

Final Arborist Report

To: JMJ Team c/o Mike Dahlem
Site: Fruitland Elementary – 1515 S Fruitland, Puyallup, WA 98371
Re: Tree Inventory
Date: April 23, 2025
Project Arborist: George White,
ISA Certified Arborist PN-8908A
ISA Qualified Tree Risk Assessor
Reviewed By: Charlie Vogelheim
ISA Certified Arborist PN-9375A
ISA Qualified Tree Risk Assessor
Referenced Documents: The City of Puyallup Vegetation Management Standards, Administrative Policies and Procedures
Tree Retention Plans Fruitland ES (JMJ Team, 3.25.2025)
Preliminary Replanting Schedule (JMJ Team, No Date)
Attached: Table of Trees
Tree Site Map

Summary

Tree Solutions Inc. inventoried and assessed 96 trees on-site within the scope area (Figure 1). Trees were inventoried if they appeared to be 15 inches or in diameter or more at standard height (DSH)¹. Site trees are identified numerically and are tagged with aluminum tree tags.

Four additional trees (Trees 384, 385, 388, and 389) were initially inventoried and assessed but were later determined to be located on an adjacent property.

Fifty-three (53) of the 96 assessed trees qualify as a significant tree². Three of the off-site trees also qualify as significant.

None of the assessed trees are registered as a heritage tree³.

¹ DSH – Measured at 4.5 feet above grade.

² The city of Puyallup defines a significant tree as any healthy tree 15 inches or greater in DSH excluding alders (*Alnus spp.*) and cottonwoods (*Populus spp.*).

³ Heritage trees include trees that have been designated as such based on their size, age, or association with a community/historical event.

I reviewed Tree Retention Plans Fruitland ES (JMJ Team, 3.25.2025) for tree retention feasibility. If the proposed plans are implemented, 67 trees will require removal, including 29 significant trees.

According to a preliminary planting schedule, a total of 82 replacement trees are planned to replace the removed significant trees.

All retained trees in the scope area must be protected during construction.

Assignment and Scope of Work

This report outlines the site visit by George White, and Julian Garcia of Tree Solutions Inc, on October 29, 2024, to the above addressed property. We were asked to visit the site and assess all regulated trees on-site. I was asked to produce an Arborist Report documenting my findings and management recommendations. Mike Dahlem, of JMJ Team, requested these services for project planning purposes.

Observations & Observations

Site

This 477,853 square foot site (parcel no. 0420324002) fronts S Fruitland in Puyallup, WA and is zoned as public facility (PF). The site currently contains an elementary school, a parking lot, a playground, a large playfield, a greenbelt, and several auxiliary buildings.

According to the City of Puyallup Public Data Viewer, moderate landscape hazard areas exist sporadically throughout the site. No wetland Environmentally Critical Areas (ECAs) are indicated on the Data Viewer, however we encountered low lying areas with standing water in the greenspaces on the western edge of the site.

I noted several invasive plant species on site including Himalayan blackberry (*Rubus bifrons*), English ivy (*Hedera sp.*), English holly (*Ilex aquifolium*). English ivy was especially pervasive (Photo 2). Ivy can smother native vegetation, negatively impact tree health, and increase the likelihood of tree failure when allowed to climb into tree canopies. Invasive plants should be removed prior to development. At a minimum, ivy should be removed from tree trunks and pulled back 3 feet from the base of any tree.

Trees

Trees on-site primarily consisted of native broadleaf species including Black cottonwood (*Populus trichocarpa*), bigleaf maple (*Acer macrophyllum*), Oregon ash (*Fraxinus latifolia*), Red alder (*Alnus rubra*) and native willow hybrids (*Salix spp.*). Other tree species included Douglas-fir (*Pseudotsuga menziesii*), wild cherry (*Prunus avium*) and Norway spruce (*Picea abies*).

Memorial Tree

During our tree inventory I noted a small flowering dogwood tree near the entrance of the school that had been planted as memorial to a student (Photo 3). While this tree is not regulated it should be carefully protected during construction or be transplanted elsewhere.

Tree 377

Tree 377 is a 55-inch black cottonwood tree located near the southwest corner of the site. This tree is codominant at 8 feet above grade with a narrow union (Photo 4). The base of this tree is conspicuously swollen and may indicate internal decay. The combination of codominant stems and the potential

internal decay increases the likelihood of failure. This tree has the potential to impact the S Fruitland roadway in the event of failure. I recommend performing an advanced risk assessment of this tree using a micro-resistance drill or sonic tomography if it is retained.

I have included an aerial photograph of the site to serve as the site map and attached a table of trees that has detailed information about each tree.

Discussion—Tree Regulations

Required Tree Retention

According to Section 10 of the City of Puyallup Vegetation Management Standards, Administrative Policies, and Procedures (PVMSAPP), all significant trees must be retained, when possible, except for the following circumstances:

- When a qualified tree risk assessor determines that the tree poses a high risk to surrounding targets.
- When the trees pose a risk to, or are actively damaging, sidewalks, streets, driveways, utilities, or other infrastructure and there is no option to relocate such improvements.
- When preserved trees will significantly block solar access.
- When all appropriate measures are taken to safeguard the tree and its root system, but the tree will likely not survive the impacts of construction.

A total of 29 significant trees will be removed because they are within the footprint of proposed improvements or are unlikely to survive the adjacent construction due to required grading or other construction impacts.

Partial retention of the existing grove between the existing parking lot and S Fruitland is especially difficult because the primary tree species that comprise the grove (black cottonwood) is a poor compartmentalizer of decay and does not respond well to root pruning. Partial retention of the grove can also elevate the likelihood of tree failure by suddenly exposing grove-adapted trees to higher wind speeds and altered wind dynamics.

Trees in Environmentally Critical Areas

All trees (including alders and cottonwoods) that are located in ECAs are regulated under chapter 21.06 of the Puyallup Municipal Code (PMC). Tree removal is generally prohibited within ECAs per PMC 21.06.320 unless the tree is hazardous, poses a threat to public safety, or is posing an immanent risk of damage to private property as determined by a qualified arborist. Trees in ECAs may also be removed during development if the project qualifies for a reasonable use exception per PMC 21.06.430.

Trees removed in ECAs must be replaced at a two to one ratio with native trees within 1 year of removal in accordance with a mitigation plan. Where feasible removed trees should be reduced to wildlife snags rather than be felled completely.

Removal of invasive vegetation such as Himalayan blackberry and English ivy from ECAs is permitted under the exemption outlined in PMC 21.06.410.d.

No tree removals are proposed within the ECAs on-site.

Tree Protection Required

All retained significant trees must be protected during construction per Sections 9 and 10 of the PVMSAPP. This involves the establishment of a Critical Root Protection Zone (CRPZ) for each retained tree that must be shown on the TESC plans and on the final landscape plans. The CRPZ is defined by a circle around the protected tree with a radius of 1 foot per inch DSH.

A minimum of 50 percent of the CRPZ of a retained, significant tree, must be preserved at natural grade during construction. No cut or fill in excess of 4 inches is permitted within the inner half of CRPZ radius. No cut or fill is permitted within a radius of three times trunk DSH.

Tree protection fencing consisting of 6-foot-tall chain-link fencing must be staked into the ground at the CRPZ of each retained tree prior to the start of construction. Trees growing in a group should be fenced at the shared edges of their CRPZs. No excavation, grading, materials storage, trenching or machine/vehicle access is permitted in the CRPZ of a retained tree without arborist coordination. Work within the CRPZ of a retained tree may be permitted but will require a higher level of tree protection such as the use of alternative excavation, soil protection measures, arborist supervision, supplemental irrigation, mulching, and/or soil amendment.

Additional tree protection specifications can be found in Appendix G.

Discussion—Construction Impacts

Proposed Plans

The most recently reviewed plans (Tree Retention Plans Fruitland Elementary, JMJ Team, 2.25.2025) propose the expansion of the existing parking lot to the south and east of the existing lot as well as various improvements to the surrounding hardscape. An asphalt path along the northern edge of the site is also proposed.

Tree Removals

A total of 67 trees (including 29 significant trees) are proposed for removal. Removed trees should be felled directionally or should otherwise be pieced down to avoid damage to adjacent retained trees. Brush generated during the removals should be chipped and left on-site to be used as mulch in the CRPZs around retained trees.

All tree stumps that have a shared CRPZ with a retained tree (Trees 364, 365, 375, 376, 377, and 394) should be ground in place rather than ripped out of the ground. This avoids inadvertent damage to retained roots that are entangled with the roots of the removed tree.

Tree Protection Fencing

Tree protection fencing consistent of the PVMSAPP must be installed around all retained trees to protect their CRPZs from soil compaction and other construction impacts. I propose installing tree protection fencing in the following locations to establish five Tree Protection Zones (TPZs):

- Zone 1 (Trees 301- 305): tree protection fencing should enclose all portions of these tree's CRPZs that are not currently covered by hardscapes or are not below existing retaining walls. Fencing should extend along the top of the retaining wall adjacent to trees 301, 304, and 305 and should enclose the CRPZs of trees 302 and 303.

- Zone 2 (Trees 306-308): tree protection fencing should be installed at the edges of the existing hardscape surrounding trees 306-308.
- Zone 3 (Trees 309 and 310): Tree Protection Fencing should be installed at the shared edge of the CRPZs of trees 309 and 310. This fencing will have to be moved inwards slightly during the construction of the adjacent asphalt path but should remain in place until then. The fencing should remain at the inside edge of the path until construction is completed.
- Zone 4 (Trees 312-317): Tree protection fencing should be installed along the edge of the existing driveway and existing parking lot to enclose the forested area contained in this corner of the site.
- Zone 5 (Trees 378, 380-387, 390, 396-400): Tree protection fencing should be installed at the outside the grading limits shown in the provided plans. This fencing should tie into the site fencing installed to the west and east sides of the site.

Tree protection fencing must be installed prior to the start of site construction (including demolition) and should remain in place until the end of the project. I recommend having the project arborist verify the locations of the tree protection fencing once it has been installed.

Other Tree Protection Recommendations

Mulch

A considerable amount of woodchip mulch will be generated from the proposed tree removals. I recommend retaining this mulch on-site and distributing it throughout the TPZs. The mulch should cover as much of the CRPZs as feasible to a depth of 4 inches. Mulch should also be kept a minimum of 6 inches from tree trunks.

Irrigation

I recommend providing all retained trees, especially those that are located managed landscape areas with supplemental irrigation during the summer months. Trees should be irrigated once per week from May-September with enough water to wet the soil to a depth of 8 inches below the mulch layer. Soaker hoses will provide the most efficient irrigation as they apply water at a lower rate and reduce loss to runoff and evaporation.

Replacement Trees

I reviewed a preliminary planting schedule provided by JMJ team which proposes the installation of 82 trees to replace the 67 trees that are currently proposed for removal. Proposed tree species are a mixture of native species such as Douglas-fir (*Pseudotsuga menziesii*), vine maple (*Acer circinatum*), shore pine (*Pinus contorta*) and incense cedar (*Calocedrus decurrens*) as well as a mixture of evergreen and deciduous shade trees that are not native to the Pacific Northwest.

All of the proposed tree species are appropriate for the project site with the exception of white birch (*Betula papyrifera*). Birch trees are in wide decline throughout western Washington as the result of a bronze birch borer (*Agrilus anxius*) epidemic. Bronze birch borer is an insect pest that causes infested birch trees to die from the top down. River birch (*Betula nigra*), which is also a proposed replacement tree, has been shown to be resistant to infestation and is acceptable replacement species.

In my opinion, the proposed replacement trees will provide a resilient tree canopy once they have had a chance to establish/mature provided that they are installed correctly and are adequately maintained in the 5 years following installation. Aside from the omission of white birch from the planting schedule, my

only suggestion is to increase the representation of native species in the planting schedule to more adequately replace the native grove that will be removed from the site. Suggested species include western redcedar (*Thuja plicata* – only recommended in the wettest parts of the site), and Garry oak (*Quercus garryana*).

Recommendations

Planning Phase

- Add the CRPZs of retained trees and the proposed locations of tree protection fencing to the TESC plan.
- Account for tree protection and when soliciting project bids.
- Manage invasive vegetation on-site with a focus on the removal of English ivy from retained trees.
- Replace all proposed paper birch plantings with another tree species free from known pest issues.
- Consider increasing the representation of native tree species in the replacement fee schedule
- Obtain all necessary permits/permissions prior to the commencement of construction activities.

Construction Phase

- Install tree protection fencing around the CRPZs of retained trees at the locations specified in this report prior to the commencement of site construction.
- Have a pre-construction meeting with the project arborist to discuss tree protection and verify the locations of tree protection fencing.
- Retain and repurpose the mulch generated by the planned tree removals by distributing it throughout the TPZs on-site.
- Install temporary supplemental irrigation to support retained trees during site construction.
- Follow all tree protection requirements in the PVMSAPP and in Appendix G during construction.
- The project arborist should monitor all work conducted within the CRPZs of retained trees.

Post- Construction

- Plant all proposed replacement trees. Replacement trees should be monitored annually for 5 years following construction to guarantee planting success.

Respectfully submitted,


George White – Consulting Arborist

Appendix A Glossary

ANSI A300: Standards for Tree Care. American National Standards Institute (ANSI).

Critical Root Protection Zone: a radius of 1 foot per diameter inch from a retained tree in which construction activities are limited for the purposes of tree protection.

Diameter at Standard height (DSH): diameter of the tree trunk measured 54 inches (4.5 feet) above grade.

Dripline: an area encircling the base of a tree, the minimum extent of which is delineated by a vertical line extending from the outer limit of a tree's branch tips down to the ground. The dripline may be irregular in shape to reflect the variation in branch outer limits.

Heritage Tree: A Tree that has been designated as such based on its age, size, stature, or historic/cultural significance.

ISA: International Society of Arboriculture

Significant Tree: A healthy tree with a diameter at standard height greater than or equal to 15 inches excluding alder and cottonwood trees.

Visual Tree Assessment (VTA): method of evaluating structural defects and stability in trees by noting the pattern of growth. (Mattheck 1994)

Appendix B References

Accredited Standards Committee A300 (ASC 300). ANSI A300 (Part 1) Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning). Londonderry: Tree Care Industry Association, 2017.

Council of Tree and Landscape Appraisers, Guide for Plant Appraisal, 10th Edition Second Printing. Atlanta, GA: The International Society of Arboriculture (ISA), 2019.

Lilly, Sharon. Arborists' Certification Study Guide. Champaign, IL: The International Society of Arboriculture, 2001.

Mattheck, Claus and Helge Breloer, The Body Language of Trees.: A Handbook for Failure Analysis. London: HMSO, 1994.

Puyallup Development and Planning Services Department, Vegetation Management Standards, Administrative Policies and Procedures. Puyallup WA: The city of Puyallup, 2022.

Puyallup Municipal Code (PMC) 21.06. Critical Areas

Appendix C Scope Area

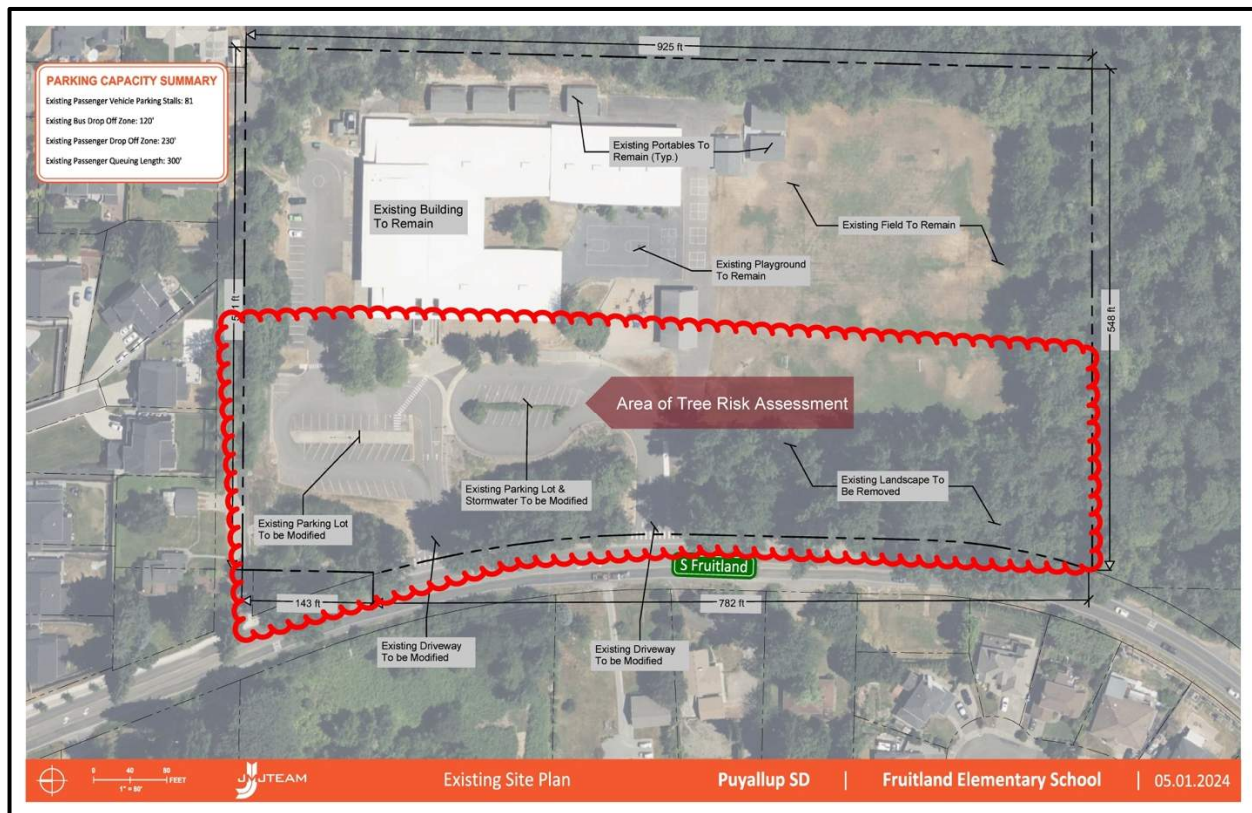


Figure 1. An aerial image of the site with the scope area outlined in red provided by JMJ Team.

Appendix D Photographs



Photo 1. Invasive English ivy is pervasive throughout the site. At a minimum, ivy that is climbing tree trunks should be severed and pulled back 3 feet from the trunk.



Photo 2. Trees on-site are primarily large, native deciduous trees including several large black cottonwood trees.



Photo 3. A small dogwood tree that was planted as a memorial to a student. This tree should be protected during construction.



Photo 4. The base of tree 377 a 55-inch black cottonwood with a narrow, codominant union and swollen base. An advanced risk assessment of this tree is recommended.

Appendix E Assumptions & Limiting Conditions

- 1 Consultant assumes that the site and its use do not violate, and is in compliance with, all applicable codes, ordinances, statutes, or regulations.
- 2 The consultant may provide a report or recommendation based on published municipal regulations. The consultant assumes that the municipal regulations published on the date of the report are current municipal regulations and assumes no obligation related to unpublished city regulation information.
- 3 Any report by the consultant and any values expressed therein represent the opinion of the consultant, and the consultant's fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event, or upon any finding to be reported.
- 4 All photographs included in this report were taken by Tree Solutions, Inc. during the documented site visit, unless otherwise noted. Sketches, drawings, and photographs (included in, and attached to, this report) are intended as visual aids and are not necessarily to scale. They should not be construed as engineering drawings, architectural reports, or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by the consultant as to the sufficiency or accuracy of the information.
- 5 Unless otherwise agreed, (1) information contained in any report by consultant covers only the items examined and reflects the condition of those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, climbing, or coring.
- 6 These findings are based on the observations and opinions of the authoring arborist, and do not provide guarantees regarding the future performance, health, vigor, structural stability, or safety of the plants described and assessed.
- 7 Measurements are subject to typical margins of error, considering the oval or asymmetrical cross-section of most trunks and canopies.
- 8 Tree Solutions did not review any reports or perform any tests related to the soil located on the subject property unless outlined in the scope of services. Tree Solutions staff are not and do not claim to be soils experts. An independent inventory and evaluation of the site's soil should be obtained by a qualified professional if an additional understanding of the site's characteristics is needed to make an informed decision.
- 9 Our assessments are made in conformity with acceptable evaluation/diagnostic reporting techniques and procedures, as recommended by the International Society of Arboriculture.

Appendix F Methods

Measuring

I measured the diameter of each tree at 48 inches above grade, diameter at standard height (DSH). If a tree had multiple stems, I measured each stem individually at standard height and determined a single-stem equivalent diameter by using the method outlined in the Guide for Plant Appraisal, 10th Edition Second Printing published by the Council of Tree and Landscape Appraisers. A tree is regulated based on this single-stem equivalent diameter value. Because this value is calculated in the office following field work, some non-significant trees may be included in our data set. These trees are included in the tree table for informational purposes only and not factored into tree totals discussed in this report.

Tagging

I tagged each tree with a circular aluminum tag at eye level. I assigned each tree a numerical identifier on our map and in our tree table, corresponding to this tree tag. I used alphabetical identifiers for trees off-site.

Evaluating

I evaluated tree health and structure utilizing visual tree assessment (VTA) methods. The basis behind VTA is the identification of symptoms, which the tree produces in reaction to a weak spot or area of mechanical stress. A tree reacts to mechanical and physiological stresses by growing more vigorously to re-enforce weak areas, while depriving less stressed parts. An understanding of the uniform stress allows the arborist to make informed judgments about the condition of a tree.

Rating

When rating tree health, I took into consideration crown indicators such as foliar density, size, color, stem and shoot extensions. When rating tree structure, I evaluated the tree for form and structural defects, including past damage and decay. Tree Solutions has adapted our ratings based on the Purdue University Extension formula values for health condition (*Purdue University Extension bulletin FNR-473-W - Tree Appraisal*). These values are a general representation used to assist arborists in assigning ratings.

Excellent - Perfect specimen with excellent form and vigor, well-balanced crown. Normal to exceeding shoot length on new growth. Leaf size and color normal. Trunk is sound and solid. Root zone undisturbed. No apparent pest problems. Long safe useful life expectancy for the species.

Good - Imperfect canopy density in few parts of the tree, up to 10% of the canopy. Normal to less than ¾ typical growth rate of shoots and minor deficiency in typical leaf development. Few pest issues or damage, and if they exist, they are controllable, or tree is reacting appropriately. Normal branch and stem development with healthy growth. Safe useful life expectancy typical for the species.

Fair - Crown decline and dieback up to 30% of the canopy. Leaf color is somewhat chlorotic/necrotic with smaller leaves and “off” coloration. Shoot extensions indicate some stunting and stressed growing conditions. Stress cone crop clearly visible. Obvious signs of pest problems contributing to lesser condition, control might be possible. Some decay areas found in main stem and branches. Below average safe useful life expectancy

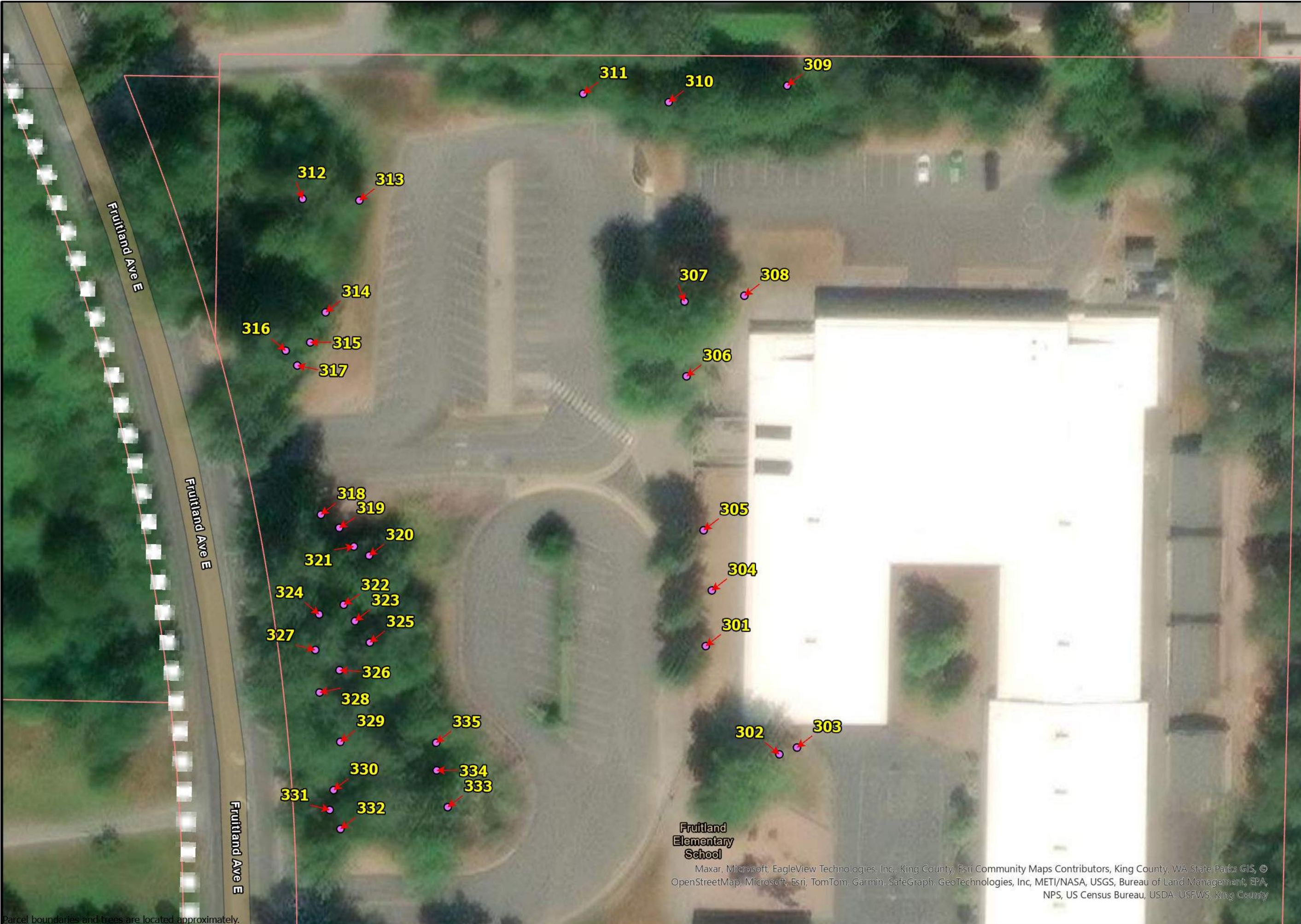
Poor - Lacking full crown, more than 50% decline and dieback, especially affecting larger branches. Stunting of shoots is obvious with little evidence of growth on smaller stems. Leaf size and color reveals overall stress in the plant. Insect or disease infestation may be severe and uncontrollable. Extensive decay or hollows in branches and trunk. Short safe useful life expectancy.

Appendix G Tree Protection Specifications

The following is a list of protection measures that must be employed before, during and after construction to ensure the long-term viability of retained trees.

1. **Project Arborist:** The project arborists shall at minimum have an International Society of Arboriculture (ISA) Certification and ISA Tree Risk Assessment Qualification.
2. **Critical Root Protection Zone (CRPZ):** The city of Puyallup requires a critical root protection zone of 1 foot for every 1-inch of DSH. The CRPZ may be reduced if approved by the project arborist, the city of Puyallup, and mitigation measures below are followed.
3. **Tree Protection Fencing:** Tree protection shall consist of 6-foot chain-link fencing installed at the edge of the CRPZ. Two-inch diameter steel fence posts shall be pounded at least 2-feet into the ground spaced no greater than 10-feet apart.
 - a. Where trees are being retained as a group the fencing shall encompass the entire area including all landscape beds or lawn areas associated with the grove.
 - b. Where work is planned within the tree protection fencing, install fencing at edge of CRPZ and move to limits of disturbance at the time that the work within the CRPZ is planned to occur. This ensures that work within the CRPZ is completed to specification.
 - c. Where trees are protected at the edge of the project boundary, construction limits fencing shall be incorporated as the boundary of tree protection fencing.
4. **Tree Protection Signage:** Tree protection signage shall be affixed to fencing every 20 feet. Signage shall be fluorescent, at least 2' x 2' in size, with 3" tall text. Signage will note: "Warning Tree Protection Zone – Do Not Enter: Entry into the tree protection area is prohibited unless authorized by the project manager." Signage shall include the contact information for the project manager and instructions for gaining access to the area.
5. **Filter / Silt Fencing:** Filter / silt fencing within the CRPZ of retained trees shall be installed in a manner that does not sever roots. Install so that filter / silt fencing sits on the ground and is weighed in place by sandbags or gravel. Do not trench to insert filter / silt fencing into the ground.
6. **Duff/Mulch:** Apply 6-inches of arborist wood chip mulch or hog fuel over bare soil within the CRPZ to prevent compaction and evaporation. Do not use composted or bark mulch products. Keep mulch 1 foot away from the base of trees and 6 inches from retained understory vegetation. Retain and protect as much of the existing duff and understory vegetation as possible. CRPZ shall be free of invasive weeds to facilitate mulch application.
7. **Soil Protection:** No parking, foot traffic, materials storage, or dumping (including excavated soils) are allowed within the CRPZ. Heavy machinery shall remain outside of the CRPZ. Access to the tree protection area will be granted under the supervision of the project arborist. If project arborist allows, heavy machinery can enter the area if soils are protected from the load. Acceptable methods of soil protection include applying 3/4-inch plywood over 4 to 6 inches of wood chip mulch or use of AlturnaMats® (or equivalent product approved by the project arborist). Retain existing paved surfaces within or at the edge of the CRPZ for as long as possible.
8. **Soil Remediation:** Soil compacted within the CRPZ of retained trees shall be remediated using pneumatic air excavation according to a specification produced by the project arborist.
9. **Canopy Protection:** Where fencing is installed at the limits of disturbance within the CRPZ, canopy management (pruning or tying back) shall be conducted to ensure that vehicular traffic does not damage canopy parts. Exhaust from machinery shall be located five feet outside the dripline of retained trees. No exhaust shall come in contact with foliage for prolonged periods of time.
10. **Monitoring:** The project arborist shall monitor all ground disturbance within the CRPZ.

11. **Excavation:** Excavation done at the edge of or within the CRPZ shall use alternative methods such as pneumatic air excavation or hand digging. If heavy machinery is used, use flat front buckets with the project arborist or laborer spotting for roots. When roots are encountered, stop excavation, and cleanly sever roots. The project arborist shall monitor all excavation done within the CRPZ.
12. **Fill:** Limit fill to 1 foot of uncompacted well-draining soil, within the CRPZ of retained trees. Fill must be kept at least 1 foot from the trunks of trees.
13. **Hardscape Removal:** Retain hardscape surfaces for as long as practical. Remove hardscape in a manner that does not require machinery to traverse newly exposed soil within the CRPZ. Where equipment must traverse the newly exposed soil, apply soil protection as described in section 7. Replace fencing at edge of CRPZ if soil exposed by hardscape removal will remain for any period of time.
14. **Root Pruning:** Limit root pruning to the extent possible. All roots shall be pruned with a sharp saw making clean cuts. Do not fracture or break roots with excavation equipment.
15. **Root Moisture:** Root cuts and exposed roots shall be immediately covered with soil, mulch, or clear polyethylene sheeting and kept moist. Water to maintain moist condition until the area is back filled. Do not allow exposed roots to dry out before replacing permanent back fill.
16. **Tree Removal:** All trees to be removed that are located within the CRPZ of retained trees shall not be ripped, pulled, or pushed over. The tree should be cut to the base and the stump either left or ground out. A flat front bucket can also be used to sever roots around all sides of the stump, or the roots can be exposed using hydro or air excavation and then cut before removing the stump.
17. **Pruning:** Pruning required for construction and safety clearance shall be done with a pruning specification provided by the project arborist in accordance with American National Standards Institute ANSI-A300 2017 Standard Practices for Pruning. Pruning shall be conducted or monitored by an arborist with an ISA Certification.
18. **Irrigation:** Retained trees with soil disturbance within the CRPZ will require supplemental water from June through September. Acceptable methods of irrigation include drip, sprinkler, or watering truck. Trees shall be watered three times per month during this time.
19. **Plan Updates:** All plan updates or field modification that result in impacts within the CRPZ or change the retained status of trees shall be reviewed by the senior project manager and project arborist prior to conducting the work.
20. **Materials:** Contractor shall have the following materials onsite and available for use during work in the CRPZ:
 - Sharp and clean bypass hand pruners
 - Sharp and clean bypass loppers
 - Sharp hand-held root saw
 - Reciprocating saw with new blades
 - Shovels
 - Trowels
 - Clear polyethylene sheeting
 - Burlap
 - Water

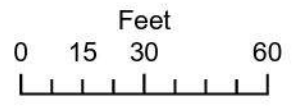


2940 Westlake Ave N #200
Seattle, WA 98109
206-528-4670

JMJ Team - Fruitland Elementary
1515 S Fruitland St,
Puyallup, WA, 98371
Parcel: 0420324002

Legend

-  Assessed Trees
-  WA State Parcels



Site Map - North

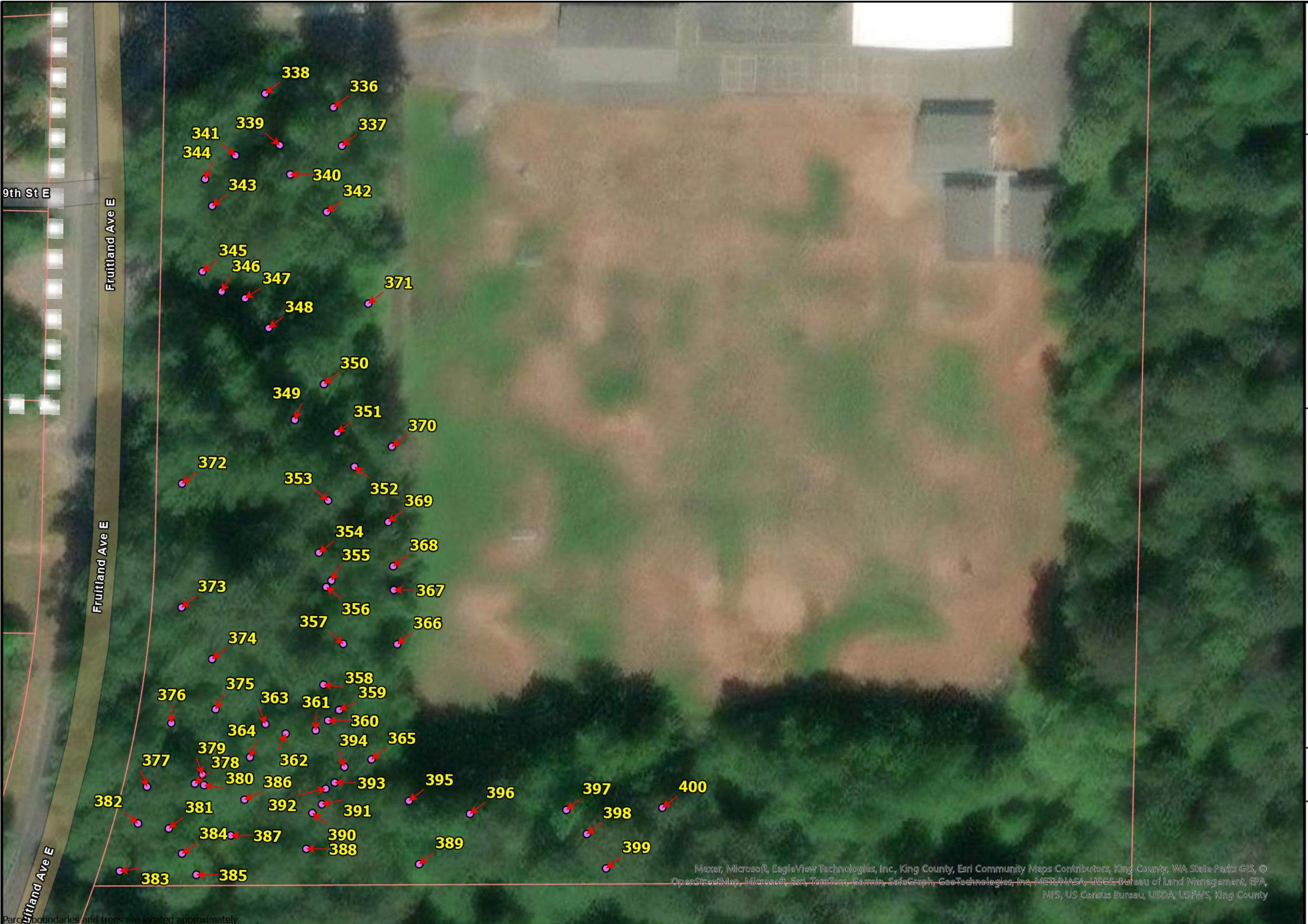
Date: November 4, 2024

Arborist:
George White
ISA PN-8908A
ISA TRAQ

Fruitland
Elementary
School

Maxar, Microsoft, EagleView Technologies, Inc., King County, Esri Community Maps Contributors, King County, WA State Parks GIS, ©
OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA,
NPS, US Census Bureau, USDA, USFWS, King County

Parcel boundaries and trees are located approximately.



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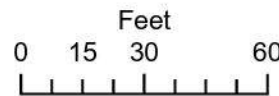


2940 Westlake Ave N #200
Seattle, WA 98109
206-528-4670

JMJ Team - Fruitland Elementary
1515 S Fruitland St,
Puyallup, WA, 98371
Parcel: 0420324002

Legend

- Assessed Trees
- WA State Parcels



Site Map - South

Date: November 4, 2024

Arborist:
George White
ISA PN-8908A
ISA TRAQ

DSH (Diameter at Standard Height) is measured 4.5 feet above grade, or as specified in the Guide for Plant Appraisal, 10th Edition, published by the Council of Tree and Landscape Appraisers. DSH for multi-stem trees are noted as a single stem equivalent, which is calculated using the method defined in the Guide for Plant Appraisal, 10th Edition. Letters are used to identify trees on neighboring property with overhanging canopies. Dripline is measured from the center of the tree to the outermost extent of the canopy.

Tree ID	Scientific Name	Common Name	DSH (inches)	DSH Multistem	Health Condition	Structural Condition	Significant	Dripline (feet)	Critical Root Protection Zone (feet)	Proposed Action	Notes
301	<i>Picea abies</i>	Norway spruce	20.8		Good	Good	Significant	21	21	Retain	Growing in rockery, sapsucker damage and heavy pitch flow
302	<i>Acer macrophyllum</i>	Bigleaf maple	24.0		Fair	Good	Significant	21	24	Retain	Gravel at base, limited dieback
303	<i>Fraxinus latifolia</i>	Oregon ash	23.5		Good	Good	Significant	29	24	Retain	Growing in gravel, base appears slightly buried
304	<i>Picea abies</i>	Norway spruce	17.0		Good	Good	Significant	17	17	Retain	Sapsucker damage with heavy pitch flow, growing above rockery
305	<i>Picea abies</i>	Norway spruce	23.7	18.8,14.5	Good	Good	Significant	16	24	Retain	Codominant at 24" above grade, growing above rockery, sapsucker damage
306	<i>Quercus palustris</i>	Pin oak	27.4		Good	Good	Significant	25	27	Retain	Super compact, bare soil at base,
307	<i>Quercus palustris</i>	Pin oak	25.3		Good	Good	Significant	27	25	Retain	Compact soil at base
308	<i>Quercus palustris</i>	Pin oak	26.0		Good	Good	Significant	18	26	Retain	Girdling roots
309	<i>Acer macrophyllum</i>	Bigleaf maple	15.6		Good	Fair	Significant	19	16	Retain	Pruned for utility line clearance, growing cluster of smaller maples
310	<i>Acer macrophyllum</i>	Bigleaf maple	17.0	13,6.5,8.8	Good	Fair	Significant	21	17	Retain	Multi-stem at base, poor union on south stem, pruned for utility line clearance
311	<i>Prunus avium</i>	Wild cherry	13.7	7.5,11.5	Fair	Fair	-	13	14	Retain	Codominant at base with narrow union, dieback, in grove of smaller cherries
312	<i>Acer macrophyllum</i>	Bigleaf maple	30.0		Fair	Poor	Significant	19	30	Retain	Measurement estimated due to access restrictions, mostly dead, remaining live crown to south,
313	<i>Prunus avium</i>	Wild cherry	15.0		Fair	Fair	Significant	14	15	Retain	Heavy ivy on trunk limited visual assessment, diameter estimated due to ivy
314	<i>Populus trichocarpa</i>	Black cottonwood	31.5		Good	Good	-	21	32	Retain	Slight phototropic lean to NE
315	<i>Populus trichocarpa</i>	Black cottonwood	28.8		Good	Good	-	19	29	Retain	Slight phototropic lean to S

Table of Trees
Fruitland Elementary
1515 Fruitland, Puyallup, WA

Arborist: GW
Date of Inventory: 10.29.2024
Table Updated: 4.17.2025

Tree ID	Scientific Name	Common Name	DSH (inches)	DSH Multistem	Health Condition	Structural Condition	Significant	Dripline (feet)	Critical Root Protection Zone (feet)	Proposed Action	Notes
316	<i>Populus trichocarpa</i>	Black cottonwood	28.9		Good	Good	-	19	29	Retain	Slight phototropic lean to west
317	<i>Populus trichocarpa</i>	Black cottonwood	31.9		Good	Good	-	31	32	Retain	Asymmetric crown an slight phototropic lean to S
318	<i>Acer macrophyllum</i>	Bigleaf maple	31.2		Good	Fair	Significant	26	31	Remove	Cavity
319	<i>Acer macrophyllum</i>	Bigleaf maple	20.0	7,17,8	Good	Good	Significant	21	20	Remove	Multi-stem at base with slightly narrow unions
320	<i>Populus trichocarpa</i>	Black cottonwood	29.9		Good	Good	-	27	30	Remove	Slight phototropic lean to E
321	<i>Acer macrophyllum</i>	Bigleaf maple	17.7		Fair	Poor	Significant	17	18	Remove	Dieback in crown, wound at base with decay, lean to E
322	<i>Populus trichocarpa</i>	Black cottonwood	42.2		Good	Good	-	37	42	Remove	Corrected lean to E
323	<i>Populus trichocarpa</i>	Black cottonwood	27.4		Good	Good	-	36	27	Remove	Phototropic crown to south
324	<i>Populus trichocarpa</i>	Black cottonwood	18.2		Fair	Poor	-	17	18	Remove	Dead top, phototropic to west
325	<i>Salix</i> spp.	Willow	18.2	9,3,3.5,11.1,5.5,4.7,7.2	Good	Good	Significant	19	18	Remove	Native willow hybrid, multi-stem at base
326	<i>Populus trichocarpa</i>	Black cottonwood	19.1	13,7.6,11.7	Good	Fair	-	21	19	Remove	Fallen tree with multiple vertical trunks along length
327	<i>Acer macrophyllum</i>	Bigleaf maple	14.9		Good	Fair	-	19	15	Remove	Phototropic to west, hangs over roadway
328	<i>Acer macrophyllum</i>	Bigleaf maple	16.0		Poor	Fair	-	17	16	Remove	Not tagged, measurements estimated due to access restrictions, no live foliage, heavy seed crop
329	<i>Salix</i> spp.	Willow	25.4	11.5,13.7,18.1	Good	Good	Significant	17	25	Remove	Native willow hybrid, multi-stem at base
330	<i>Acer macrophyllum</i>	Bigleaf maple	16.1		Good	Good	Significant	21	16	Remove	
331	<i>Acer macrophyllum</i>	Bigleaf maple	16.3	10.5,12.5	Poor	Fair	Significant	13	16	Remove	Codominant at base, significant dieback, decay on S Stem
332	<i>Acer macrophyllum</i>	Bigleaf maple	22.8	17,15.2	Fair	Fair	Significant	19	23	Remove	Codominant at base, limited crown dieback, 2 additional stems removed at base
333	<i>Acer macrophyllum</i>	Bigleaf maple	25.5		Good	Good	Significant	21	26	Remove	
334	<i>Acer macrophyllum</i>	Bigleaf maple	23.0		Good	Good	Significant	17	23	Remove	Not tagged, measurements estimated due to access restrictions, heavy blackberry at base

Table of Trees
Fruitland Elementary
1515 Fruitland, Puyallup, WA

Arborist: GW
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Tree ID	Scientific Name	Common Name	DSH (inches)	DSH Multistem	Health Condition	Structural Condition	Significant	Dripline (feet)	Critical Root Protection Zone (feet)	Proposed Action	Notes
335	<i>Acer macrophyllum</i>	Bigleaf maple	38.4	22,20,15,12,15	Fair	Fair	Significant	20	38	Remove	Not tagged, measurements estimated due to access restrictions, multi-stem at base, limited dieback in upper crown
336	<i>Populus trichocarpa</i>	Black cottonwood	23.0	13,13,13.	Good	Fair	-	36	23	Remove	Multi-stem at base phototropic to ENE
337	<i>Populus trichocarpa</i>	Black cottonwood	15.0		Good	Good	-	15	15	Remove	Ivy on trunk to 40 feet
338	<i>Populus trichocarpa</i>	Black cottonwood	40.5		Good	Good	-	32	41	Remove	Phototropic to NW, ivy on trunk
339	<i>Populus trichocarpa</i>	Black cottonwood	38.0		Good	Good	-	37	38	Remove	Ivy on trunk to 50 feet, phototropic to E
340	<i>Populus trichocarpa</i>	Black cottonwood	21.5		Good	Good	-	21	22	Remove	Ivy on trunk to 40 feet
341	<i>Populus trichocarpa</i>	Black cottonwood	18.0		Good	Fair	-	26	18	Remove	Significant phototropic lean to west
342	<i>Populus trichocarpa</i>	Black cottonwood	43.5		Good	Good	-	37	44	Remove	Ivy on trunk to 50 feet
343	<i>Pseudotsuga menziesii</i>	Douglas-fir	15.8		Good	Fair	Significant	16	16	Remove	Abnormal base, phototropic to sw
344	<i>Populus trichocarpa</i>	Black cottonwood	42.0		Good	Good	-	37	42	Remove	Ivy on trunk to 50 feet
345	<i>Pseudotsuga menziesii</i>	Douglas-fir	22.0		Fair	Fair	Significant	16	22	Remove	Heavy ivy, tip dieback, phototropic lean to NW
346	<i>Populus trichocarpa</i>	Black cottonwood	43.0		Good	Good	-	36	43	Remove	Heavy ivy on trunk to 50 feet, large deadwood in upper crown
347	<i>Pseudotsuga menziesii</i>	Douglas-fir	0.0		Fair	Good	-	12	0	Remove	Heavy ivy and limited tip dieback.
348	<i>Pseudotsuga menziesii</i>	Douglas-fir	30.0		Fair	Good	Significant	17	30	Remove	Heavy ivy on trunk, corrected phototropic lean to S
349	<i>Populus trichocarpa</i>	Black cottonwood	49.0		Good	Good	-	42	49	Remove	Heavy ivy to 60 feet, old limb failures present, very large crown
350	<i>Acer macrophyllum</i>	Bigleaf maple	24.3	11.6,17,13	Fair	Fair	Significant	26	24	Remove	Multi-stem at base, heavy ivy in crown, limited dieback
351	<i>Populus trichocarpa</i>	Black cottonwood	19.0		Good	Good	-	19	19	Remove	Heavy ivy to 40 feet
352	<i>Populus trichocarpa</i>	Black cottonwood	24.0		Good	Fair	-	41	24	Remove	Heavy ivy to 40 feet, Uncorrected phototropic lean to W
353	<i>Acer macrophyllum</i>	Bigleaf maple	26.4	5.5,19,17.5	Good	Fair	Significant	21	26	Remove	Multi-stem at base, heavy ivy to 40 feet
354	<i>Acer macrophyllum</i>	Bigleaf maple	18.0		Good	Good	Significant	26	18	Remove	Heavy ivy
355	<i>Acer macrophyllum</i>	Bigleaf maple	20.4	7.5,19	Fair	Fair	Significant	16	20	Remove	Heavy ivy, trunk contacting 356

Table of Trees
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1515 Fruitland, Puyallup, WA

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Tree ID	Scientific Name	Common Name	DSH (inches)	DSH Multiste m	Health Condition	Structural Condition	Significant	Dripline (feet)	Critical Root Protection Zone (feet)	Proposed Action	Notes
356	<i>Acer macrophyllum</i>	Bigleaf maple	17.0		Good	Good	Significant	21	17	Remove	Phototropic to west, trunk in contact with 355
357	<i>Populus trichocarpa</i>	Black cottonwood	52.5	52,7	Good	Fair	-	42	52	Remove	Heavy ivy to 50 feet, large crown size, old limb failures present
358	<i>Populus trichocarpa</i>	Black cottonwood	38.8		Good	Good	-	32	39	Remove	
359	<i>Populus trichocarpa</i>	Black cottonwood	30.1		Good	Fair	-	36	30	Remove	Significant phototropic lean to W, partially corrected
360	<i>Populus trichocarpa</i>	Black cottonwood	18.7		Good	Poor	-	31	19	Remove	Incorrect phototropic lean to S
361	<i>Populus trichocarpa</i>	Black cottonwood	15.8		Good	Good	-	21	16	Remove	
362	<i>Populus trichocarpa</i>	Black cottonwood	16.4		Good	Poor	-	41	16	Remove	Uncorrected phototropic lean to S
363	<i>Acer macrophyllum</i>	Bigleaf maple	13.7	7.5,7.5,8.6	Poor	Fair	-	16	14	Remove	Low vigor, no live foliage, shaded
364	<i>Populus trichocarpa</i>	Black cottonwood	24.5		Good	Good	-	31	25	Remove	Slight phototropic lean to S
365	<i>Acer macrophyllum</i>	Bigleaf maple	34.0		Fair	Poor	Significant	31	34	Remove	Measured at narrowest point below union, south stem failed/dead
366	<i>Populus trichocarpa</i>	Black cottonwood	15.3		Good	Fair	-	26	15	Remove	Phototropic lean to west
367	<i>Populus trichocarpa</i>	Black cottonwood	24.0		Good	Fair	-	31	24	Remove	Codominant at 5 feet, with narrow union/included bark
368	<i>Populus trichocarpa</i>	Black cottonwood	17.1	13.7,10.3	Good	Fair	-	26	17	Remove	Codominant at base, ivy
369	<i>Populus trichocarpa</i>	Black cottonwood	23.9	11.5,20.9	Good	Good	-	26	24	Remove	Codominant at base, ivy to 25 feet
370	<i>Populus trichocarpa</i>	Black cottonwood	22.0		Good	Good	-	21	22	Remove	Ivy to 35 feet
371	<i>Populus trichocarpa</i>	Black cottonwood	27.0		Good	Good	-	26	27	Remove	Ivy to 35 feet
372	<i>Populus trichocarpa</i>	Black cottonwood	39.3		Good	Good	-	27	39	Remove	Ivy on trunk to 40 feet
373	<i>Populus trichocarpa</i>	Black cottonwood	36.5		Good	Good	-	37	37	Remove	
374	<i>Acer macrophyllum</i>	Bigleaf maple	19.5		Poor	Good	Significant	19	20	Remove	Significant dieback in crown
375	<i>Acer macrophyllum</i>	Bigleaf maple	16.6	11.5,12	Fair	Good	Significant	13	17	Remove	Codominant at base, limited dieback in upper crown

Table of Trees
Fruitland Elementary
1515 Fruitland, Puyallup, WA

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376	<i>Acer macrophyllum</i>	Bigleaf maple	33.3	12.2,23.8, 19.8	Fair	Poor	Significant	26	33	Remove	Large deadwood in crown, multiple stem failures, multi-stem at base
377	<i>Populus trichocarpa</i>	Black cottonwood	66.8		Good	Fair	-	48	67	Remove	Codominant at 8 feet with narrow union and included bark, significant reaction growth at base may indicate internal decay, advanced testing recommended
378	<i>Acer macrophyllum</i>	Bigleaf maple	15.2		Good	Good	Significant	21	15	Retain	
379	<i>Acer macrophyllum</i>	Bigleaf maple	19.2		Good	Good	Significant	21	19	Remove	
380	<i>Acer macrophyllum</i>	Bigleaf maple	24.5	15.3,19.1	Poor	Fair	Significant	16	24	Retain	Codominant at base west stem has heavy dieback, sooty bark disease present
381	<i>Acer macrophyllum</i>	Bigleaf maple	16.8		Good	Fair	Significant	16	17	Retain	Low live crown ratio
382	<i>Acer macrophyllum</i>	Bigleaf maple	32.6	18.2,18.4, 13.5,14.6	Good	Good	Significant	26	33	Retain	Multi-stem at base, phototropic to west
383	<i>Pseudotsuga menziesii</i>	Douglas-fir	35.3		Good	Good	Significant	19	35	Retain	In corner of property
384*	See off-site trees										
385*	See off-site trees										
386	<i>Fraxinus latifolia</i>	Oregon ash	21.8		Good	Good	Significant	26	22	Retain	
387	<i>Acer macrophyllum</i>	Bigleaf maple	22.8		Fair	Good	Significant	21	23	Retain	Limited tip dieback
388*	See off-site trees										
389*	See off-site trees										
390	<i>Acer macrophyllum</i>	Bigleaf maple	23.7		Good	Fair	Significant	21	24	Remove	Previous failures in crown codominant at 20 feet
391	<i>Acer macrophyllum</i>	Bigleaf maple	15.8		Poor	Poor	-	9	16	Remove	Nearly dead, only epicormic growth alive
392	<i>Acer macrophyllum</i>	Bigleaf maple	16.1		Fair	Fair	Significant	16	16	Remove	Multi-stem at base, only central stem is alive
393	<i>Acer macrophyllum</i>	Bigleaf maple	16.2		Fair	Fair	Significant	11	16	Remove	Large failures in upper crown
394	<i>Acer macrophyllum</i>	Bigleaf maple	16.2		Fair	Fair	Significant	16	16	Remove	Central decay, old failures in crown, armillaria? Mushies on trunk in trim
395	<i>Acer macrophyllum</i>	Bigleaf maple	27.7		Good	Good	Significant	31	28	Remove	
396	<i>Acer macrophyllum</i>	Bigleaf maple	21.8	18.4,11.7	Good	Fair	Significant	21	22	Retain	Codominant at base with narrow union
397	<i>Fraxinus latifolia</i>	Oregon ash	15.6		Good	Good	Significant	16	16	Retain	Failed alder hung up in crown
398	<i>Acer macrophyllum</i>	Bigleaf maple	16.9		Good	Fair	Significant	16	17	Retain	Old seam on trunk

Table of Trees
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1515 Fruitland, Puyallup, WA

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399	<i>Fraxinus latifolia</i>	Oregon ash	22.6		Good	Good	Significant	21	23	Retain	
400	<i>Acer macrophyllum</i>	Bigleaf maple	39.8	7.6,15.2,64.20,29.2	Good	Good	Significant	32	40	Retain	Multi-stem at base, south stem dominant
*Off-site Trees											
384	<i>Fraxinus latifolia</i>	Oregon ash	17.8		Good	Good	Significant	17	18	Retain	Large broken hanging limb
385	<i>Populus trichocarpa</i>	Black cottonwood	55.4		Good	Good	-	37	55	Retain	
388	<i>Acer macrophyllum</i>	Bigleaf maple	36.3	26.8,24.5	Fair	Good	Significant	32	36	Retain	codominant at 2 feet with south union, some dieback in crown
389	<i>Acer macrophyllum</i>	Bigleaf maple	38.0		Fair	Poor	Significant	37	38	Retain	Remaining stem phototropic to N, measurements estimated