



Soundview Consultants LLC

Environmental Assessment • Planning • Land Use Solutions

2907 Harborview Dr., Suite D, Gig Harbor, WA 98335

Phone: (253) 514-8952 Fax: (253) 514-8954

Arborist Report

To: Alex Garcia Mendoza, Trammel Crow

File Number: 1520.0006

From: Shauna Willett, Soundview Consultants LLC
Jon Pickett, Soundview Consultants LLC

Date: August 24, 2023

Re: Arborist Report and Tree Retention Plan
PSE Todd Road – 325 Todd Road Northwest, Puyallup, WA 98371

Dear Mr. Garcia Mendoza,

Soundview Consultants LLC (SVC) has been assisting Trammel Crow (Applicant) with an Arborist Report and Tree Retention Plan for the proposed commercial development of a 6.17-acre property located at 325 Todd Road Northwest in the City of Puyallup, Washington. The property consists of one parcel located in the Southwest $\frac{1}{4}$ of Section 21, Township 20 North, Range 4 East, W.M. (Pierce County Tax Parcel Numbers 0420211030). SVC investigated the site to identify and assess trees according to the City of Puyallup's Vegetation Management Standards Administrative Policies and Procedures manual (VMS), along with development standards of the City of Puyallup's Municipal Code (PMC) 20.58 Landscaping Requirements.

Figure 1. Subject Property Location.



Purpose

The purpose of this Arborist Report and Tree Retention Plan is to evaluate the proposed project according to the tree retention standards of the City of Puyallup's VMS Administrative Policies and Procedures manual, along with development standards outlined under PMC 20.58 Landscaping Requirements. An analysis of trees within the subject property was made to identify trees to be retained and removed within and bordering the proposed development and associated infrastructure.

Proposed Project

The proposed project is composed of the main OTC building, and Outdoor Training area. It will be used as a vocational school for construction trades. The OTC building is 33,837 SF and will consist of office/commercial/instructional spaces. The Outdoor Training area will consist of 2,406 SF of enclosed spaces, and 8,673 SF of covered areas.

The project was carefully designed to avoid and minimize impacts to critically sensitive areas. The project has gone through several design revisions and alternative design measures and the final project will retain 1,498 square feet (0.034 acres) of one low-functioning Category IV wetland (Wetland A) within the right-of-way (ROW) along the western side of the subject property.

Methods

The investigation consisted of a walk-through survey of the subject property to 1) determine location, size (diameter at breast height), tree species and health (good, fair, poor, dead/dying) for all identified trees onsite, and 2) determine proximity, critical root zone and fall distance of trees to be retained or removed in relation to the proposed development and its associated infrastructure.

Trees were located using a high-accuracy Arrow 100 GNSS receiver unit and each tree was assigned a unique identification number. This tree number was written onto florescent yellow flagging tape that was either tied to a branch on the tree or nailed to the tree when no available low branches were present.

SVC's ISA Certified Arborist assessed each tree and recorded species identification, tree DBH, and observations of health and structural condition. Tree health and risk assessments were made using current methodology in accordance with the standards and practices of the International Society of Arboriculture ANSI 300.

To calculate a single diameter at breast height (DBH) for multi-stemmed trees, vector magnitude was applied, whereby the square root of the sum of the squares of the diameters of the stems is used. For example, a multi-stemmed tree with diameter measurements of 12-, 15-, and 28-inches results in the square root of 1,153 which is 34 inches in diameter. The critical root zone (CRZ) is calculated as 1-foot radius per 1-inch of trunk diameter. However, the City of Puyallup's Vegetation Management Standards define the CRZ as 2 feet per 1-inch DBH. This CRZ has been applied to the tree proposed for retention.

All trees were assessed onsite that were at least 15-feet in height or greater and with a DBH equal to or greater than 4 inches DBH. Tree condition ratings are based on the following criteria. Further details and definitions are provided in Attachment A.

Good = Tree has no significant defects and is expected to survive without disturbance to its normal life expectancy.

Fair = Tree has either a minor or more substantial defect, either fungal decay or mechanical, that render it not likely to survive to normal life expectancy, depending on the species.

Poor = Tree has significant defects or mechanical issues that render it not likely to survive five years, depending on the species.

Dying = Tree is dying and lacks vigor.

Significant and Heritage Trees

The City of Puyallup defines significant trees as trees that are healthy and growing that are greater than 15 inches DBH per VMS 10.1.B. Significant tree protections do not apply to native black cottonwood (*Populus balsamifera*) or red alder (*Alnus rubra*) per VMS 10.1.B. The City of Puyallup defines a heritage tree as a tree that has been designated as such pursuant to PMC 20.58.025 due to its notable characteristics, including, but not limited to, age, size, location, species, aesthetics or association with an event that is significant to the city of Puyallup. However, none of the trees onsite are documented as heritage trees per the City's Heritage Trees map.

Tree Assessment Results

A total of 36 trees ($\geq 4''$ DBH) were assessed, flagged, given a unique identification number, and entered into GIS. Refer to Attachment B for the Tree Inventory Exhibit and Data. Of the 36 trees, 19 trees were determined to be significant and included a wide variety of species that included Hickory (*Carya* sp.), bigleaf maple (*Acer marcophyllum*), giant sequoia (*Sequoiadendron giganteum*), western red cedar (*Thuja plicata*), Ponderosa pine (*Pinus ponderosa*), Douglas fir (*Pseudotsuga menziesii*), and Sitka spruce (*Picea sitchensis*). One English holly (*Ilex aquifolium*) met the significant tree criteria; however, English holly is considered a non-native invasive species in the State of Washington. The larger English holly trees onsite were intentionally planted as landscape trees within the past 50 years and, due to their historical significance, are included in this assessment. However, due to English holly being a non-native invasive species, this species was not included in the significant tree total. The majority of the large trees with trunk diameters greater than 25-inches are located together in a stand likely planted around an old structure or farmstead.

Tree Replacement

A landscape plan is required per PMC 20.58.010 prior to acquiring permits for new construction and must include the location of existing trees onsite. Per VMS 7.2, in some instances, additional or larger sized material may be required to mitigate the loss of onsite vegetation, to provide more immediate vegetation re-establishment, screening or buffering of the project site, or as other mitigation as determined appropriate by the Director. However, PMC and the VMS do not specify mitigation ratios for the removal of onsite trees. Thus, the proposed tree replacement specifications are based on the criteria included in VMS section 7.2 – Plant Materials Required Sizes, as shown below:

A. All small deciduous trees, those less than 25 feet tall at maturity, shall be at least 1" caliper, preferably 1.5" or larger, and branched with a strong, central single leader.

B. Medium or large deciduous trees shall be at least one (1") inch in caliper, preferably 1.5" or larger, and branched with a strong, central single leader.

C. All shrubs required by this document and/or Title 20 of the Puyallup Municipal Code shall be no smaller than two (2) gallon in size at the time of planting, unless otherwise specified.

D. All groundcover materials required by this document and/or Title 20 of the Puyallup Municipal Code shall be no smaller than one (1) gallon in size, unless otherwise specified.

E. Coniferous evergreen trees shall be a minimum of 5 to 6 feet in height.

F. Any material not specifically listed shall meet current AAN standards and be of appropriate size to satisfy the intent of this document and/or the PMC.

Tree Replacement Ratios – Tree Type and Size

Per VMS 10.1.B, significant trees are trees that are healthy and growing that are greater than 15 inches DBH. Trees that are proposed to be removed that are greater than 15 inches DBH and that were documented to be in good or fair health during the onsite tree assessment per the criteria provided in the Methods section of this report will be replaced based on the proposed mitigation ratios below:

1. Coniferous trees will be replaced at a 2:1 ratio and shall be a minimum of 5 to 6-feet in height per VMS 7.2.F.

Coniferous tree species onsite that meet the criteria for significant trees consist of Douglas fir, giant sequoia, ponderosa pine, Sitka spruce, and western red cedar.

2. Deciduous trees will be replaced at a 2:1 ratio and shall be at least 1-inch in caliper and branched with a strong, central single leader per VMS 7.2B.

Deciduous tree species onsite that meet the criteria for significant tree consist of big leaf maple and hickory.

A total of 19 significant trees were identified on the subject property, that were at least 15 inches DBH and were in good or fair health during the time of the onsite tree assessment. Of the 19 significant trees, 3 were deciduous and 16 were coniferous. It is proposed that these trees be replaced at a 2:1 ratio based on the criteria provided above. Table 1 below provides the proposed mitigation for the replacement of the significant trees onsite that are proposed to be removed.

Table 1. Tree Replacement Ratios

Tree Species	# Trees	# of significant trees ¹	# Trees recommended to be retained	Tree replacement ratio ³	# of trees to be mitigated for removal	# of replacement trees at 2:1 ratio
Apple	7	0	0	0	0	0
Big leaf maple	3	2	0	2:1	2	4
Cherry	1	0	0	0	0	0
Cypress	1	0	0	0	0	0
Dogwood	1	0	0	0	0	0
Douglas fir	2	2	0	2:1	2	4
Giant Sequoia	1	1	0	2:1	1	2
Hickory	1	1	0	2:1	1	2
English holly	3	0	0	0	0	0
Horse Chestnut	1	0	0	0	0	0
Japanese maple	1	0	0	0	0	0
Ponderosa pine	4	4	0	2:1	4	8
Sitka spruce	1	1	0	2:1	1	2
Western red cedar	9	8	0	2:1	8	16
Totals	36	19	0	N/A	19	38

1. Significant trees are trees that are healthy and growing that are greater than 15-inches DBH per VMS 10.1.B. Trees that received a health score of “Good” or “Fair” were considered healthy and growing and are considered significant trees.
2. PMC code and the VMS do not contain specific tree replacement ratios. A tree replacement ratio of 2:1 is proposed. See Tree Replacement Mitigation Ratio section above for details on tree type and size that are proposed to mitigate for the removal of the onsite significant trees.

Significant Trees Narrative

A total of 19 significant trees were identified on the subject property. Per VMS 10.1.B, significant and heritage trees shall be retained, when possible, except for the circumstances outlined in VMS 10.1.B (1-5). Due to the irregular triangular shape of the subject property, full site utilization is required in order to allow the site to be economically feasible for commercial development, and to provide

adequate space for vehicle and truck circulation, along with infrastructure requirements. As such, no trees are proposed to be retained.

Closure

The purpose of this Arborist Report and Tree Retention Plan is to evaluate the proposed project according to the tree retention and replanting requirements of the City's VMS and the development standards of PMC 20.58. No heritage trees are documented on the subject property. Additionally, the 19 significant trees that are proposed to be removed are proposed to be mitigated for onsite at a 2:1 ratio based on the criteria provided in the Tree Replacement sections of this report.

All observations regarding trees in this report were made by a certified arborist based on education and professional experience. All determinations of health condition, structural condition, or hazard potential of a tree or trees at issue are based on current methodology and best available science. All health and hazard determinations are limited by the visual nature of the assessment. Defects may be obscured by soil, brush, vines, aerial foliage, branches, multiple trunks, or other trees. Even structurally sound, healthy trees are wind thrown during severe storms or fail due to other weather conditions. As such, a determination is not a guarantee of sound health, or lack of risk.

The findings and conclusions documented in this assessment report have been prepared for specific application to the PSE Todd Road site. These findings and conclusions have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. The conclusions and recommendations presented in this report are professional opinions based on an interpretation of information currently available to us and are made within the operation scope, budget, and schedule of this project. No warranty, expressed or implied, is made. In addition, changes in government codes, regulations, or laws may occur. Due to such changes, our observations and conclusions applicable to this assessment may need to be revised wholly or in part in the future.

This plan is preliminary and based on preliminary site layout and design. The final tree retention plan is subject to change based on approved construction plans.

Sincerely,



International Society
of Arboriculture

A handwritten signature in blue ink that reads "Shauna Willett".

Shauna Willett
Certified Arborist #
WE-7452A

A handwritten signature in black ink that reads "Jon Pickett".

Jon Pickett
Associate Principal

References

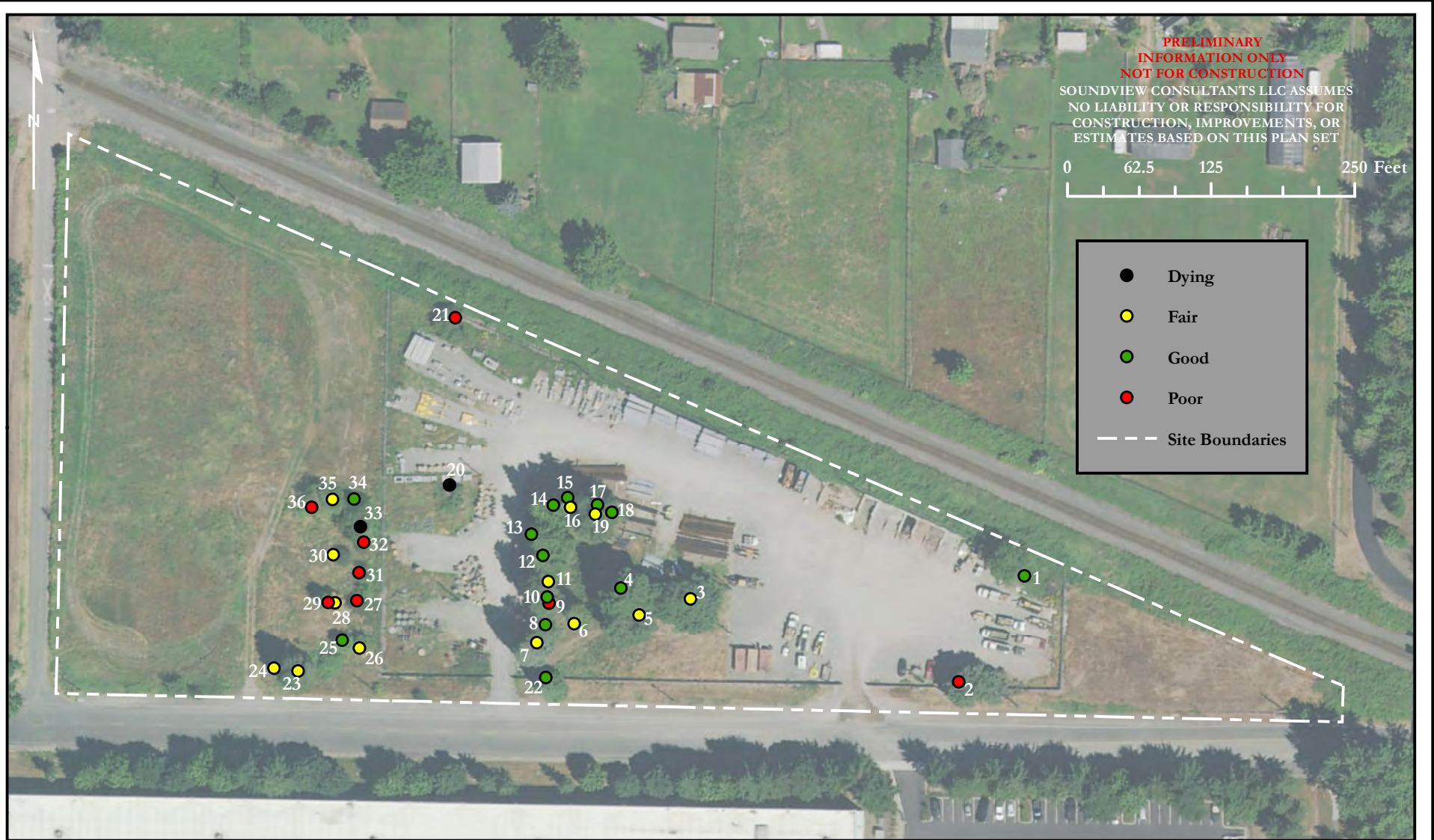
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Attachment A – Tree Health and Condition Definitions

Condition	Symbol	Definition
Excellent	E	Nearly ideal specimen with excellent form and vigor
		Well-balanced and nearly symmetric crown
		Normal to excellent shoot elongation on new growth
		Little to no twig dieback or discoloration of leaves
		No apparent pest or disease problems
		Sound, solid trunk free of defects and mechanical damage Tree should live to full life expectancy for species
Good	G	Vigor is normal for the species
		Full or nearly full canopy
		Well-balanced or partially asymmetric crown
		No dieback to branches > 2" in diameter
		Twig dieback and leaf discoloration are minor
		Minor pest or disease problems are manageable
		Tree is reacting appropriately to damage Sound, solid trunk free of defects and mechanical damage Tree should live to full life expectancy for species
Fair	F	Reduced vigor, new growth may be stunted
		Thinning canopy, asymmetric or inconsistent form
		Suckering or secondary growth may be present
		Twig and branch dieback may comprise up to 50% of canopy
		Minor pest or disease problems are visible but not fatal
		Tree is reacting appropriately to damage Single or multiple defects (codominant stem, uncorrected lean, forked leader) are not practical to correct Life expectancy shortened to 10-40 years depending on species
Poor	P	Tree is declining and appears unhealthy
		Thinning canopy, asymmetric or inconsistent form
		Suckering or secondary growth may be present
		Twig and branch dieback may comprise more than 50% of crown
		Pest or disease problems are uncontrollable and likely fatal
		Extensive decay or cavities present in trunk and/or branches Single or multiple defects (codominant stem, forked leader, uncorrected lean) are not practical to correct Life expectancy shortened to 1-5 years depending on species
Dying	DY	Tree is dying and lacks vigor
		Little live foliage
		Suckering or secondary growth is dominant growth
		Twig and branch dieback may comprise more than 80% of crown Life expectancy shortened to 1-3 years depending on species
Dead	D	Tree is dead

Attachment B – Tree Inventory Exhibit

TREE INVENTORY MAP



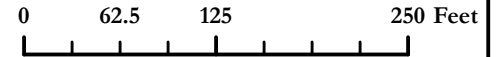

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TODD ROAD
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0420211030

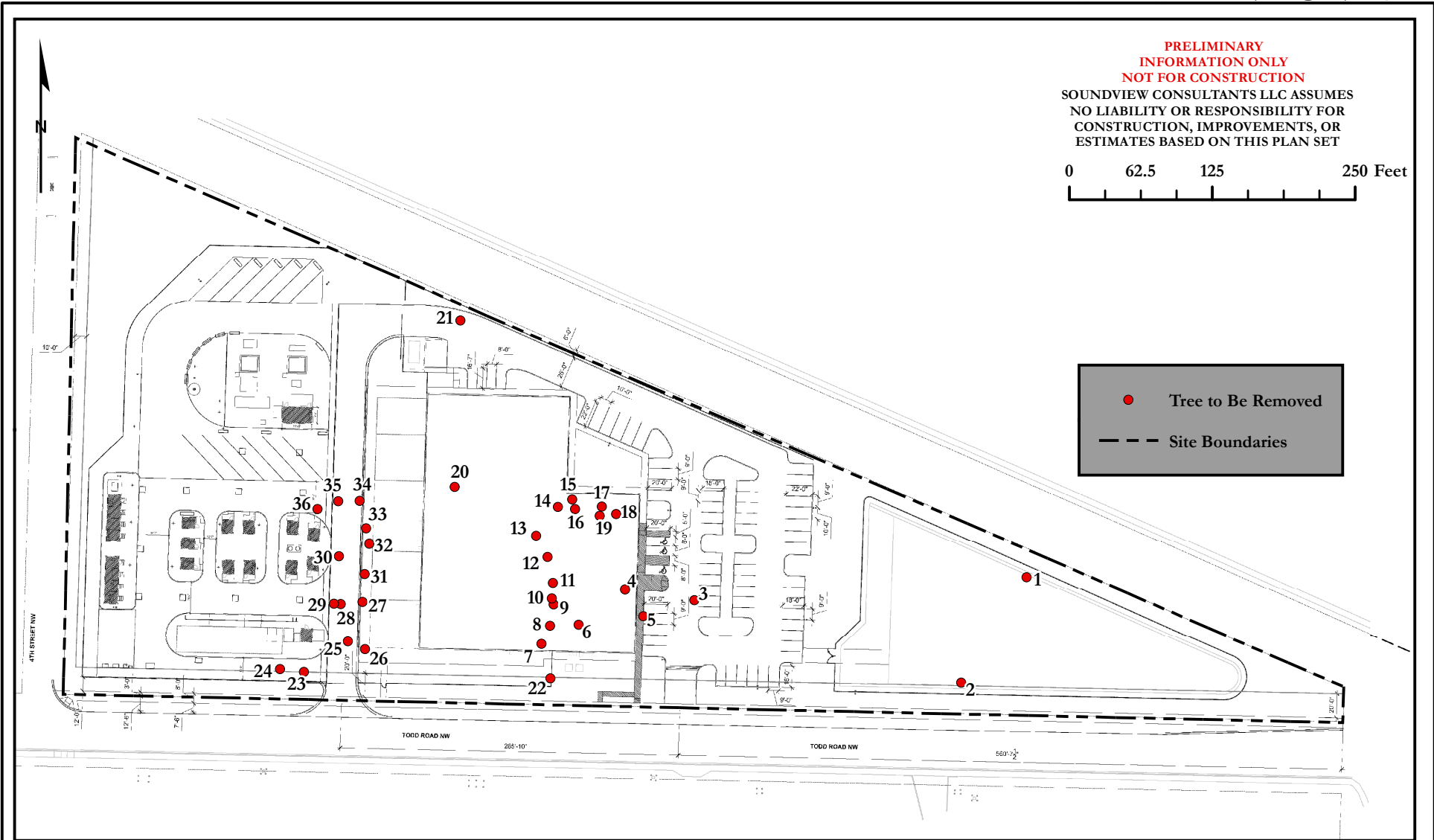
DATE: 8/24/2023
JOB: 1520.0006
BY: JML
SCALE: 1" = 125'
FIGURE NO. 1

TREE RETENTION MAP

**PRELIMINARY
INFORMATION ONLY
NOT FOR CONSTRUCTION**
SOUNDVIEW CONSULTANTS LLC ASSUMES
NO LIABILITY OR RESPONSIBILITY FOR
CONSTRUCTION, IMPROVEMENTS, OR
ESTIMATES BASED ON THIS PLAN SET



● Tree to Be Removed
- - - Site Boundaries




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0420211030

DATE: 8/24/2023
JOB: 1520.0006
BY: DLS
SCALE: 1" = 125'
FIGURE NO. 2

Attachment C – Qualifications

All field inspections, assessments, and supporting documentation, including this ***Arborist Report and Tree Retention Plan*** prepared for the ***PSE Todd Road*** project were prepared by Shauna Willett under the direction of Jon Pickett of SVC. Site investigations were completed by Shauna Willett. Report preparation was completed by Kramer Canup and additional project oversight was completed by Kyla Caddey.

Jon Pickett

Principal

Professional Experience: 14+ years

Jon Pickett is a Principal and Senior Scientist with a diverse background in environmental and shoreline compliance and permitting, wetland and stream ecology, fish and wildlife biology, mitigation compliance and design, and environmental planning and land use due diligence. Jon oversees a wide range of large-scale industrial, commercial, and multi-family residential projects throughout Western Washington, providing environmental permitting and regulatory compliance assistance for land use entitlement projects from feasibility through mitigation compliance. Jon performs wetland, stream, and shoreline delineations and fish & wildlife habitat assessments; conducts code and regulation analysis and review; prepares reports and permit applications and documents; provides environmental compliance recommendation; and provides restoration and mitigation design.

Jon earned a Bachelor of Science degree in Natural Resource Sciences from Washington State University and Bachelor of Science and Minor in Forestry from Washington State University. Jon has received 40-hour wetland delineation training (Western Mountains, Valleys, & Coast and Arid West Regional Supplements) and regularly performs wetland, stream, and shoreline delineations. Jon is a Whatcom County Qualified Wetland Specialist and Wildlife Biologist and is a Pierce County Qualified Wetland Specialist. He has been formally trained by WSDOE in the use of the Washington State Wetland Rating System 2014, How to Determine the Ordinary High-Water Mark (Freshwater and Marine), Using Field Indicators for Hydric Soils, and the Using the Credit-Debit Method for Estimating Mitigation Needs.

Shauna Willett

Certified Arborist and Environmental Scientist

Professional Experience: 15 years

Shauna Willett is an Environmental Scientist and ISA Certified Arborist. She has performed individual tree assessments, tree inventories and environmental assessments of many habitats including oak woodlands, forests, riparian corridors, and wetlands of the Puget Sound region and throughout California. She has worked as a consulting arborist in the residential, commercial, and utility sectors of arboriculture where she conducted preventative maintenance inspections of distribution and high voltage transmission lines for Puget Sound Energy. This assessment work has involved field identification of tree and plant species, pest and disease diagnosis, and data collection and analysis in public and private sectors. Her research background is highly varied, spanning the fields of agriculture, nutrition - domestically and internationally, aquatic toxicology and urban forestry. Shauna received her master's degree in geography with a dual emphasis in urban forestry and landscape architecture at the University of California, Davis. Shauna is a Tree Risk Assessment Qualified (ISA) arborist. She has extensive knowledge on local plant taxonomy and ecological vegetative indicators.

Shauna currently performs tree assessments, wetland and stream delineations, fish and wildlife habitat assessments; conducts environmental code analysis; creates and modifies maps and tree surveys using AutoCAD, prepares environmental assessment and mitigation reports, biological evaluations, and permit applications to support clients through the regulatory and planning process for various land use projects. She has been formally trained by the Washington State Department of Ecology in the use of the Washington State Wetland Rating System. Shauna earned a Bachelor of Science degree in Landscape Architecture from the University of California, Davis, with a focus on the relationship between communities and their urban forest ecosystems.

Kramer Canup

Staff Scientist II

Professional Experience: 6 years

Kramer Canup is a Staff Scientist II with a professional background in project management, habitat restoration, vegetation monitoring, invasive plant management, monitoring protocol development, grant writing, tropical ecology, wildlife monitoring and environmental education. Kramer brings years of experience coordinating logistics for a variety of habitat restoration projects, vegetation monitoring programs, along with study abroad and backpacking courses. Previously, Kramer has managed riparian and upland habitat restoration projects, managed vegetation monitoring programs, and he has taught study abroad courses in the Peruvian Amazon and Andes for the University of Washington. Beyond Kramer's project management and coordination skills, he brings over 10 years of experience performing ecological field work such as vegetation monitoring, plant installation and invasive plant control.

Kramer currently prepares reports, prepares permits, and completes wetland and ordinary high water delineations and wildlife assessments.