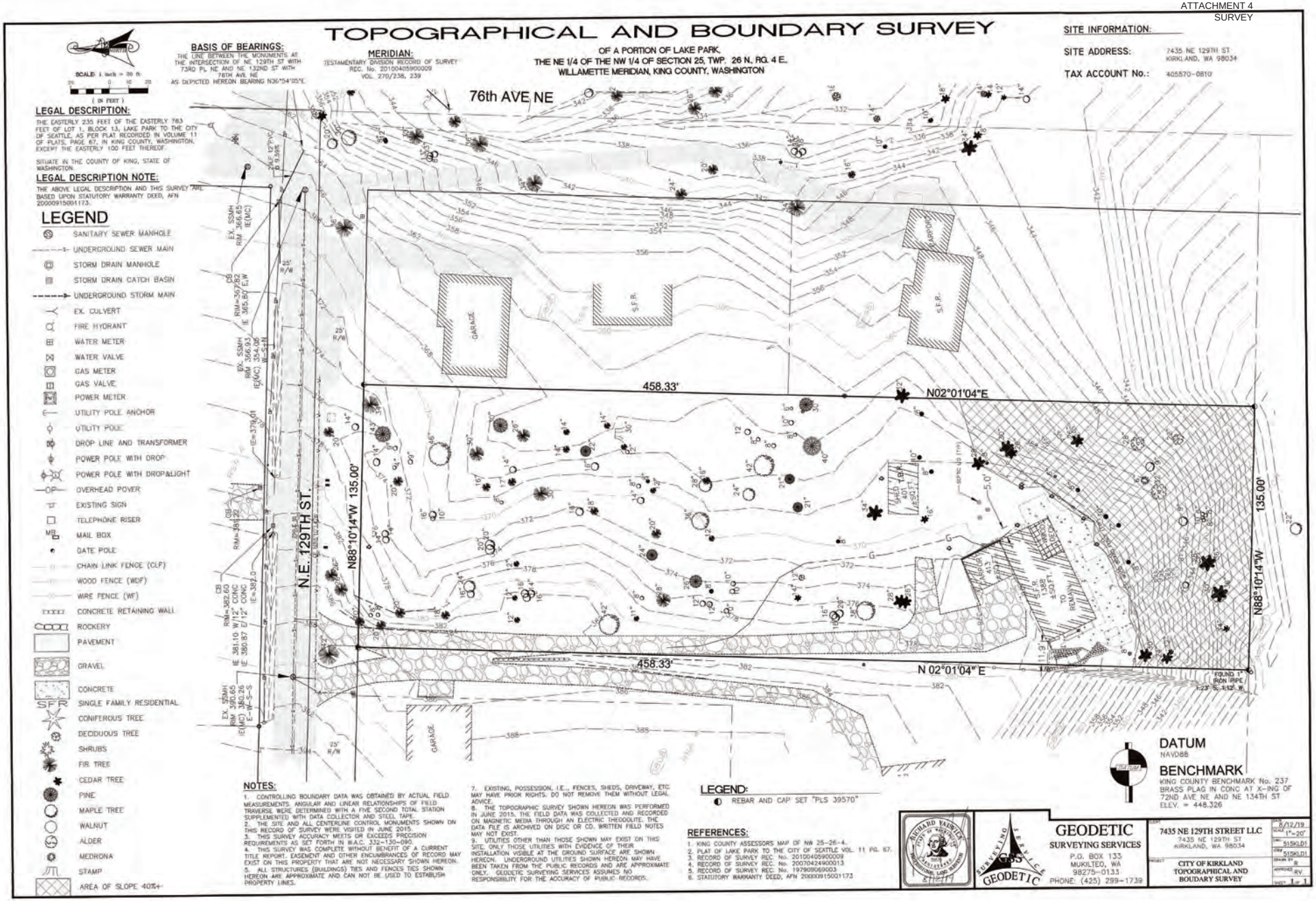
13. Zoning Code Section 110.60.9 establishes the requirement that existing utility and transmission (power, telephone, etc.) lines on-site and in rights-of-way adjacent to the site must be underground. The Public Works Director may determine if undergrounding transmission lines in the adjacent right-of-way is not feasible and defer the undergrounding by signing an agreement to participate in an undergrounding project, if one is ever proposed. In this case, the Public Works Director has determined that undergrounding of existing overhead utility on NE 129th St. is not feasible at this time and the undergrounding of off-site/frontage transmission lines should be deferred with a Local Improvement District (LID) No Protest Agreement. The final recorded subdivision mylar shall include the following note:

Local Improvement District (LID) Waiver Agreement. Chapter 110.60.7.b of the Kirkland Zoning Code requires all overhead utility lines along the frontage of the subject property to be converted to underground unless the Public Works Director determines that it is infeasible to do so at the time of the subdivision recording. If it is determined to be infeasible, then the property owner shall consent to the formation of a Local Improvement District, hereafter formed by the City or other property owners. During review of this subdivision it was determined that it was infeasible to convert the overhead utility lines to underground along the frontage of this subdivision on NE 129th St. Therefore, in consideration of deferring the requirement to underground the overhead utility lines at the time of the subdivision recording, the property owner and all future property owners of lots within this subdivision hereby consent to the formation of a Local Improvement District hereafter formed by the City or other property owners

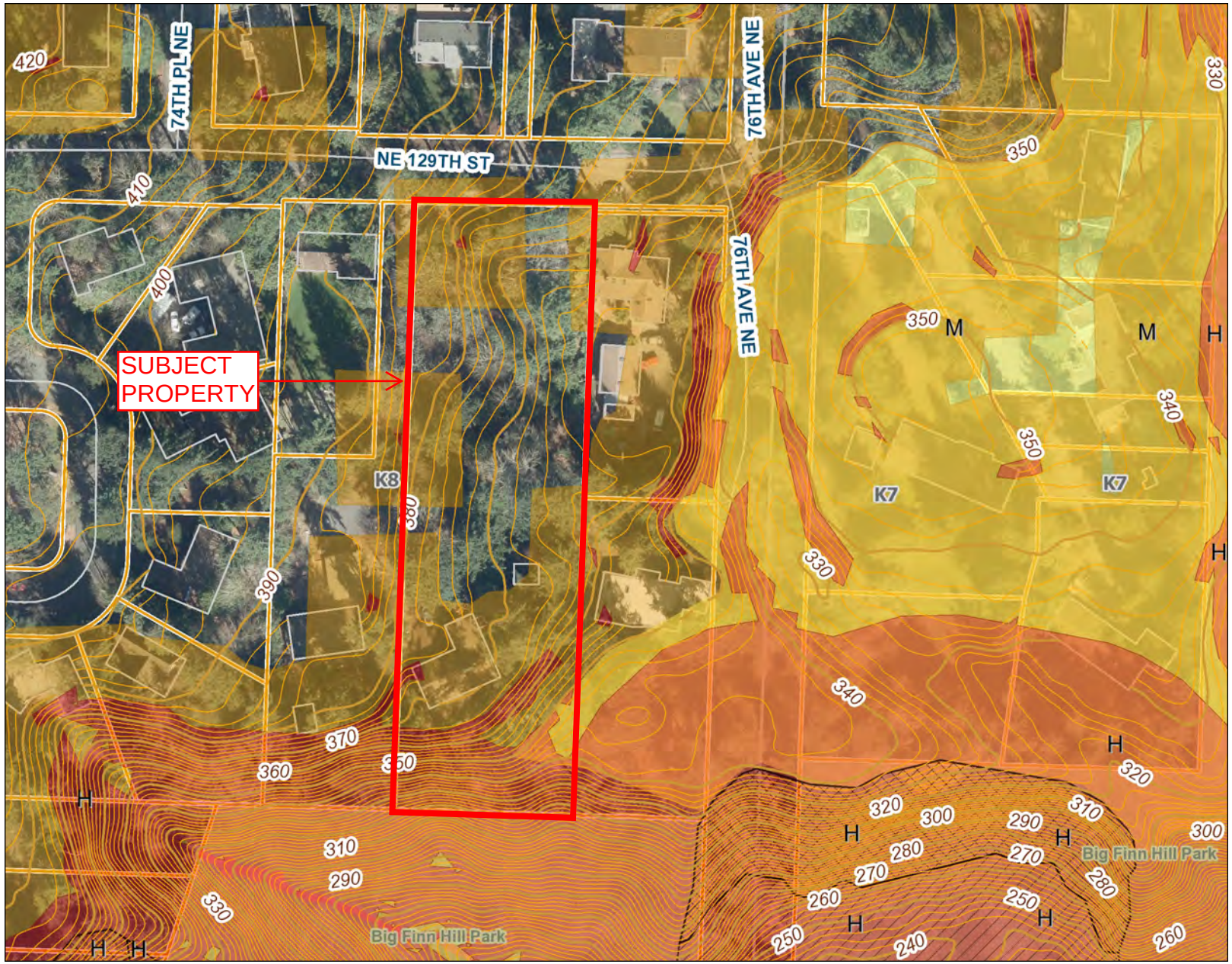
14. New street lights may be required per Puget Power design and Public Works approval. Contact the INTO Light Division at PSE for a lighting analysis. If lighting is necessary, design must be submitted prior to issuance of a grading or building permit. New street lighting must be LED.

Links

- City of Kirkland Pre-Approved Plans and Policies
- Public Works Development Fees
- Stormwater FAQs
- Application Forms (Electronic, Paper)
- KZC105 – Private Drive, Private and Pedestrian Walkway Requirements
- KZC110 - Public Right-of-way Improvement Requirements


TOPOGRAPHICAL AND BOUNDARY SURVEY
OF A PORTION OF LAKE PARK,
THE NE 1/4 OF THE NW 1/4 OF SECTION 25, TWP. 26 N., RG. 4 E.,
WILLAMETTE MERIDIAN, KING COUNTY, WASHINGTON
SITE INFORMATION:
SITE ADDRESS: 7435 NE 129TH ST KIRKLAND, WA 98034
TAX ACCOUNT No.: 405570-0810
BASIS OF BEARINGS:
THE LINE BETWEEN THE MONUMENTS AT THE INTERSECTION OF NE 129TH ST WITH 73RD PL NE AND NE 132ND ST WITH 76TH AVE NE AS DEPICTED HEREON BEARING N36°54'05"E.
MERIDIAN:
TESTAMENTARY DIVISION RECORD OF SURVEY REC. No. 20100405900009 VOL. 270/238, 239
SCALE: 1 inch = 20 ft.
(IN FEET)
LEGAL DESCRIPTION:
THE EASTERLY 235 FEET OF THE EASTERLY 763 FEET OF LOT 1, BLOCK 13, LAKE PARK TO THE CITY OF SEATTLE, AS PER PLAT RECORDED IN VOLUME 11 OF PLATS, PAGE 67, IN KING COUNTY, WASHINGTON, EXCEPT THE EASTERLY 100 FEET THEREOF.
SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.
LEGAL DESCRIPTION NOTE:
THE ABOVE LEGAL DESCRIPTION AND THIS SURVEY ARE BASED UPON STATUTORY WARRANTY DEED, AFN 20000915001173.
LEGEND
SANITARY SEWER MANHOLE
UNDERGROUND SEWER MAIN
STORM DRAIN MANHOLE
STORM DRAIN CATCH BASIN
UNDERGROUND STORM MAIN
EX. CULVERT
FIRE HYDRANT
WATER METER
WATER VALVE
GAS METER
GAS VALVE
POWER METER
UTILITY POLE ANCHOR
UTILITY POLE
DROP LINE AND TRANSFORMER
POWER POLE WITH DROP
POWER POLE WITH DROP&LIGHT
OVERHEAD POWER
EXISTING SIGN
TELEPHONE RISER
MAIL BOX
GATE POLE
CHAIN LINK FENCE (CLF)
WOOD FENCE (WDF)
WIRE FENCE (WF)
CONCRETE RETAINING WALL
ROCKERY
PAVEMENT
GRAVEL
CONCRETE
SINGLE FAMILY RESIDENTIAL
CONIFEROUS TREE
DECIDUOUS TREE
SHRUBS
FIR TREE
CEDAR TREE
PINE
MAPLE TREE
WALNUT
ALDER
MEDRONA
STAMP
AREA OF SLOPE 40%+-
76th AVE NE
N.E. 129TH ST.
458.33'
N02°01'04"E
N88°10'14"W 135.00'
458.33'
N 02°01'04" E
135.00'
N88°10'14"W
GARAGE
S.F.R.
CARPORT
SHED 1.8'R 40'T ±50 FT.
FOUND 1" IRON PIPE 1.23' S, 1.12' W
DATUM
NAVD88
BENCHMARK
KING COUNTY BENCHMARK No. 237
BRASS PLAG IN CONC AT X-ING OF 72ND AVE NE AND NE 134TH ST
ELEV. = 448.326
NOTES:
1. CONTROLLING BOUNDARY DATA WAS OBTAINED BY ACTUAL FIELD MEASUREMENTS. ANGULAR AND LINEAR RELATIONSHIPS OF FIELD TRAVERSE WERE DETERMINED WITH A FIVE SECOND TOTAL STATION SUPPLEMENTED WITH DATA COLLECTOR AND STEEL TAPE.
2. THE SITE AND ALL CENTERLINE CONTROL MONUMENTS SHOWN ON THIS RECORD OF SURVEY WERE VISITED IN JUNE 2015.
3. THIS SURVEY ACCURACY MEETS OR EXCEEDS PRECISION REQUIREMENTS AS SET FORTH IN W.A.C. 332-130-090.
4. THIS SURVEY WAS COMPLETE WITHOUT BENEFIT OF A CURRENT TITLE REPORT. EASEMENT AND OTHER ENCUMBRANCES OF RECORD MAY EXIST ON THIS PROPERTY THAT ARE NOT NECESSARY SHOWN HEREON.
5. ALL STRUCTURES (BUILDINGS) TIES AND FENCES TIES SHOWN HEREON ARE APPROXIMATE AND CAN NOT BE USED TO ESTABLISH PROPERTY LINES.
7. EXISTING, POSSESSION, I.E., FENCES, SHEDS, DRIVEWAY, ETC MAY HAVE PRIOR RIGHTS. DO NOT REMOVE THEM WITHOUT LEGAL ADVICE.
8. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED ON MAGNETIC MEDIA THROUGH AN ELECTRIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST.
9. UTILITIES OTHER THAN THOSE SHOWN MAY EXIST ON THIS SITE. ONLY THOSE UTILITIES WITH EVIDENCE OF THEIR INSTALLATION VISIBLE AT THE GROUND SURFACE ARE SHOWN HEREON. UNDERGROUND UTILITIES SHOWN HEREON MAY HAVE BEEN TAKEN FROM THE PUBLIC RECORDS AND ARE APPROXIMATE ONLY. GEODETIC SURVEYING SERVICES ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF PUBLIC RECORDS.
LEGEND:
REBAR AND CAP SET "PLS 39570"
REFERENCES:
1. KING COUNTY ASSESSORS MAP OF NW 25-26-4.
2. PLAT OF LAKE PARK TO THE CITY OF SEATTLE VOL. 11 PG. 67.
3. RECORD OF SURVEY REC. No. 20100405900009
4. RECORD OF SURVEY REC. No. 20070424900013
5. RECORD OF SURVEY REC. No. 19790909069003
6. STATUTORY WARRANTY DEED, AFN 20000915001173
RICHARD VANNETTA
STATE OF WASHINGTON
REGISTERED LAND SURVEYOR
SURVEYING SERVICE
GEODETIC
GEODETIC
SURVEYING SERVICES
P.O. BOX 133
MUKILTEO, WA
98275-0133
PHONE: (425) 299-1739
7435 NE 129TH STREET LLC
7435 NE 129TH ST
KIRKLAND, WA 98034
CITY OF KIRKLAND
TOPOGRAPHICAL AND
BOUNDARY SURVEY
DATE 5/12/19
SCALE 1"=20'
DWG 515KLD1
CRD 515KLD1
DRAWN BY R.
APPROVED RV
SHEET 1 of 1

City of Kirkland GIS



Legend

- Contours 10 Feet
- Contours 2 Feet
- Streams
  - Open
  - Pipe
- Landslide
  - Deposit Areas
  - Head Scarps
  - High Susceptibility
  - Moderate Susceptibility
- Wetlands
- Liquefaction Potential
  - High
  - Medium or Mixed
- City Limits
- Grid
- QQ Grid
- Cross Kirkland Corridor
- Regional Rail Corridor
- Streets
- Parcels
- Place Names
- Buildings
- Lakes
- Parks
- Schools

1: 1,325

Notes

0.0 0 0.02 0.0 Miles

NAD_1983_StatePlane_Washington_North_FIPS_4601_Feet

AMERICAN FOREST
MANAGEMENT

7435 NE 129th Street
Kirkland, WA
Arborist Report

January 12th, 2018

Updated 5/9/18

11415 NE 128th St., Suite 110, Kirkland, WA 98034 | Phone: 425.820.3420 | Fax: 425.820.3437
americanforestmanagement.com

Table of Contents

Appendix

Site/Tree Photos – pages 8 - 12
Tree Summary Tables - attached
Tree Conditions Maps - attached
Tree Plan Maps - attached

1. Introduction

American Forest Management was contacted by Medici Architects and was asked to compile an 'Arborist Report' for a parcel located within the City of Kirkland.

The proposed development project encompasses the property at 7435 NE 129th Street. Our assignment is to prepare a written report on present tree conditions, which is to be filed with the preliminary permit application.

This report encompasses all of the criteria set forth under the City of Kirkland's tree regulations (Chapter 95 of the Kirkland Zoning Code). The required minimum tree density for the parcel (61,855 sq. ft.) is 43 tree credits. This property is within the Holmes Point Overlay.

Date of Field Examination: .....December 5th, 2017

2. Description

103 significant trees were located and assessed on the property. The subject trees are comprised of a primarily native species. On the south portion of the lot there is a steep slope. Trees in this area were assessed but were assumed to be in a critical area and cannot be removed or counted towards the required tree credits. In addition, five trees in the NE 129th St right-of-way were included in this assessment.

Subject trees have been identified with a numbered aluminum tag attached to the lower trunk of the tree. Field tree tag numbers correspond with attached Tree Condition Summary Table and attached copy of the site survey. The tree summary table provides descriptive data for all assessed trees, including drip-line measurements.

3. Methodology

Each tree in this report was visited. Tree diameters were measured by tape. The tree heights were measured using a Spiegel Relaskop. Each tree was visually examined for defects and vigor. The tree assessment procedure involves the examination of many factors:

- The crown of the tree is examined for current vigor. This is comprised of inspecting the crown (foliage, buds and branches) for color, density, form, and annual shoot growth, limb dieback and disease. The percentage of live crown is estimated for coniferous species only and scored appropriately.

- The bole or main stem of the tree is inspected for decay, which includes cavities, wounds, fruiting bodies of decay (conks or mushrooms), seams, insects, bleeding, callus development, broken or dead tops, structural defects and unnatural leans. Structural defects include crooks, forks with V-shaped crotches, multiple attachments, and excessive sweep.

- The root collar and roots are inspected for the presence of decay, insects and/or damage, as well as if they have been injured, undermined or exposed, or original grade has been altered.

Based on these factors a determination of viability is made. Trees considered 'non-viable' are trees that are in poor condition due to disease, extensive decay and/or cumulative structural defects, which exacerbate failure potential. A 'viable' tree is a tree found to be in good health, in a sound condition with minimal defects and is suitable for its location. Also, it will be wind firm if isolated or left as part of a grouping or grove of trees.

The four condition categories are described below:

Excellent – free of structural defects, no disease or pest problems, no root issues, excellent structure/form with uniform crown or canopy, foliage of normal color and density, above average vigor, it will be wind firm if isolated, suitable for its location

Good – free of significant structural defects, no disease concerns, minor pest issues, no significant root issues, good structure/form with uniform crown or canopy, foliage of normal color and density, average or normal vigor, will be wind firm if isolated or left as part of a grouping or grove of trees, suitable for its location

Fair – minor to moderate structural defects not expected to contribute to a failure in the near future, no disease concerns, moderate pest issues, no significant root issues, asymmetric or unbalanced crown or canopy, average or normal vigor, foliage of normal color, moderate foliage density, will be wind firm if left as part of a grouping or grove of trees, cannot be isolated, suitable for its location

Poor – major structural defects expected to cause fail in the near future, disease or significant pest concerns, decline due to old age, significant root issues, asymmetric or unbalanced crown or canopy, sparse or abnormally small foliage, poor vigor, and/or not suitable for its location

The attached Tree Summary Table provides specific information on tree sizes and drip-line measurements.

4. Observations

The parcel is comprised primarily of native tree species. Dominant species include Douglas-fir, western red cedar and big leaf maple. General species observations are described below. For information on specific trees, see the attached tree table.

Western red cedar

The Western red cedars range in age and condition. There are several dead Western red cedar trees on the subject property. Most have developed good trunk taper. Most are displaying healthy foliage of normal color and density. Some have forked trunks with poor attachments and included bark at the point of attachment. Conditions and viability vary.

Douglas fir

Age and condition of the Douglas fir varied. In the northwest corner of the property, there are several standing dead Douglas fir trees. There appears to be a root rot infestation in this area. Several fir trees have been removed from the property in the past, evidenced by numerous cut, rotten stumps. The most common defect was trees with tops broken off. The

majority of the Douglas fir trees have foliage of normal color and density. Conditions and viability vary.

Big leaf maple
The big leaf maple trees range in age and condition. Most have forked trunks. Some of the mature big leaf maple trees have lost co-dominant trunks in the past. Lower trunk wounds were common. Many have dead branches in the crown. Conditions and viability vary.

Pacific madrone
There are Pacific madrones scattered around the property. Most have strong leans which is characteristic of the species. All three are in fair condition and are viable.

Scots pine
There are some Scots pines planted in Lot 4 and 5. On the south slope of Lot 5 there are several Scots pines. Most have ivy growing up the trunk and were topped repeatedly in the past. Conditions and viability vary.

Native Vegetation Areas
Vegetation on the parcel is primarily English ivy and non-native species. There are some small patches of native vegetation such as salmonberry, sword fern and Indian plum scattered around the property. There are no areas of significant native understory vegetation that would qualify as natural areas.

5. Discussion

The extent of drip-lines (farthest reaching branches) for the subject trees can be found on the tree summary table at the back of this report. These have also been delineated on a copy of the site plan for trees proposed for retention. The information plotted on the attached site plan may need to be transferred to a final tree retention/protection plan to meet City submittal requirements. The trees that are to be removed shall be shown "X'd" out on the final plan.

The Limit of Disturbance (LOD) measurements can also be found on the tree summary table. These have been delineated on a copy of the site plan for parcel trees proposed for retention and neighboring trees. The LOD measurements are based on species, age, condition, drip-line, prior improvements, proposed impacts and the anticipated cumulative impacts to the entire root zone.

Tree protection fencing shall be erected around retained trees prior to the entry of any heavy equipment onto the site. Any excavation work within the drip-lines of retained trees shall be overseen by the project arborist. Cut stumps of trees within the PNA boundary shall be left intact to preserve soil integrity and prevent erosion at the PNA west boundary.

ROW trees #1, #4 and #5 will require removal to facilitate access to the site. Trees #4 and #5 are near previously failed, root diseased trees. Tree #4 has a very sparse crown and infection is suspected. Tree #5 is also likely infected due to its close proximity to the diseased area. These do not warrant retention. ROW trees #7 and #8 will also require removal for required sidewalk improvements.

There is a 10' utility easement adjacent to the PNA. The civil plan shows the utility cutting across the northeast portion of the property adjacent to Tree #9. In order to save Tree #9, the utility should come down 129th Street and tie in at a right angle to the utility easement, avoiding the root zone. The utility trench shall be shifted to the west side of the easement adjacent to save trees #23, #29 and #40 and #62 to avoid the outer limits of disturbance. The project arborist will be onsite to oversee work adjacent to save trees and provide any necessary root tunneling (hand-digging) or root pruning services.

There is English ivy covering the trunks of many of the trees. To maintain these trees in a viable condition, the ivy needs to be cut and removed from the trees.

The Holmes Point Overlay requires that 25% of undisturbed/native vegetation remain on the property as a Protected Natural Area (PNA). English ivy dominates the understory for most of the property. New protected natural areas will be developed on the east side of the lots. All viable trees in these areas where preservation is feasible will be retained. The English ivy will be removed and replaced with native vegetation. The minimum vegetation conditions in the PNA are that shrubs are predominantly 36" high, covering at least 60% of the PNA and living groundcovers cover at least 60% of the PNA. Planting specifications can be found in Kirkland Zoning Code.

There are no neighboring trees on the west property lines with potential for impact from proposed development. The PNA buffer will sufficiently protect nearby neighboring trees to the east. Neighboring and PNA retained trees are expected to remain wind firm once the lots are cleared. The removal of significant trees from the lots or the ROW of 129th Street are not expected to have adverse impacts on trees to remain at the site.

6. Tree Density

Lot 1 Tree Density Calculation

Lot Size – +/- 8,720 sq.ft.
8,720 X 0.75 / 43,560 x 30 = 4.5

Chapter 70 Holmes Point Overlay Zone 70.15.4.A.1 – 150 tree credits per acre within PNA
25% Protect Natural Area Tree Retention Calculation
8,720 x 0.25 = 2,180 sq.ft.
2,180 / 43,560 x 150 = 7.5 tree credits

Lot 1 Density required = 12 credits (7.5 required to be located in PNA)
Tree Credits to be Retained = 24
Supplemental Trees Required = 0

Lot 2 Tree Density Calculation

Lot Size – +/- 8,724 sq.ft.
8,724 X 0.75 / 43,560 x 30 = 4.5

Chapter 70 Holmes Point Overlay Zone 70.15.4.A.1 – 150 tree credits per acre within PNA
25% Protect Natural Area Tree Retention Calculation
8,724 x 0.25 = 2,181 sq.ft.
2,181 / 43,560 x 150 = 7.5 tree credits

Lot 2 Density required = 12 credits (7.5 required to be located in PNA)
Tree Credits to be Retained = 8
Supplemental Trees Required = 4

Lot 3 Tree Density Calculation

Lot Size – +/- 8,835 sq.ft.
8,835 X 0.75 / 43,560 x 30 = 4.5

Chapter 70 Holmes Point Overlay Zone 70.15.4.A.1 – 150 tree credits per acre within PNA
25% Protect Natural Area Tree Retention Calculation
8,835 x 0.25 = 2,208 sq.ft.
2,208 / 43,560 x 150 = 7.5 tree credits

Lot 3 Density required = 12 credits (7.5 required to be located in PNA)
Tree Credits to be Retained = 17
Supplemental Trees Required = 0

Lot 4 Tree Density Calculation

Lot Size – +/- 8,728 sq.ft.
8,728 X 0.75 / 43,560 x 30 = 4.5

Chapter 70 Holmes Point Overlay Zone 70.15.4.A.1 – 150 tree credits per acre within PNA
25% Protect Natural Area Tree Retention Calculation
8,728 x 0.25 = 2,182 sq.ft.
2,182 / 43,560 x 150 = 7.5 tree credits

Lot 4 Density required = 12 credits (7.5 required to be located in PNA)
Tree Credits to be Retained = 14
Supplemental Trees Required = 0

Lot 5 Tree Density Calculation
Lot Size – +/- 18,756 sq.ft.
18,756 X 0.75 / 43,560 x 30 = 9.7

Chapter 70 Holmes Point Overlay Zone 70.15.4.A.1 – 150 tree credits per acre within PNA
25% Protect Natural Area Tree Retention Calculation
18,756 x 0.25 = 4,689 sq.ft.
4,689 / 43,560 x 150 = 16.1 tree credits

Density required = 26 credits (16 required to be located in PNA)
Tree Credits to be Retained = 165
Supplemental Trees Required = 0

7. Tree Replacement

Lot 3 is short on tree credits and will require four supplemental trees. Replacement with a minimum 6' height Western red cedar is recommended.

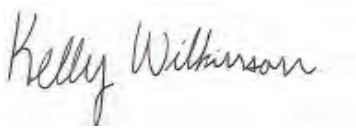
Consult with your landscape architect to determine if vegetation deficiencies exist within the PNA, per code 70.15 Standards (4) (b). Supplemental native shrubs and ground covers may be necessary to meet the standards.

There is no warranty suggested for any of the trees subject to this report. Weather, latent tree conditions, and future man-caused activities could cause physiologic changes and deteriorating tree condition. Over time, deteriorating tree conditions may appear and there may be conditions, which are not now visible which, could cause tree failure. This report or the verbal comments made at the site in no way warrant the structural stability or long term condition of any tree, but represent my opinion based on the observations made.

Nearly all trees in any condition standing within reach of improvements or human use areas represent hazards that could lead to damage or injury.

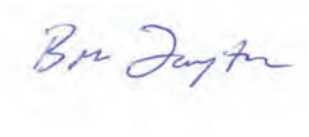
Please call if you have any questions or if we can be of further assistance.

Sincerely,



Kelly Wilkinson
ISA Certified Arborist #PN-7673A
ISA Tree Risk Assessment Qualified

Updated on May 9, 2018 by:



Bob Layton
ISA Certified Arborist #PN-2714A
ISA Tree Risk Assessment Qualified

Photos

Tree #18 – Western red cedar
To the left of this tree is a dead Douglas fir tree, possibly infected with root rot

Tree #36 – basal wound on lower trunk of a big leaf maple

Tree #37 – big leaf maple, a co-dominant stem broke off in the past

Tree #47 – large wound extending multiple feet on the lower trunk of a young big leaf maple

Tree #51 – mature big leaf maple, topped in the past, very small live crown, non-viable

Dead Western red cedar trees on Lot 2

Tree #70 – big leaf maple with severe decay between the attachment of the two co-dominant trunks, non-viable tree

Slope on Lot 5 – Douglas fir trees on the left, Scots pines on the right

Tree #72 and #70 – big leaf maples

Tree Summary Table

For: 7435 NE 129th Short Plat
City of Kirkland

American Forest Management, Inc

Date: 1/5/2018
Inspector: Wilkinson

Tree/ Tag #	Species	Native/ Planted/ Volunteer	DBH (inches)	Height (feet)	Tree Credit	Drip-Line / Limits of Disturbance (feet)				Condition	Viability	Comments	Proposal
						N	S	E	W				
9	Western red cedar	native	32	108	11	8/10	14/16	8/12	7/16	good	viable		**retain**
10	Douglas fir	native	35	115		9/12	10/12	7/12	13/12	good	viable	Ivy	remove
11	big leaf maple	native	11	58		8/6	5/6	8/6	0/5	fair	viable	Ivy	remove
12	big leaf maple	native	8	62		12	3	8	5	fair	viable	Ivy	remove
13	Douglas fir	native	25	140		9	7	7	6	good	viable		remove
14	big leaf maple	native	10	50		0	13	16	2	fair	viable	Ivy, asymmetrical crown	remove
15	big leaf maple	native	48	146		14	9	18	10	fair	viable	Dense ivy	remove
16	big leaf maple	native	18, 9	93		18	9	6	16	fair	viable	Ivy	remove
17	big leaf maple	native	19, 25 (31)	142		12/15	14/15	8/11	25/11	good	viable	Forks at base, soil piled near base	remove
18	Western red cedar	native	22	94		10	12	12	11	good	viable		remove
19	Western red cedar	native	18	75		13	12	12	15	good	viable		remove
20	big leaf maple	native	33	105		15	19	15	3	fair	viable	Large ivy stem growing up trunk,	remove
21	Western red cedar	native	19	90		8	9	9	7	good	viable		remove
22	Western red cedar	native	29	105		7	10	16	6	good	viable		remove
23	Douglas fir	native	34	135	13	16/16	14/16	14/NA	12/14	fair	viable	old broken top, appears sound	**retain**
24	Western red cedar	native	29	84		10/14	12/14	12/NA	8/12	good	viable		remove
25	Western red cedar	native	17	70		8/12	8/8	6/NA	10/12	good	viable		remove
26	big leaf maple	native	14	80		8/10	16/10	12/10	4/10	fair	viable	crooked top, poor structure	remove
27	Western red cedar	native	29	72		10/12	14/14	12/NA	14/14	good	viable		remove
28	Western red cedar	native	16	52		10/10	12/12	8/NA	10/10	good	viable		remove
29	Western red cedar	native	16	48	4	12/12	14/12	12/NA	6/10	good	viable		**retain**
30	Douglas fir	native	26	110		12/14	14/16	16/NA	12/14	good	viable		remove
31	big leaf maple	native	14	72		10/10	18/12	12/NA	8/10	fair	viable	leans south, some basal decay	remove
32	big leaf maple	native	19	70		14/14	16/14	12/NA	16/14	good	viable	good form	remove
33	Western red cedar	native	9	55		7/6	12/6	10/6	10/6	fair	viable	J trunk	remove
34	Western red cedar	native	14	57		8/7	8/7	8/7	7/7	good	viable		remove
35	Western red cedar	native	14	54		6	12	6	13	fair	viable	Forked top	remove
36	big leaf maple	native	21, 18, 23	110		20	18	18	13	fair	viable	Mature , lower trunk wounds	remove
37	big leaf maple	native	41	120		14	20	25	31	fair	viable	Codom broke off	remove
39	Western red cedar	native	13	38		8/10	10/10	10/NA	8/8	good	viable		remove
40	Western red cedar	native	17	46	4	10/10	12/12	10/NA	8/10	fair	viable	basal decay, moderate decay	**retain**
41	Western red cedar	native	8	25		12	9	12	6	good	viable		remove

Tree Summary Table

For: 7435 NE 129th Short Plat
City of Kirkland

American Forest Management, Inc

Date: 1/5/2018
Inspector: Wilkinson

Tree/ Tag #	Species	Native/ Planted/ Volunteer	DBH (inches)	Height (feet)	Tree Credit	Drip-Line / Limits of Disturbance (feet)				Condition	Viability	Comments	Proposal
						N	S	E	W				
42	big leaf maple	native	10	85		6	6	7	4	good	viable		remove
43	Western red cedar	native	13	36		8	10	12	7	good	viable		remove
44	big leaf maple	native	15	93		4	8	8	7	fair	viable	Seam in trunk on E side	remove
45	Western red cedar	native	22	73		13	10	9	9	good	viable		remove
46	Douglas fir	native	27	130		10	12	12	9	good	viable		remove
47	big leaf maple	native	8	50						poor	non-viable	Lower trunk wound, 4' tall	remove
48	Western red cedar	native	15	65		13	12	8	10	fair	viable	Trunk swell	remove
49	Western red cedar	native	30	101		7	12	10	14	good	viable		remove
50	Douglas fir	native	29	132		9	12	8	9	good	viable		remove
51	big leaf maple	native	45	51						poor	non-viable	Topped	remove
52	big leaf maple	native	29	125						good	viable		remove
53	big leaf maple	native	11	95		11	0	8	14	good	viable		remove
54	big leaf maple	native	13	97		3	4	7	4	fair	viable	Narrow crown	remove
55	Douglas fir	native	10	80		3	6	5	4	fair	viable		remove
56	big leaf maple	native	11, 10 (15)	114		5/7	13/7	12/7	0/7	fair	viable		remove
57	big leaf maple	native	12	116		0/7	15/7	2/7	4/7	fair	viable		remove
58	big leaf maple	native	11	95		7	16	4	7	good	viable		remove
59	Western red cedar	native	12	43		6	10	8	8	good	viable		remove
60	big leaf maple	native	14, 27	106		6	23	13	18	fair	viable	Large dead stems	remove
61	black cottonwood	native	42	140						poor	non-viable	Large wound on upper trunk,	remove
62	big leaf maple	native	10	86	1	5/6	6/6	5/6	3/6	fair	viable	Ivy	**retain**
63	big leaf maple	native	11	88	1	3/6	5/6	9/6	2/6	fair	viable	Ivy, forked top	**retain**
64	Douglas fir	native	34	125	13	8/16	21/16	17/16	15/16	fair	viable		**retain**
65	Douglas fir	native	42	170	17	15/17	16/17	18/17	20/11	good	viable		remove
66	Douglas fir	native	27	116		7	12	6	16	fair	viable	Top broke off	remove
67	Douglas fir	native	24	115		8	9	6	8	fair	viable	Top broke off	remove
68	Pacific madrone	native	13	58		3	6	10	0	fair	viable	Cankers	remove
69	Western hemlock	native	15	98	3	15/8	9/8	10/8	11/8	good	viable		**retain**
70	big leaf maple	native	26, 28,	125						poor	non-viable	Decay at attachment	remove
71	Austrian pine	planted	7	39		4/6	11/6	7/6	6/6	fair	viable		remove
72	big leaf maple	native	40	84		4	30	32	26	fair	viable		remove
73	Douglas fir	native	43	135		13	18	13	16	good	viable		remove
75	Atlas cedar	planted	19	44		6	18	10	16	fair	viable	Forked top	remove

Tree Summary Table

For: 7435 NE 129th Short Plat
City of Kirkland

American Forest Management, Inc

Date: 1/5/2018
Inspector: Wilkinson

Tree/ Tag #	Species	Native/ Planted/ Volunteer	DBH (inches)	Height (feet)	Tree Credit	Drip-Line / Limits of Disturbance (feet)				Condition	Viability	Comments	Proposal
						N	S	E	W				
77	Douglas fir	native	36	141		12	11	16	12	good	viable	mature, do not isolate from 78	remove
78	Douglas fir	native	32	125		3	16	10	19	good	viable	mature, do not isolate from 77	remove
79	Douglas fir	native	36	150		15/15	13/15	11/15	18/15	good	viable		remove
80	Douglas fir	native	37	155	14	5/15	22/15	26/15	5/15	good	viable		**retain**
86	Douglas fir	native	43	160	17	16/18	14/18	23/18	18/18	good	viable		**retain**
87	Scots pine	planted	12	32	2	7/6	0/6	4/6	6/6	fair	viable		**retain**
90	Scots pine	planted	8	28	1	3/6	5/6	4/6	5/6	fair	viable	Topped, ivy	**retain**
93	Magnolia	planted	8, 4, 3 (9)	16	1	12/6	7/6	19/6	11/6	fair	viable		**retain**
94	Douglas fir	native	45	150	18	8/20	15/20	15/20	12/20	good	viable	Ivy	**retain**
95	Douglas fir	native	25	140	8	9/12	16/12	12/12	13/12	fair	viable	Ivy	**retain**
96	Douglas fir	native	19	80	5	6/10	11/10	9/10	6/10	good	viable		**retain**
97	Douglas fir	native	42	160	17	16/20	22/20	13/20	18/20	good	viable	Full crown, looks great	**retain**
98	Douglas fir	native	40	165	16	18/19	20/19	16/19	12/19	good	viable		**retain**
99	big leaf maple	native	11, 12, 8, 6 (19)	78	5	4	13	8	6	fair	viable		**retain**
100	Douglas fir	native	43	160	17	12/18	25/18	19/18	16/18	good	viable	on steep slope	**retain**
101	Douglas fir	native	31	155	11	6	11	9	8	good	viable	on steep slope	**retain**
102	Douglas fir	native	28	150	10	10/14	15/14	12/14	15/14	good	viable	on steep slope	**retain**
104	big leaf maple	native	16	60						poor	non-viable	Ivy, dead stems, thin crown	remove
106	big leaf maple	native	9	80	1	3/6	6/6	11/6	9/6	fair	viable	Narrow crown	remove
110	big leaf maple	native	9	77		9	3	5	9	fair	viable		
111	big leaf maple	native	9	62		6	0	8	0	fair	viable	Ivy	remove
112	big leaf maple	native	8	42		X	X	X	X	poor	non-viable	major trunk decay	remove
113	big leaf maple	native	8	46	1	6/6	8/6	4/NA	6/6	fair	viable	poor taper	**retain**
114	Western red cedar	native	17	43		10	10	12	6	good	viable		remove
115	big leaf maple	native	8	69	1	15	7	14	11/6	good	viable		**retain**
116	Austrian pine	planted	7	55		5	6	4	6	fair	viable	Forked top	remove
117	Scots pine	planted	8	65		4	12	7	5	fair	viable		remove
118	Pacific madrone	native	7	43		0	16	0	0	fair	viable	20% LCR	remove
119	big leaf maple	native	6	29		6	18	13	2	good	viable		remove
120	Douglas fir	native	9	70		15/6	12/6	12/6	13/6	good	viable		remove
121	Douglas fir	native	34	150	13	12/14	20/14	0/14	25/14	good	viable		**retain**
122	big leaf maple	native	9	52	1	6/6	8/6	6/6	7/6	fair	viable	Seam on lower trunk	**retain**

Tree Summary Table

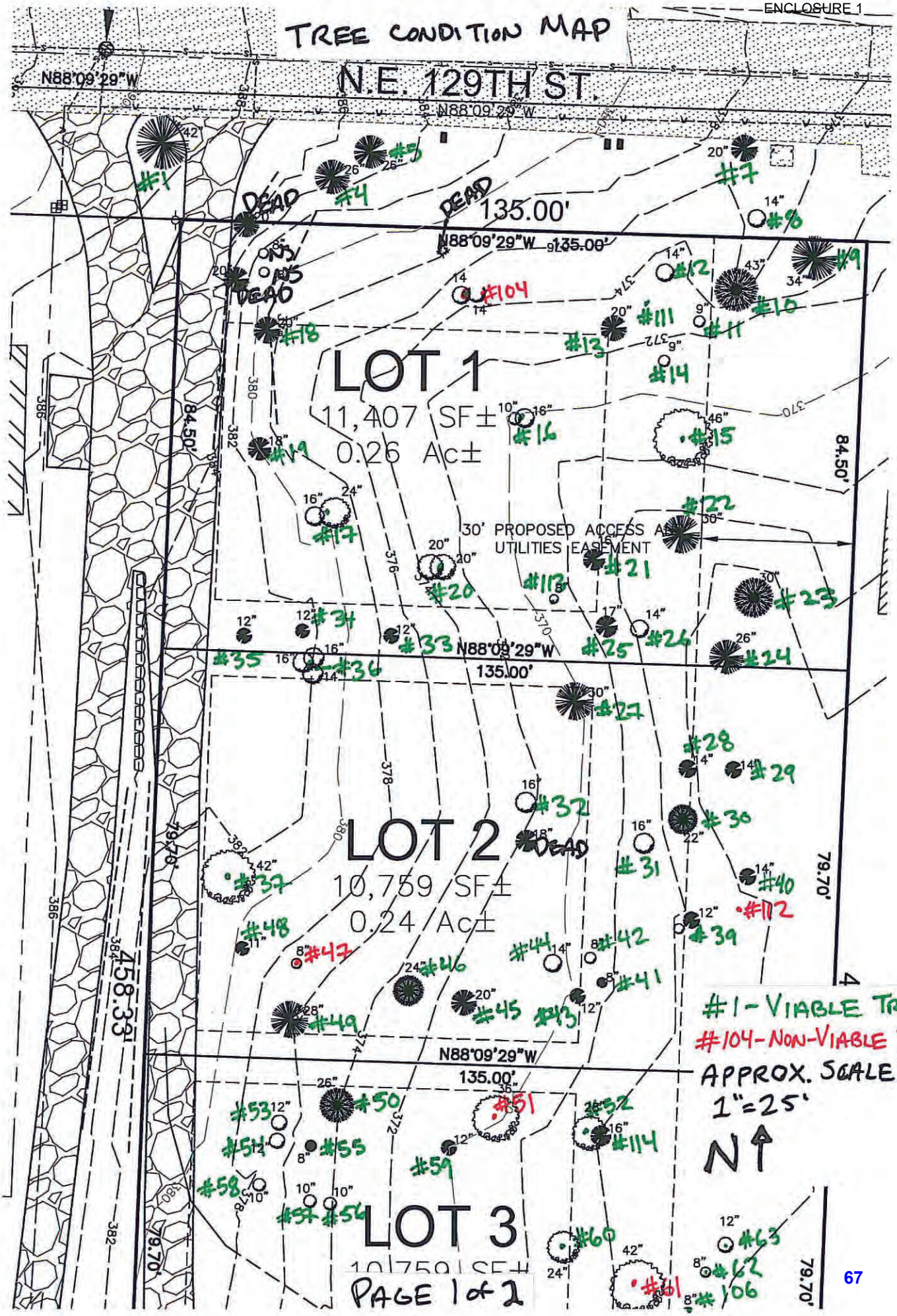
For: 7435 NE 129th Short Plat
City of Kirkland

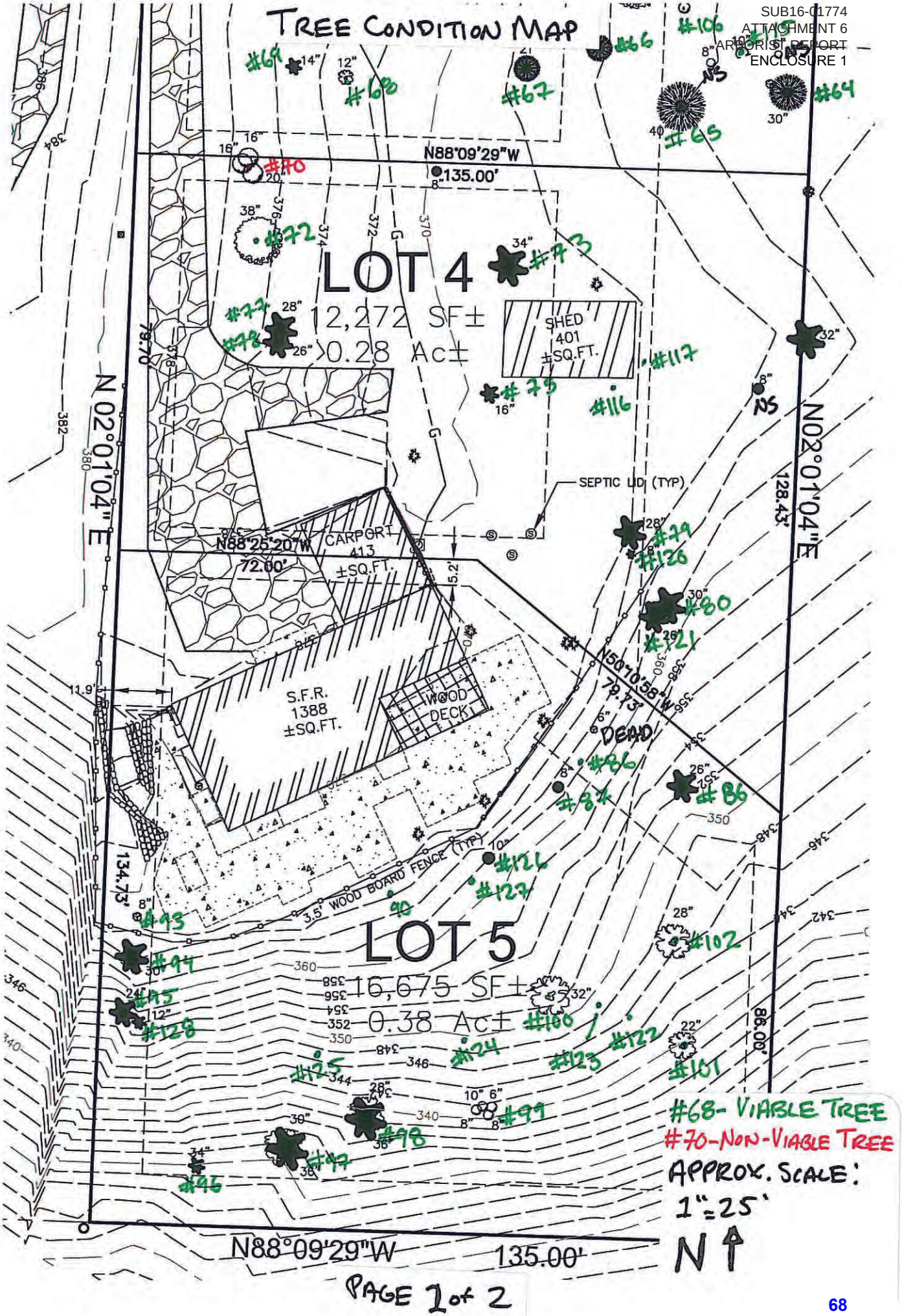
American Forest Management, Inc

Date: 1/5/2018
Inspector: Wilkinson

Tree/ Tag #	Species	Native/ Planted/ Volunteer	DBH (inches)	Height (feet)	Tree Credit	Drip-Line / Limits of Disturbance (feet)				Condition	Viability	Comments	Proposal
						N	S	E	W				
123	Pacific madrone	native	6	35	1	0/6	18	0	0	fair	viable	Leans S	**retain**
124	big leaf maple	native	9	54	1	16/6	0	4	3	good	viable		**retain**
125	big leaf maple	native	7	65	1	12/6	3	6	7	good	viable		**retain**
126	Scots pine	planted	11	32	1	16/12	9	8	11/12	fair	viable	Crooked top	**retain**
127	Scots pine	planted	5, 5 (7)	23	1	0	2	0	13	fair	viable	Topped, leans W	**retain**
128	Douglas fir	native	14	112	3	6	9	14	6	fair	viable	Topped	**retain**
						129th Ave NE Right-of-Way Trees							
1	Western red cedar	native	41	109		11/10	14/10	16/10	9/10	good	viable	in the center of the driveway	remove
4	Douglas fir	native	32	125		8/14	7/14	7/14	5/14	fair	viable	Very thin crown, near root rot pocket	remove
5	Douglas fir	native	28	121		6/13	8/13	7/13	5/13	fair	viable	Top broke off, near root rot pocket	remove
7	Douglas fir	native	22	115		10/10	7/10	10/10	6/10	good	viable	Slight lean E	remove
8	big leaf maple	native	19	93		13/8	6/8	9/8	12/8	fair	viable	Severe ivy	remove

All Trees - Drip-Line and Limits of Disturbance measurements from face of trunk
Calculated DBH: the DBH is parenthesis is the square root of the sum of the dbh for each individual stem squared (example with 3 stems: dbh = square root [(stem1)2 +(stem2)2 +(stem3)2]).


TREE CONDITION MAP
N.E. 129TH ST.
N88°09'29"W
135.00'
LOT 1
11,407 SF±
0.26 Ac±
LOT 2
10,759 SF±
0.24 Ac±
LOT 3
30' PROPOSED ACCESS AND UTILITIES EASEMENT
84.50'
79.70'
458.33'
#1 - VIABLE TREE
#104 - NON-VIABLE TREE
APPROX. SCALE:
1"=25'
N

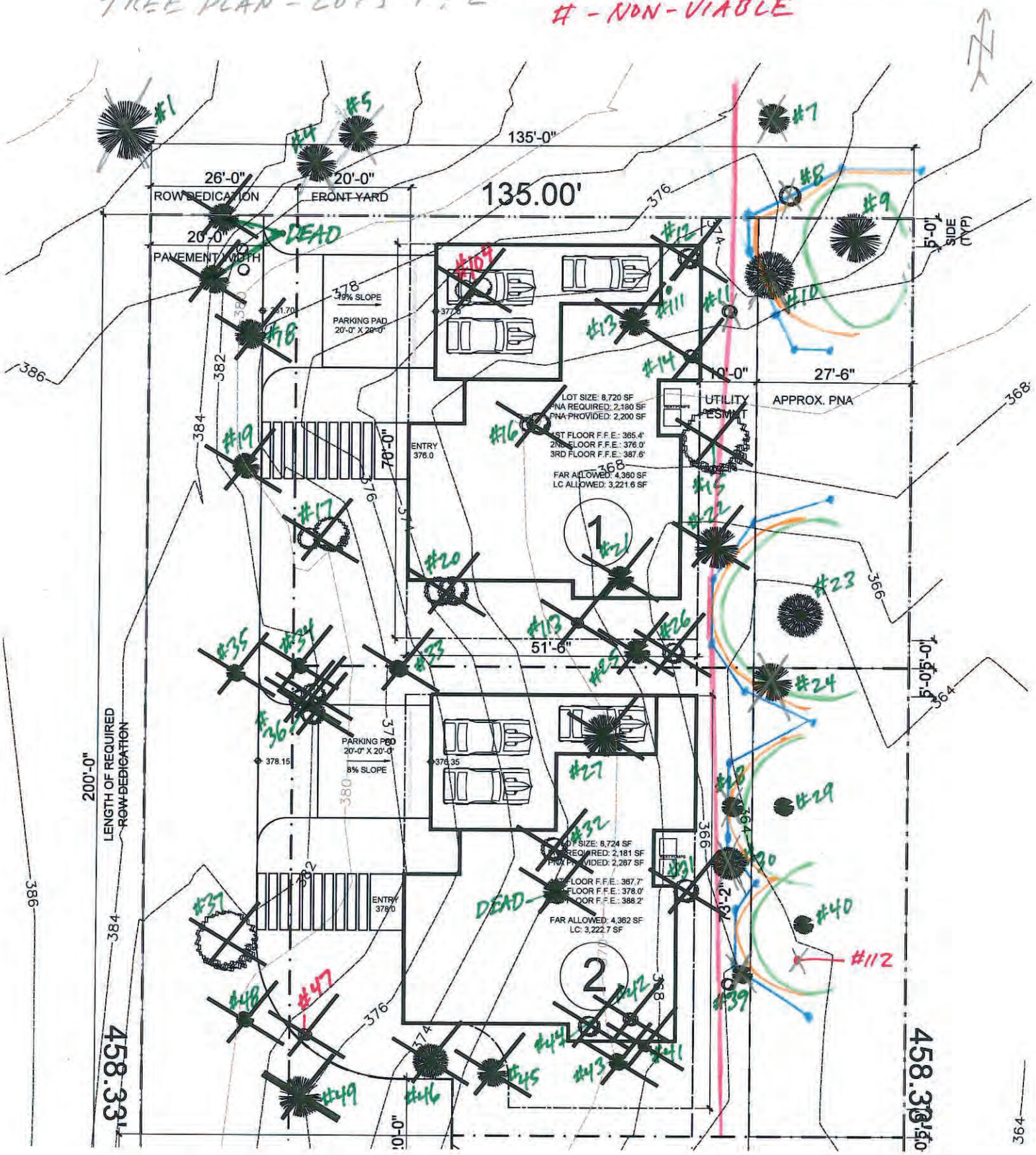

TREE CONDITION MAP
LOT 4
12,272 SF±
0.28 Ac±
SHED
401
±SQ.FT.
CARPORT
413
±SQ.FT.
S.F.R.
1388
±SQ.FT.
WOOD
DECK
SEPTIC LID (TYP)
N88°09'29"W
135.00'
N02°01'04"E
79.70'
128.43'
N88°25'20"W
72.00'
N50°10'58"W
79.73'
DEAD
3.5' WOOD BOARD FENCE (TYP)
LOT 5
16,675 SF±
0.38 Ac±
134.73'
86.00'
N88°09'29"W
135.00'
#68- VIABLE TREE
#70-NON-VIABLE TREE
APPROX. SCALE:
1"=25'
N

7435 NE 129TH ST

TREE PLAN - LOTS 1 & 2

- VIABLE SIGNIFICANT TREE

- NON-VIABLE



— - DRIP-LINE

— - LIMITS OF DISTURBANCE

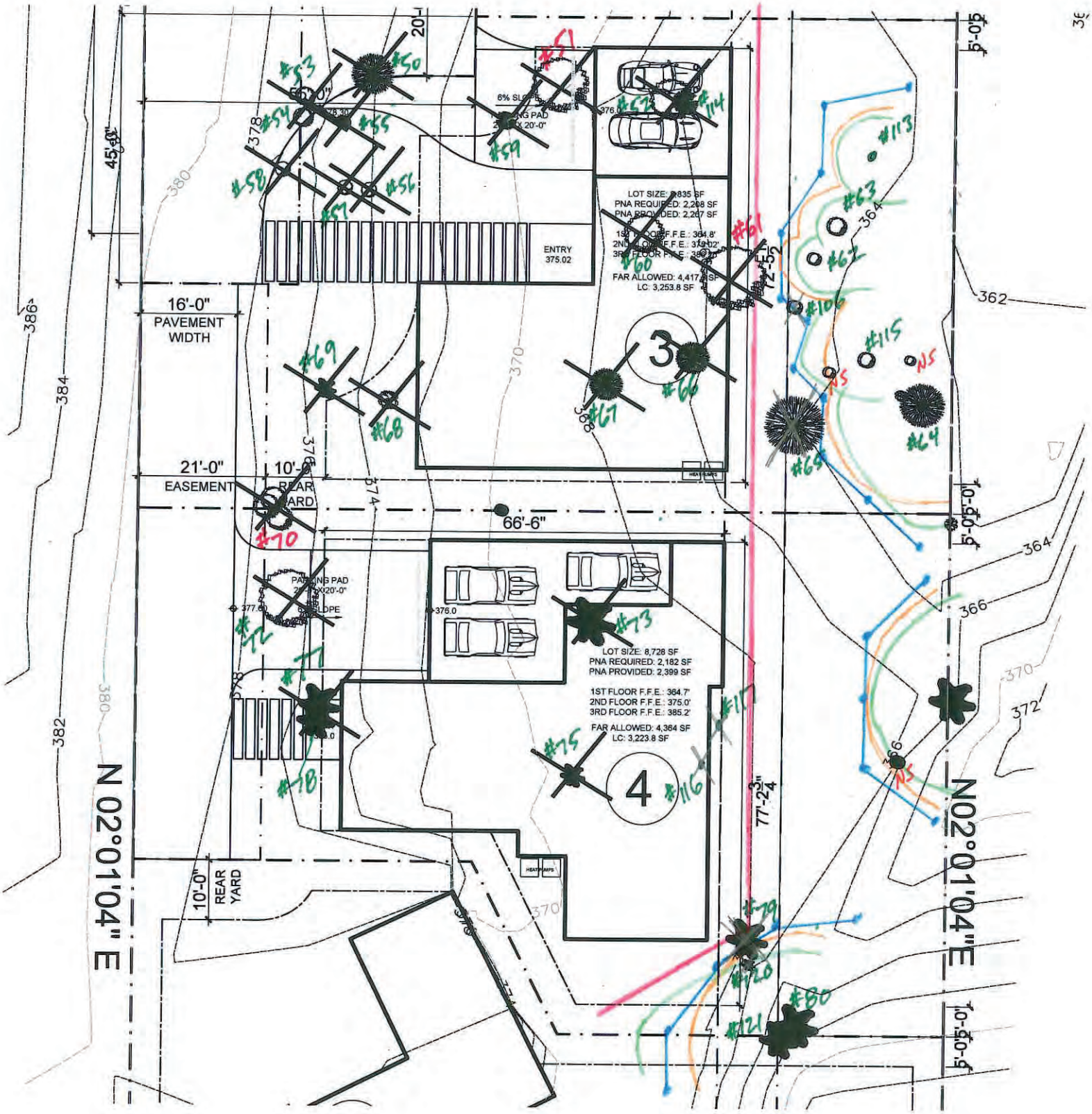
— - TREE PROTECTION FENCING

— - PROPOSED UTILITY TRENCH

APPROX. SCALE
1" = 22 1/2'

7435 NE 129TH ST
TREE PLAN - LOTS 4 & 5

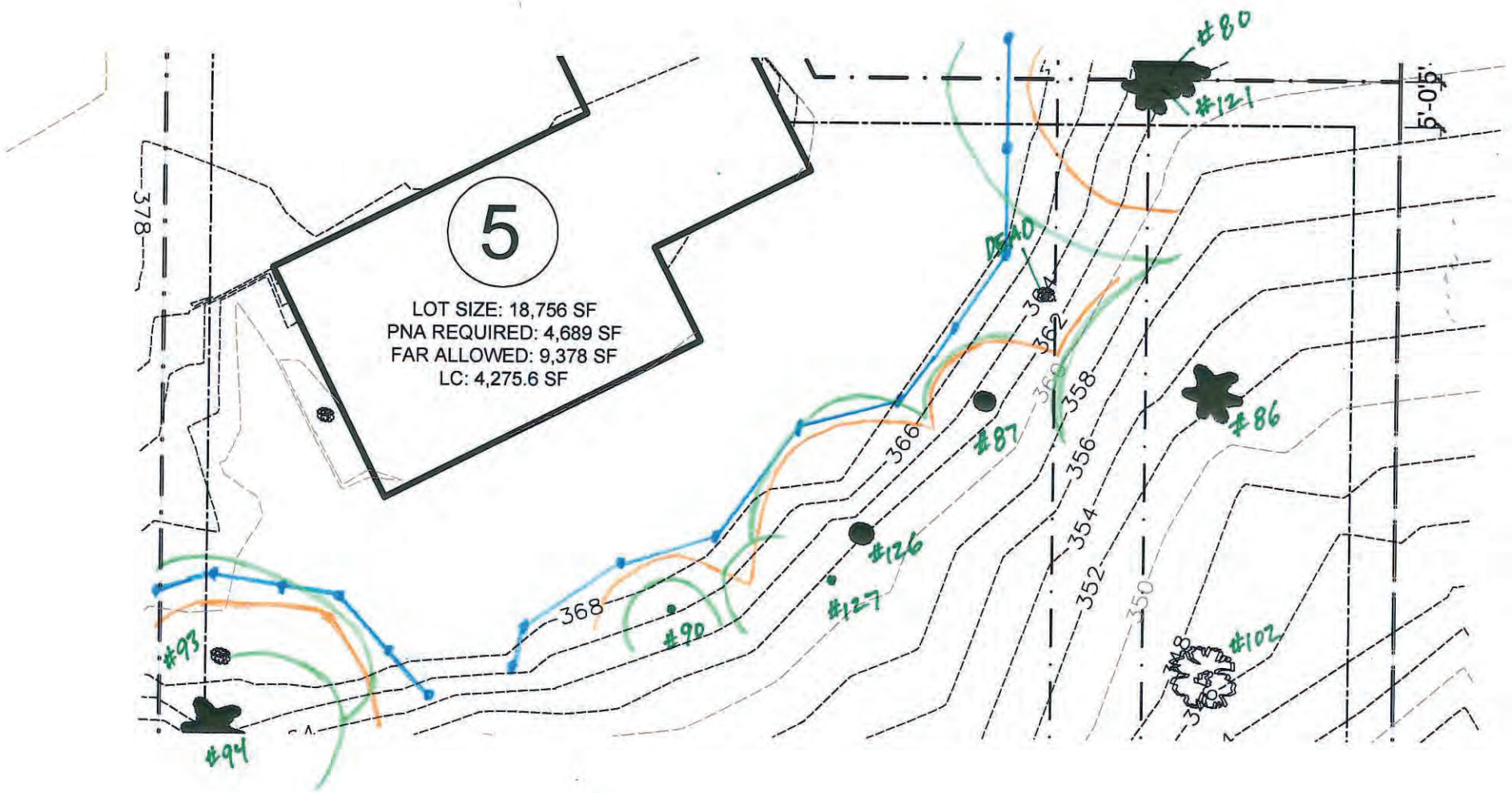
- VIABLE SIGNIFICANT
- NON-VIABLE
NS - NON-SIGNIFICANT TREE



— - DRIP-LINE
— - LIMIT OF DISTURBANCE
— - TREE PROTECTION FENCING
— - PROPOSED UTILITY TRENCH

APPROX. SCALE
1" = 22'

7435 NE 129th ST
TREE PLAN - LOT 5



— DRIP-LINE
— LIMIT OF DISTURBANCE
— TREE PROTECTION FENCING

APPROX. SCALE
1" = 17 1/2'

AMERICAN FOREST MANAGEMENT

Addendum

To: Schuyler Tutt
Company: MEDICI ARCHITECTS
From: Benjamin Mark

Date: 5/3/2019

Re: 7435 NE 129th St. Project

Greetings Mr. Tutt,

The intent of this addendum to an American Forest Management (AFM) arborist report originally dated January 12th 2018, is to respond to the updated plans regarding the viability of retained trees in the subject parcel, and provide comments regarding potential impacts of nearby construction activity.

The majority of trees to be retained on the property are found in the southernmost lot (lot 5), which will remain in the present configuration with minimal development activity. In this area, trees #80 and #121 are the closest to the proposed development. The plan shows protection fencing along the east edge of the Native Growth Protection Area (NGPA), which turns to the southwest to provide a larger root protection area for these two trees. This fencing location should provide ample protection for their critical root zones (CRZ) if it is placed a minimum of 15' from the northwest face of their trunks.

An NGPA is planned along the eastern property lines of lots #1-#4 bordering a neighboring residence. Excavation for installation of a storm drain is planned just west of the limit of clearing in this area. Eight trees are found in this NGPA which are far enough from the proposed excavation to be realistically retained in viable condition. These trees are described as follows.

Tree #64 is a 34" DBH (stem diameter measured 4.5' above grade) Douglas fir in good condition. Another Douglas fir (#65) of similar dimensions is growing 18' to the west on the edge of the NGPA. The planned trench runs just west of #65, which would not likely remain viable in this scenario. Removal of #65 is not likely to destabilize #64 as they are growing a reasonable distance from each other. #115 is a relatively small big leaf maple in this area.

Trees #62 and #63 are fair condition big leaf maples with DBH of 10" and 11" respectively. These are well away from the proposed construction activity. There is presently a very large black cottonwood in poor condition growing 12' west of them which is planned to be removed. It is unlikely that removing this tree will negatively affect them, as large limbs regularly shed from cottonwoods of this size can cause significant structural damage to smaller neighboring trees.

Two western red cedars #29 and #40 are found near the east property line. These are relatively young with DBH of 17" and were likely planted together. Their crowns are somewhat thin on the west sides and fuller on the east due to being shaded by larger trees on the subject parcel, and having good eastern exposure.

Tree #23 is a Douglas fir with a DBH of 35" and an overall height of 135' which dominates all of the nearby trees. The closest disturbance planned is removal of #22 which is 18' away. This should not impact its viability.

Tree #9 is a Western red cedar with a DBH of 32". Its crown is somewhat sparse at the top. The nearest planned disturbance is removal of ROW tree #8.

In order to keep these trees in viable condition during and after development, the following guidelines should be followed:

- Pneumatic or hydro excavation should be used to excavate at the limits of disturbance to expose roots.
- Excavation within the drip lines of the trees should monitored by a qualified arborist.
- Roots over approximately 1 to 2 inch diameter should be cleanly cut using a sharp implement to promote occlusion of the wound and proper root regeneration.
- Root cuts over 3 inches in diameter should be monitored and assessed by a qualified arborist to determine the impact to the subject trees.
- Regular irrigation during the dry summer months will encourage root growth and minimize stress.
- Annual monitoring of the subject retained trees is advised to determine future viability.

Please let me know if you have any questions or need further assistance on this project.

Sincerely,

Benjamin Mark
ISA Certified Arborist #PN-6976A
ISA Tree Risk Assessment Qualified

There is no warranty suggested for any of the trees subject to this report. Weather, latent tree conditions, and future man-caused activities could cause physiologic changes and deteriorating tree condition. Over time, deteriorating tree conditions may appear and there may be conditions, which are not now visible which, could cause tree failure. This report or the verbal comments made at the site in no way warrant the structural stability or long term condition of any tree, but represent my opinion based on the observations made.

Trees within reach of improvements or human use areas may represent hazards that could lead to damage or injury.

AMERICAN FOREST MANAGEMENT

ADDENDUM

To: Schuyler Tutt
Company: MEDICI ARCHITECTS
From: Benjamin Mark
Date: August 11, 2019
Re: 7435 NE 129th St. Project

Greetings Mr. Tutt,

The intent of this addendum to an American Forest Management (AFM) arborist report originally dated January 12th 2018, is to respond to the City of Kirkland Plan Review Comments (File #SUB16-01774) regarding retained trees on the subject parcel. Comments regarding potential impacts of planned construction activity and updated Tree Density Calculations are included as well.

The majority of trees to be retained on the property are found in the southernmost lot (lot 5), which will remain in the present configuration with minimal development activity.

A preserved natural area (PNA) is planned along the eastern portions of lots #1-#4 bordering a neighboring residence. A French drain and utility easement is planned along the west edge of the PNA. The trenches proposed to install these services are within the critical root zones (CRZ) of the following trees which are intended to be retained.

#23 is a Douglas fir *(Pseudotsuga menziesii)* with a 34 inch DBH. The proposed trench to install the French drain is 7 feet west of its trunk. This tree has a critical root zone (CRZ) which extends 14 feet to the west.

#29 is a western red cedar *(Thuja plicata)* with a 16 inch DBH. The proposed trench is 5.5 feet west of its trunk. This tree has a CRZ which extends 10 feet to the west.

#80 and #121 are Douglas fir with DBHs of 37 and 34 inches respectively. The south end of the French drain and catch basin extends nearly to the root flare of #121, and within three feet of #80. These trees would require 15 feet of undisturbed root zone to remain viable.

Relocation of the French drain would greatly improve the chances of these trees remaining viable. Other excavation methods such as pneumatic or hydro excavation within the limits of disturbance may allow for conduit installation without severing structural roots. Attached are site guidance notes which may help design a protocol for work within the CRZ of retained trees.

Trees #55, 56, 57, and 59 are located in the western portion of lot #3. The grade will be lifted significantly within their CRZs. Viable retention is unlikely according to this plan.

Trees #40, 62, and 69 show minor disturbance within their critical root zones, but would likely remain viable in in the proposed scenario.

In order to keep these trees in viable condition during and after development, the following guidelines should be followed:

1. Pneumatic or hydro excavation should be used to excavate at the limits of disturbance to expose roots.

2. Excavation within the drip lines of the trees should monitored by a qualified arborist.

3. Roots over approximately 1 to 2 inch diameter should be cleanly cut using a sharp implement to promote occlusion of the wound and proper root regeneration.

4. Root cuts over 3 inches in diameter should be monitored and assessed by a qualified arborist to determine the impact to the subject trees.

5. Regular irrigation during the dry summer months will encourage root growth and minimize stress.

6. Annual monitoring of the subject retained trees is advised to determine future viability.

Trees along the NE 129th street Right of Way.

#1 is a western red cedar with a 41 inch DBH. The proposed driveway access is three feet east of its trunk. This tree has a CRZ which extends 10 feet to the east.

#4 is a Douglas fir with a 32 inch DBH. #5 is a Douglas fir with a 28 inch DBH. The proposed sidewalk is routed directly through the trunks of these trees.

Tree #7 is located 1 foot 9 inches north of the proposed sidewalk.

The north end of the proposed French drain extends to just west of tree #8.

These trees are unlikely to be retained with the driveway, sidewalk, and French drain in this configuration.

Tree density calculations.

Total Lot Size: 61,874.2
ROW Dedication: 6,115.5
Lot Size After Dedication: 55,758.7

Lot 1 Tree Density Calculation

Net Lot Size – 8,764.7 sq.ft.
8,764.7 X 0.75 / 43,560 x 30 = 4.5

Chapter 70 Holmes Point Overlay Zone 70.15.4.A.1 – 150 tree credits per acre within PNA
25% Protect Natural Area Tree Retention Calculation
8,767 x 0.25 = 2,191.2 sq.ft.
2,191.2 / 43,560 x 150 = 7.5 tree credits

Lot 1 Density required = 12 credits (7.5 required to be located in PNA)
Tree Credits to be Retained = 24
Supplemental Trees Required = 0

Lot 2 Tree Density Calculation

Lot Size – +/- 8,708.7 sq.ft.
8,708.7 X 0.75 / 43,560 x 30 = 4.5

Chapter 70 Holmes Point Overlay Zone 70.15.4.A.1 – 150 tree credits per acre within PNA
25% Protect Natural Area Tree Retention Calculation
8,708.7 x 0.25 = 2,177.2 sq.ft.
2,177.2 / 43,560 x 150 = 7.5 tree credits

Lot 2 Density required = 12 credits (7.5 required to be located in PNA)
Tree Credits to be Retained = 8
Supplemental Trees Required = 4

Lot 3 Tree Density Calculation

Lot Size – +/- 8,820.3 sq.ft.
8,820.3 X 0.75 / 43,560 x 30 = 4.5

Chapter 70 Holmes Point Overlay Zone 70.15.4.A.1 – 150 tree credits per acre within PNA
25% Protect Natural Area Tree Retention Calculation
8,820.3 x 0.25 = 2,205 sq.ft.
2,205 / 43,560 x 150 = 7.6 tree credits

Lot 3 Density required = 12 credits (7.5 required to be located in PNA)
Tree Credits to be Retained = 19
Supplemental Trees Required = 0

Lot 4 Tree Density Calculation

Lot Size – +/- 8,740 sq.ft.
8,740 X 0.75 / 43,560 x 30 = 4.5

Chapter 70 Holmes Point Overlay Zone 70.15.4.A.1 – 150 tree credits per acre within PNA
25% Protect Natural Area Tree Retention Calculation
8,740 x 0.25 = 2,185 sq.ft.
2,185 / 43,560 x 150 = 7.5 tree credits

Lot 4 Density required = 12 credits (7.5 required to be located in PNA)
Tree Credits to be Retained = 14
Supplemental Trees Required = 0

Lot 5 Tree Density Calculation
Lot Size – +/- 18,707.7 sq.ft.
18,707.7 X 0.75 / 43,560 x 30 = 9.7

Chapter 70 Holmes Point Overlay Zone 70.15.4.A.1 – 150 tree credits per acre within PNA
25% Protect Natural Area Tree Retention Calculation
18,707.7 x 0.25 = 4,677 sq.ft.
4,677 / 43,560 x 150 = 16.1 tree credits

Density required = 26 credits (16 required to be located in PNA)
Tree Credits to be Retained = 153
Supplemental Trees Required = 0

URBAN FORESTRY COMMENTS: Please note that the resubmittal did not include sufficient information to perform a full Urban Forestry review at this time. As such, there may be additional urban forestry comments after the next submittal provides the requested information. Original comments and follow-up comments are provided below:

1. V.1 Review Comment: Revise the tree retention plan to include the following components: accurate tree locations for all trees, setbacks and limits of excavation.
   Follow-up Comment: the site plan should be amended to show the limits of excavation for all proposed improvements, including roadways, structures, utilities, etc. The revision shows areas of disturbance at the rear of houses 1-4, but does not look to include limits of any over-excavation for other improvements. It appears an assumption is being made that all trees outside of the proposed PNA's will be approved for removal, and this is not necessarily the case. There are many trees located in the front yards of the proposed homes that are candidates for retention and more information (as requested) is needed for that evaluation to be completed.
2. V.1 Review Comment: In addition to the trees proposed for retention, if the sewer line and French drains were relocated, the following trees potentially could be retained. See Figure 1 and 2 for recommended tree protection fencing for these trees based on retained trees LOD's.
   a. Lot #1: Tree #10 (in PNA), #11
   b. Lot#2: #24 (in PNA), #28, #39
   c. Lot #3: #65 (in PNA) and #106 (in PNA)
   Follow-up Comment: The additional arborist comments submitted will be reviewed in the next round of reviews when the above requested information is supplied.

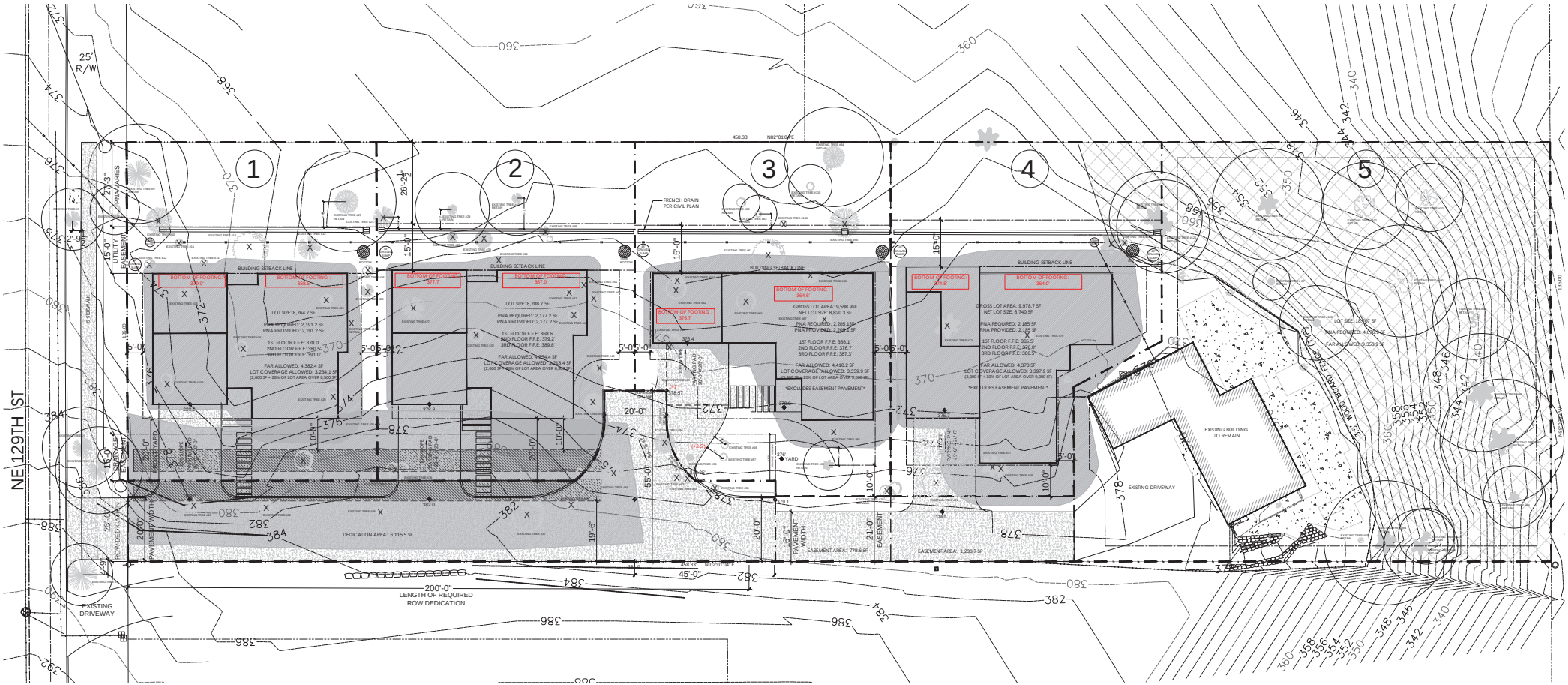
There is no warranty suggested for any of the trees subject to this report. Weather, latent tree conditions, and future man-caused activities could cause physiologic changes and deteriorating tree condition. Over time, deteriorating tree conditions may appear and there may be conditions, which are not now visible which, could cause tree failure. This report or the verbal comments made at the site in no way warrant the structural stability or long term condition of any tree, but represent my opinion based on the observations made.

Nearly all trees in any condition standing within reach of improvements or human use areas represent hazards that could lead to damage or injury.

Please call if you have any questions or if we can be of further assistance.

Sincerely,

Benjamin Mark
ISA Certified Arborist #PN-6976A
ISA Tree Risk Assessment Qualified (TRAQ)



7435 NE 129TH ST | EXCAVATION DIAGRAM

SCALE: 1" = 30'

MEDICI ARCHITECTS

08-12-19

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LOT SIZE CALCULATION		
TOTAL LOT SIZE	61,874.2	SF
ROW DEDICATION	6,115.5	SF
LOT SIZE AFTER DEDICATION	55,758.7	SF

	NET LOT SIZE	PNA(25%)	FAR (50%)	LC ALLOWED	EASEMENT	GROSS LOT SIZE	
LOT 1	8,764.7	2,191.2	4,382.4	3,234.1		8,764.7	SF
LOT 2	8,708.7	2,177.2	4,354.4	3,218.4		8,708.7	SF
LOT 3	8,820.3	2,205.1	4,410.2	3,359.9	778.60	9,598.9	SF
LOT 4	8,740.0	2,185.0	4,370.0	3,397.9	1,238.70	9,978.7	SF
LOT 5	18,707.7	4,676.9	9,353.9			18,707.7	SF
LOT SIZE						55,758.7	SF

Site Guidance Note 7: Excavation in root protection areas

SGN 7: Summary guidance for site operatives

Administration

1. Unauthorised damage to protected trees is a criminal offence and could lead to enforcement action.
2. Work under the normal site risk assessment procedures and comply with the wider site safety rules.
3. Brief operatives entering root protection areas (RPAs) by the supervising arboriculturist before work starts.

Other relevant SGNs

4. Monitor works in RPAs by the supervising arboriculturist (See SGN 1 Monitoring tree protection).
5. Design access to avoid soil compaction (See SGN 3 Ground protection).
6. Additional guidance on excavating to install services is provided in SGN 11 (Installing services in root protection areas).

Important reminders

7. Excavate using specialised compressed air tools or hand tools such as forks and spades, with a preference for air tools. Note: Do not mechanically excavate.
8. If using hand tools, avoid accidental bark damage by using a fork to loosen the soil to help locate any substantial roots.
9. Use a smaller tool such as a trowel to clear the soil away from roots without damaging the bark.

SGN 7: Summary guidance for site operatives

10. Remove soil/material from the excavation without disturbing the adjacent rooting environment.

11. Retain flexible clumps of smaller fibrous roots if they can be displaced temporarily or permanently beyond the excavation without damage.

12. Cut exposed roots to be removed cleanly 10–20cm behind the final face of the excavation.

13. Protect roots temporarily exposed, but to be retained, from direct sunlight, drying out, and extremes of temperature, by appropriate covering such as dampened hessian sacking and/or boards over the hole.

14. If necessary, individual roots and clumps of less than 2.5cm width will be cut cleanly without consulting the supervising arboriculturist.

15. Retain individual roots and clumps greater than 2.5cm in width where possible and only cut if agreed with the supervising arboriculturist.

16. When back-filling, place an inert granular material mixed with top soil or sharp sand around retained roots greater than 2.5cm in width before light compaction.

SGN 7: Explanatory notes and examples

Purpose

SGN 7 describes the principles that will be applied to authorised excavation in RPAs, based on the recommendations in BS 5837 (7.2), and the guidance in NJUG (4.1).

General principles and clarifications

Excavation can adversely affect retained trees through direct damage to roots and destructively disturbing the rooting environment. However, some trees can tolerate limited amounts of excavation if the work is carried out carefully and the disturbance is kept to a minimum. The amount of disturbance that an individual tree can tolerate depends on factors such as tree species, health, age, and the growing conditions. These are all matters that will be assessed by an experienced and qualified arboriculturist.

In practical terms, unless otherwise agreed by the supervising arboriculturist, all excavation will be carried out using hand tools, and the preferred method will be by compressed air soil displacement. Alternatively, if the compressed air option is not available, hand digging will be acceptable. Whatever the method of digging, the priority will be to remove soil without damaging the bark and wood of significant woody roots. If individual roots or clumps are discovered, those less than 2.5cm width can be cut cleanly without consultation with the supervising arboriculturist. Individual roots and clumps greater than 2.5cm width will be retained where possible and only cut after agreement by the supervising arboriculturist.

More specifically, all soil removal must be done with care to minimise the disturbance of roots beyond the immediate area of excavation. Where possible, flexible clumps of smaller fibrous roots should be retained if they can be displaced temporarily or permanently beyond the excavation without damage. If digging by hand, a fork should be used to loosen the soil and help locate any substantial roots. Once roots have been located, the trowel should be used to clear the soil away from them without damaging the bark. Exposed roots to be removed should be cut cleanly with a sharp saw or secateurs 10–20cm behind the final face of the excavation. Roots temporarily exposed, but to be retained, will be protected from direct sunlight, drying out and extremes of temperature by appropriate covering such as dampened hessian sacking.

barrell TREE CONSULTANCY

SGN 7: Explanatory notes and examples

Conventional trench installation of services damages tree roots and is **not permitted** in RPAs.

SGN 7-01

All excavation in RPAs should be with hand-held tools. Where possible, there will be a preference to use air tools because they are very effective at exposing roots and services with minimal damage.

SGN 7-02

Air tools are particularly useful where roots are very dense.

SGN 7-03

SGN 7: Explanatory notes and examples


SGN 7-04

Conventional hand tools such as spades and forks should be used where surfacing is so hard and compacted that it is not possible to use air tools.


SGN 7-05

These cobbles and the sub-surface were so compacted that hand tools had to be used to loosen and then remove the material around the roots before replacing with a more favourable rooting medium.


SGN 7-06

Individual roots and clumps greater than 2.5cm in width should be retained undamaged, unless cutting is authorised by the supervision arboriculturist.

SGN 7: Explanatory notes and examples

Once roots have been located with a fork, a smaller tool such as a trowel should be used to clear soil from around the root to avoid damaging bark and wood.

SGN 7-07

Exposed roots to be retained should be protected from light, drying out, and extremes of temperature, by covering with hessian sacking and/or boards until they can be covered back with soil.

SGN 7-08

Where roots to be retained will be exposed for longer than a few hours and there is a risk of drying out, the hessian covering should be kept damp by watering.

SGN 7-09