



# Soundview Consultants LLC

Environmental Assessment • Planning • Land Use Solutions

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## Arborist Report

**To: Ken Rody, Bradbury Place LLC**

**File Number: 2567.0001**

**From: Shauna Willett, Soundview Consultants LLC  
Alex Murphy, Soundview Consultants LLC**

**Date: May 9, 2023**

**Re: Arborist Report**

**5<sup>th</sup> Street Southeast – 2525 5<sup>th</sup> Street Southeast, Puyallup, Washington 98372**

Dear Mr. Ken Rody,

Soundview Consultants LLC (SVC) has been assisting Bradbury Place LLC (Applicant) with an Arborist Report for the proposed residential development of a 2.682-acre property located at 2525 5<sup>th</sup> Street Southeast in the City of Puyallup, Washington. The property consists of two parcels located in the Northwest ¼ of Section 3, Township 19 North, Range 4 East, W.M. (Pierce County Tax Parcel Numbers 0419036002 and 0419036003). 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).

**Figure 1. Subject Property Location.**



## Purpose

The purpose of this Arborist Report is to evaluate the proposed project according to the tree retention standards of the City of Puyallup's VMS Administrative Policies and Procedures manual. An analysis of trees within the subject property was made to identify trees to be removed or retained within and bordering the proposed development and associated infrastructure.

## Proposed Project

The purpose of the proposed project is to construct high density, multifamily housing for Bradbury Place LLC, that will include the construction of 5 townhome buildings along with associated parking areas, landscaping areas, a storm pond, and associated infrastructure.

## 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 and critical root zone of trees to be removed or retained in relation to the proposed development and its associated infrastructure.

Trees were located using a high-accuracy Arrow 100 GNSS receiver unit based on professional level survey 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. Trees directly adjacent to the property boundary were assessed but not formally flagged due to their offsite location.

SVC's ISA Certified Arborist assessed each tree onsite 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 protection zone (CRPZ) is calculated as 1-foot radius per 1-inch of trunk diameter.

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. Therefore, all qualifying trees greater than 15-inches DBH were formally assessed. 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.

## Tree Assessment Results

A total of 67 trees ( $\geq 15''$  DBH) were assessed, flagged and given a unique identification number. Four additional significant Douglas fir trees were collected by survey but not assessed by SVC (T-67 to T-70), but are included in the mapping and associated data for a total of 71 trees; however, the DBH, health, and overall condition of these trees cannot be confirmed. Refer to Attachment B for the Tree Inventory Exhibit and Data. The assessed/collected trees were comprised of 68 Douglas fir (*Pseudotsuga menziesii*), one dying western red cedar (*Thuja plicata*), one Deodar cedar (*Cedrus deodara*), and one multi-stemmed bigleaf maple (*Acer macrophyllum*). DBH of assessed trees ranged from 15 inches to 39 inches, of which 24 were large mature fir trees with trunk diameters in excess of 30 inches DBH. All but one tree was in good or fair condition.

Data was collected on trees directly adjacent to the property boundaries as aerial and rooting space allotment should be taken into consideration when determining the clearing limits for the site, as their CRZ will need to be protected from construction impacts. The assessed Deodar cedar (T-21) was located on the parcel boundary, however, survey did not collect this tree, as such, we are assuming it is offsite. Additionally, the location, approximate DBH, and condition were collected on an offsite Douglas fir (T-22) to the east. Along the southern property boundary, 4 unflagged trees were determined to be onsite and 7 unflagged trees were confirmed to be offsite after confirming their surveyed locations. In total, there were 61 onsite significant trees, 9 offsite significant trees, and 1 dying tree of significant size assessed.

## Tree Retention Narrative

A total of 61 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). PMC 20.58.015.6(g) requires a discussion of methods for preserving significant or heritage trees. Given the distribution of significant trees throughout the site and the townhome development that requires space for an internal access road and associated infrastructure, full site utilization is necessary and there is no space available to shift project elements to avoid any of the identified significant trees. As such, no trees are proposed to be retained.

## Offsite Tree Protection

Due to the proximity to the subject property, the CRPZ of nine offsite trees (T-10, 11, 13, 14, 17-19, 21, 22b) have the potential to encroach into the proposed project clearing limits yet are required to be protected from construction impacts. The DBH of adjacent, offsite trees ranges from 16 inches to 33 inches and therefore the CRPZ may extent onsite based on the specifications outlined in the Methods section. The following Puyallup VMS design standards outline the allowable impacts to the CRPZ of significant trees:

*i. For significant trees, a minimum of 50 percent of the critical root zone must be preserved at natural grade, with natural ground cover. For heritage trees, a minimum of 75 percent of the critical root zone must be preserved at natural grade with natural ground cover.*

*ii. No cut or fill greater than four (4) inches will be located closer to the tree trunk than 1/2 the CRPZ radius distance.*

*iii. No cut or fill within the distance from the tree which is three (3) times the trunk diameter (also can be determined by calculating the 1/4 CRPZ). For example, no cut is allowed within 60-inches of a tree which has a 20-inch diameter trunk.*

If the minimum standards cannot be met, greater impacts may be allowed if all design alternatives are unfeasible, and a pre-conditioning and after care mitigation program is established which shall include at a minimum:

*i. Establishing and maintaining a 4-6" layer of hard wood chip mulch in the CRPZ*

*ii. Soil aeration using a high pressure air spade, pneumatic air tool or power auger to create a spoke patterned area around the base of the tree and throughout the CRPZ, back filled with compost to encourage root growth.*

*iii. Temporary irrigation (soaker or drip irrigation) throughout the CRPZ during construction*

In addition, the Puyallup VMS requires the following:

*The CRPZ shall be shown on the final clearing (CFG and TESC) plan sheets (under the civil site development permit) and final landscape plan sheet. The CRPZ shall be protected using the city standard detail found in appendix 20.5. The case planner shall complete an inspection of the CRPZ prior to any work occurring on the development site. The CRPZ fencing and tree protection signage shall remain in place throughout all phases of construction. Other permit conditions, which shall be shown on the face of all CFG, TESC and final landscape plan sheets, include:*

- i. All trees shall be marked in the field. This may be done with a small aluminum tag, spray painted numbers using a stencil template, or other minimally invasive method that aids the site contractor and case planner in identifying each tree scheduled for retention.*
- ii. No work shall occur within the CRPZ, including, but not limited to, stockpiling materials or soil, parking equipment, placing solvents, or dumping any construction related debris, etc.*
- iii. Entry into the CRPZ or modification of the CRPZ area requires prior authorization from the city Planning Department.*
- iv. Roots cut shall be cut cleanly and immediately covered with wet burlap, wet wood chips/hog fuel, wet compost, etc. to prevent root desiccation.*
- v. Areas immediately adjoining the CRPZ that will remain a root zone area/landscaping area post-construction but impacts to that area of the root zone are needed for construction related activities shall be covered with 6-8 inches of coarse wood chip mulch/hog fuel and covered with plywood to protect the roots in that area.*

## **Closure**

The purpose of this Arborist Report 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. It is proposed that no significant trees are to be retained on the subject property given the need for full site utilization for the project to be economically feasible. However, the CRZ of 9 offsite significant trees are required to be protected based on the criteria provided in the Offsite Tree Protection section 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 5<sup>th</sup> Street Southeast 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.

Any trees to be retained shall be of good health and free from damage and defects. During and following site clearing and construction activities, trees designated for retention that are determined to be unhealthy or damaged and pose a hazard shall be removed. Due to the inherent risk of failure from severe weather, undetectable and hidden disease, defect, and damage of the trees to be retained, Soundview Consultants LLC assumes no liability of bodily injury, death, or property damage resulting from failure of the trees to be retained. 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 blue ink that reads "Alex Murphy".

Alex Murphy  
Planner & Project Manager

## References

- City of Puyallup Planning Division. 2022. *Vegetation Management Standards- Administrative Policies and Procedures*. November 2022.
- Dunster, Julian. 2017. *Tree Risk Assessment Manual Second Edition*. International Society of Arboriculture. Champaign, Illinois.
- Hitchcock, C.L. & A. Cronquist, Ed. by D. Gibling, B. Ledger, P. Zika, and R. Olmstead. 2018. *Flora of the Pacific Northwest, 2nd Edition*. U.W. Press and Burke Museum. Seattle, Washington.
- Miller, Robert. Hauer, Richard. Werner, Les. 2015. *Urban Forestry: Planning and Managing Urban Greenspaces, Third Edition*. Waveland Press Incorporated. Long Grove, Illinois.
- Pojar and MacKinnon. 1994. *Revised Plants of the Pacific Northwest Coast: Washington Oregon, British Columbia & Alaska*. Lone Pine. Vancouver, British Columbia, Canada.

# Attachment A – Tree Health and Condition Definitions

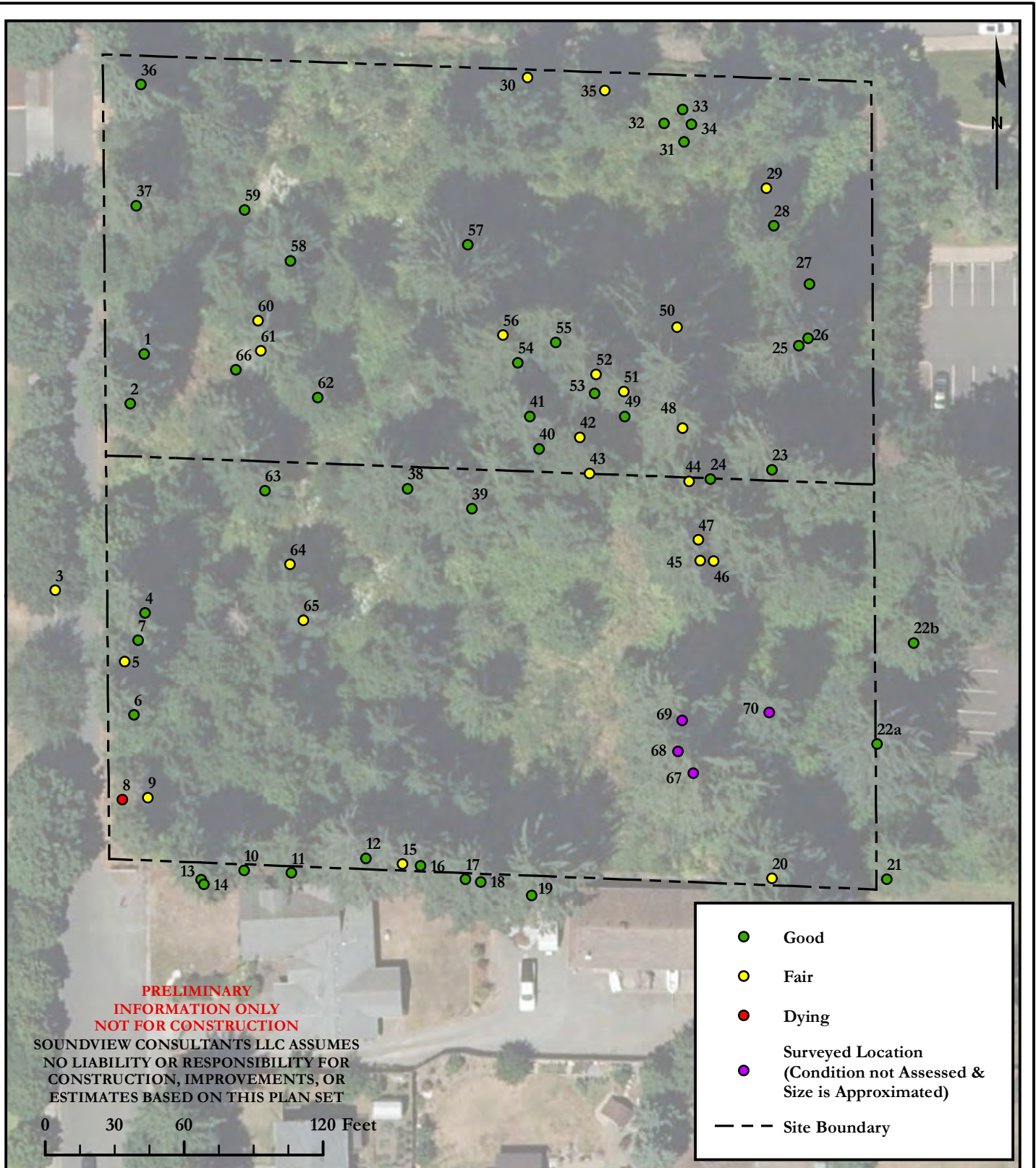
Condition	Symbol	Definition
Excellent	E	Nearly ideal specimen with excellent form and vigor
		Well-balanced and nearly symmetric crown
		Normal to excellent shoot elongation on new growth
		Little to no twig dieback or discoloration of leaves
		No apparent pest or disease problems
		Sound, solid trunk 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

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# TREE INVENTORY MAP




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5TH STREET SE  
 2525 5TH STREET SE  
 PUYALLUP, WA 98372  
 PIERCE COUNTY PARCEL NUMBERS:  
 0419036002 & 0419036003

DATE: 4/21/2023
JOB: 2567.0001
BY: DDS
SCALE: 1" = 60'
FIGURE NO. 1 of 2

# TREE INVENTORY DATA

TREE NUMBER	SPECIES	DBH	CONDITION	NOTES
1	Douglas fir	31	Good	
2	Douglas fir	37	Good	Fresh resin streaks on lower trunk -from broken branches & stress fractures
3	Big leaf maple	15	Fair	Multi-stem
4	Douglas fir	28	Good	
5	Douglas fir	22	Fair	80% primary branches, 20% epicormic branches
6	Douglas fir	26	Good	
7	Douglas fir	22	Good	
8	Western red cedar	31	Dying	Habitat tree, pileated woodpecker holes throughout
9	Douglas fir	27	Fair	
10	Douglas fir	21	Good	Offsite, no flag, CRZ may be affected by clearing limits
11	Douglas fir	27	Good	Offsite, no flag, CRZ may be affected by clearing limits, corrected lean
12	Douglas fir	30	Good	Onsite, no flag
13	Douglas fir	20	Good	Offsite, no flag, CRZ may be affected by clearing limits
14	Douglas fir	26	Good	Offsite, no flag, CRZ may be affected by clearing limits
15	Douglas fir	24	Fair	
16	Douglas fir	23	Good	Onsite, fence dividing tree from neighboring backyard
17	Douglas fir	16	Good	Offsite, inside yard, no flag, CRZ may be affected by clearing limits
18	Douglas fir	32	Good	Offsite, inside yard, no flag, CRZ may be affected by clearing limits, approximate DBH
19	Douglas fir	33	Good	Offsite, inside yard, no flag, CRZ may be affected by clearing limits, approximate DBH
20	Douglas fir	26	Fair	Small kink at 12 feet, right at fence line
21	Deodar cedar	21	Good	Offsite, not surveyed, CRZ may be affected by clearing limit
22a	Douglas fir	39	Good	Two vertical branches at 30 feet, recommend surveying location to confirm ownership
22b	Douglas fir	30	Good	Offsite, no flag, DBH approximate, CRZ likely affected by clearing limit
23	Douglas fir	33	Good	
24	Douglas fir	34	Good	
25	Douglas fir	35	Good	Asymmetric Crown, nearly basally joined with T 26
26	Douglas fir	34	Good	Asymmetric Crown, nearly basally joined with T 25, kink at 50 feet
27	Douglas fir	20	Good	
28	Douglas fir	30	Good	
29	Douglas fir	21	Fair	Corrected Lean
30	Douglas fir	23	Fair	Vertical branch at 20 feet
31	Douglas fir	17	Good	
32	Douglas fir	15	Good	
33	Douglas fir	20	Good	
34	Douglas fir	16	Good	
35	Douglas fir	12	Fair	Codominant stem
36	Douglas fir	37	Good	
37	Douglas fir	33	Good	
38	Douglas fir	33	Good	
39	Douglas fir	33	Good	Corrected Lean
40	Douglas fir	26	Good	
41	Douglas fir	30	Good	
42	Douglas fir	31	Fair	
43	Douglas fir	19	Fair	Corrected Lean
44	Douglas fir	30	Fair	
45	Douglas fir	30	Fair	
46	Douglas fir	21	Fair	
47	Douglas fir	31	Fair	
48	Douglas fir	25	Fair	
49	Douglas fir	29	Good	
50	Douglas fir	30	Fair	
51	Douglas fir	24	Fair	
52	Douglas fir	20	Fair	
53	Douglas fir	22	Good	
54	Douglas fir	29	Good	
55	Douglas fir	29	Good	Very slight lean to Northwest
56	Douglas fir	28	Fair	Assymetric crown
57	Douglas fir	33	Good	
58	Douglas fir	16	Good	
59	Douglas fir	16	Good	
60	Douglas fir	15	Fair	
61	Douglas fir	16	Fair	Cankorous growth at 4 feet with sap and oddly angled branches
62	Douglas fir	15	Good	Basally joined, good basal union
63	Douglas fir	16	Good	
64	Douglas fir	18	Fair	Codominant stem, tight union with included bark
65	Douglas fir	15	Fair	
66	Douglas fir	15	Good	
67	Douglas fir	32	N/A	Location and DBH collected by Survey
68	Douglas fir	28	N/A	Location and DBH collected by Survey
69	Douglas fir	38	N/A	Location and DBH collected by Survey
70	Douglas fir	20	N/A	Location and DBH collected by Survey



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5TH STREET SE

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PIERCE COUNTY PARCEL NUMBERS:  
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DATE: 4/21/2023

JOB: 2567.0001

BY: DDS

SCALE: NONE

FIGURE NO. 2 of 2

## Attachment C – Qualifications

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All field inspections, assessments, and supporting documentation, including this *Arborist Report* prepared for the *5<sup>th</sup> Street SE* project were prepared by Shauna Willett under the direction of Alex Murphy of SVC. Site investigations were completed by Shauna Willett. Report preparation was completed by Cody Berthiaume and final quality assurance was performed by Kyla Caddey.

### Alex Murphy

Planner & Project Manager

Professional Experience: 7 years

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Alex Murphy is a Planner and Project Manager with a background in land use planning, site planning & design, permitting, and project management. He has over 7 years of experience working for local jurisdictions in the Intermountain West and Pacific Northwest with an emphasis on maximizing opportunities for culturally and environmentally sensitive projects.

Alex earned a Bachelor of Landscape Architecture degree from Utah State University. He is a Certified Planner through the American Institute of Certified Planners and has received formal training in climate adaptation planning for coastal communities from NOAA. Mr. Murphy currently assists in wetland, stream, and shoreline delineations and fish and wildlife habitat assessments; conducts environmental code analysis; and prepares environmental assessment and mitigation reports. He also manages development projects, supporting clients through the regulatory and planning process for various land use proposals.

### Shauna Willett

Certified Arborist and Environmental Scientist

Professional Experience: 15 years

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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.

## **Cody Berthiaume**

Staff Scientist

Professional Experience: 5+ years

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Cody Berthiaume is a Staff Scientist with a background in wildlife research, ecological monitoring, and natural resource management. Cody's experience comes from a variety of seasonal positions, spanning multiple disciplines and ecosystems. Currently, he assists with tree assessments, wetland delineations, and report writing. Previously, he has contributed to the creation and implementation of field protocols regarding arboreal surveys and captures of red tree voles in working timber stands. Cody has also led remote field crews collecting standardized vegetation and soil data (AIM/IIRH), in conjunction with the Bureau of Land Management. Additionally, as an AmeriCorps volunteer, Cody has worked closely with NPS personnel assisting with invasive species removal and priority wildlife and habitat monitoring. Cody graduated from the University at Buffalo with a Bachelor of Science in Environmental Studies with a concentration in Environmental Resources & Management.

## **Kyla Caddey, PWS, Certified Ecologist**

Senior Environmental Scientist

Professional Experience: 8 years

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Kyla Caddey is a Senior Environmental Scientist with a diverse background in stream and wetland ecology, wildlife ecology and conservation, wildlife and natural resource assessments and monitoring, and riparian habitat restoration at various public and private entities. Kyla has field experience performing in-depth studies in both the Pacific Northwest and Central American ecosystems which included various environmental science research and statistical analysis. Kyla has advanced expertise in federal- and state-listed endangered, threatened, and sensitive species surveys and assessment of aquatic and terrestrial systems throughout the Puget Sound region. She has completed hundreds of wetland delineations and has extensive knowledge and interest in hydric soil identification. As the senior writer, she provides informed project oversight and performs final quality assurance / quality control on various types of scientific reports for agency submittal, including: Biological Assessments/Evaluations; Wetland, Shoreline, and Fish and Wildlife Habitat Assessments; Mitigation Plans, and Mitigation Monitoring Reports. She currently performs wetland, stream, and shoreline delineations and fish and wildlife habitat assessments; prepares scientific reports; and provides environmental permitting and regulatory compliance assistance to support a wide range of commercial, industrial, and multi-family residential land use projects.

Kyla earned a Bachelor of Science degree in Environmental Science and Resource Management from the University of Washington, Seattle with a focus in Wildlife Conservation and a minor in Quantitative Science. She has also completed additional coursework in Comprehensive Bird Biology from Cornell University. Ms. Caddey is a Certified Professional Wetland Scientist (PWS #3479) through the Society of Wetland Scientists and Certified Ecologist through the Ecological Society of America. She has received 40-hour wetland delineation training (Western Mtns, Valleys, & Coast and Arid West Regional Supplement), is a Pierce County Qualified Wetland Specialist and Wildlife Biologist, and is a USFWS-approved Mazama pocket gopher survey biologist. Kyla has been formally trained through the Washington State Department of Ecology, Coastal Training Program, and the Washington Native Plant Society in winter twig and grass, sedge, and rush identification for Western WA; Using the Credit-Debit Method in Estimating Wetland Mitigation Needs; How to Determine the



Ordinary High Water Mark; Using Field Indicators for Hydric Soils; How to Administer Development Permits in Washington Shorelines; Puget Sound Coastal Processes; and Forage Fish Survey Techniques. Additionally, she has received formal training in preparing WSDOT Biological Assessments.