

SUF

SOUND URBAN FORESTRY

Appraisals, Planning, Urban Landscape Design and Management

Trails End Park

1500 79th Avenue SE
Tumwater, Washington 98501

Tree Protection Plan

Prepared for: City of Tumwater, Don Carney, Capital Projects Manager

Prepared by: Sound Urban Forestry, Kevin McFarland, Consulting Urban Forester
City of Tumwater Tree Protection Professional

Date: 12/6/2023

This report has been developed as part of the proposed 15.85-acre City of Tumwater Trails End Park project at 1500 79th Ave SE, in Tumwater, Washington. This plan will satisfy the requirements as specified by the City's Protection of Trees and Vegetation Ordinance (TMC 16.08) and Development Guidelines and Standards.

I. Overall Site & Vegetation Description

The site was previously cleared and developed as an equestrian facility. A large stable and outdoor arena are all that remain. The majority of the parcel is open field grass with some Scotch broom and Himalayan blackberry. There are scattered areas of volunteer and planted trees.

II. Inventory of Trees

A 100% inventory of the trees within the parcel and adjacent ROW was conducted on November 16, 2023. This information is presented in the table below. The approximate locations are indicated on the included aerial. Trees that are marked with an asterisk do not count towards tree retention calculations due to condition or species (TMC 16.08.070.R1) or the fact that they are off-site.

Table 1. Inventory of Trees within Property

ID	Species	DBH	Condition	Comments
*1	Kwanzan Cherry	14"	Fair	Off-site, street tree along Trails End Dr.
*2	Kwanzan Cherry	13"	Fair	Off-site, street tree along Trails End Dr.
*3	Kwanzan Cherry	17"	Poor	Off-site, street tree along Trails End Dr. Multi-stem, topped for line clearance.
*4	Kwanzan Cherry	15"	Fair	Off-site, street tree along Trails End Dr.
*5	Kwanzan Cherry	12"	Fair	Off-site, street tree along Trails End Dr.
*6	Kwanzan Cherry	16"	Poor	Off-site, street tree along Trails End Dr. Topped for line clearance.
*7	Kwanzan Cherry	11"	Poor	Off-site, street tree along Trails End Dr. Decayed main stem.
*8	Kwanzan Cherry	13"+14"	Poor	Off-site, street tree along Trails End Dr. Topped for line clearance.
*9	Kwanzan Cherry	14"	Poor	Off-site, street tree along Trails End Dr. Topped for line clearance.
*10	Kwanzan Cherry	13"	Fair	Off-site, street tree along Trails End Dr.
*11	Kwanzan Cherry	6"	Poor	Off-site, street tree along Trails End Dr. Infected with brown rot.

ID	Species	DBH	Condition	Comments
*12	Kwanzan Cherry	8"	Poor	Off-site, street tree along Trails End Dr.
*13	Kwanzan Cherry	14"	Fair	Off-site, street tree along Trails End Dr.
*14	Kwanzan Cherry	10"	Poor	Off-site, street tree along Trails End Dr. Poor structure.
*15	Kwanzan Cherry	13"	Fair	Off-site, street tree along Trails End Dr.
16	Big Leaf Maple	5"+8"	Good	
17	Big Leaf Maple	4"+3"	Fair	
18	Big Leaf Maple	6"+6"	Fair	
19	Big Leaf Maple	10"	Good	
20	Big Leaf Maple	8"	Good	
21	Black Locust	10"	Fair	
22	Black Locust	8"	Fair	
23	Black Locust	9"	Fair	Multi-stem.
24	Black Locust	26"	Fair	Multi-stem.
25	Black Locust	12"+3"	Fair	
26	Black Locust	21"	Fair	Multi-stem.
27	Black Locust	20"	Good	
28	Cottonwood	10"	Good	
29	Cottonwood	12"+9"	Fair	
30	Cottonwood	8"	Fair	
31	Cottonwood	12"	Fair	
32	Cottonwood	14"	Fair	
33	Cottonwood	12"	Good	
34	Cottonwood	8"	Good	
35	Cottonwood	8"	Good	
36	Douglas Fir	24"+25"	Fair	
37	Oregon Ash	22"	Good	
38	Oregon Ash	18"	Good	
39	Oregon Ash	17"	Good	
40	Cottonwood	13"	Good	
41	Cottonwood	36"	Good	
42	Cottonwood	32"	Fair	
43	Cottonwood	28"	Fair	
44	Cottonwood	24"	Good	
45	Oregon Ash	22"	Good	
46	Cottonwood	24"	Good	
47	Oregon Ash	24"	Good	
48	Oregon Ash	22"	Good	
49	Western Red Cedar	20"	Good	
50	True Fir	20"	Fair	
51	Douglas Fir	28"	Good	

ID	Species	DBH	Condition	Comments
52	Western Red Cedar	30"	Good	
53	Western Red Cedar	18"	Good	
54	Western Red Cedar	20"	Good	
55	Western Red Cedar	18"	Good	
56	Western Hemlock	22"	Good	
57	Red Alder	20"	Fair	
58	Red Alder	18"	Good	
59	Red Alder	16"	Fair	
60	Western Hemlock	16"	Good	
61	Red Alder	16"	Good	
62	Grand Fir	24"	Good	
63	Douglas Fir	22"	Good	
64	Red Alder	18"	Good	
65	Western Red Cedar	22"	Good	
66	Grand Fir	22"	Fair	
67	Grand Fir	20"	Good	
68	Douglas Fir	26"	Good	
69	Willow	23"	Fair	Multi-stem.
70	Big Leaf Maple	28"	Good	
71	Douglas Fir	30"	Good	
72	Douglas Fir	32"	Good	
73	Douglas Fir	28"	Good	
74	Douglas Fir	22"	Good	
75	Douglas Fir	24"	Good	
76	Douglas Fir	22"	Good	
77	Douglas Fir	30"	Good	
78	Douglas Fir	26"	Good	
79	Douglas Fir	18"	Good	
80	Douglas Fir	20"	Good	
81	Douglas Fir	26"	Good	
82	Douglas Fir	26"	Good	
83	Douglas Fir	24"	Good	
84	Douglas Fir	20"	Good	
85	Douglas Fir	16"	Fair	
86	Douglas Fir	30"	Good	
87	Douglas Fir	28"	Good	
88	Douglas Fir	31"	Good	
89	Douglas Fir	22"	Good	
*90-104	Callery Pear	Avg. 14"	Fair to good	Off-site. Street trees along Arab Drive.
105	Oregon White Oak	42"	Fair	
106	Kwanzan Cherry	8"	Fair	
*107	Kwanzan Cherry	6"	Poor	
*108	Kwanzan Cherry	6"	Poor	

ID	Species	DBH	Condition	Comments
*109	Kwanzan Cherry	8"	Dead	
110	Kwanzan Cherry	8"	Fair	
111	Kwanzan Cherry	14"	Fair	
112	Kwanzan Cherry	12"	Fair	
113	Kwanzan Cherry	14"	Fair	
114	Kwanzan Cherry	16"	Fair	
115	Kwanzan Cherry	14"	Fair	
116	Kwanzan Cherry	15"	Fair	
117	Kwanzan Cherry	16"	Fair	
118	Kwanzan Cherry	18"	Fair	
*119	Kwanzan Cherry	12"	Poor	
120	Kwanzan Cherry	14"	Fair	
121	Kwanzan Cherry	12"	Fair	

Landmark Trees

Tree #105 has been identified as a 'Landmark' tree by the City. This tree will remain and be protected.

Off-Site Trees

In addition to the birch trees along Trails End Drive, there are several young, 10-12" Douglas firs located near the northwest corner of the property. These trees will not be impacted by the project.

III. Tree Retention Calculations

All trees except those along the Trails End Drive and 79th Ave frontages will be retained.

Table 4. Summary of Tree Retention Calculations

Gross Acreage	~15.85-acres
Buildable Area	8.62-acres
Total Trees Within Site (Table 1)	88 Trees
20% Tree Retention	18 Trees
12 Trees/ Acre Retention	*103 Trees
Proposed Tree Retention	75 Trees
Shortfall on Required Retention	28 Trees
Required Replanting (1:1)	28 Trees

*This is the greater amount and therefore required by TMC

IV. Replanting

This project falls short of the minimum retention by 28 trees. There is ample room for replanting within the kettle area to be preserved.

V. Tree Protection

I am recommending tree protection fencing be installed around Trees #16-25, #28-35, #71-89 and #105. The approximate locations are shown in orange on the attached aerial. The exact locations will be determined prior to any clearing or grading during an on-site meeting between myself and the project supervisor/contractor.

The fencing will:

- Meet the standards of the City of Tumwater;
- Be installed as shown prior to any site work;
- Remain in place the entire duration of the project. If the fencing needs to be temporarily moved, I will be contacted at least 48 hours in advance to review with the contractor. No equipment, supplies or material will be allowed within the fenced areas.

Professionally Submitted,



Kevin M. McFarland, Member
ISA Certified Arborist PN-0373 & ISA Tree Risk Assessment Qualified
Sound Urban Forestry, LLC

Approximate Locations of Inventoried Trees and Tree Protection Fencing

