



SOUND URBAN FORESTRY

Appraisals, Planning, Urban Landscape Design and Management

Olympia High School

1302 North Street SE

Olympia, WA 98501

Level II Soil and Vegetation Protection Report

Prepared for: Bob Droll, Landscape Architect

Olympia School District

Prepared by: Kevin M. McFarland, SUF
Consulting Forester/Certified Arborist

Date: 9/7/18

Introduction

The following Level II SVP has been developed as part of the proposed Building and Athletic Field Addition project at Olympia High School. This Plan will fulfill the requirements as outlined in the OMC 16.60 Tree, Soil and Natural Vegetation Protection and Replacement as well as the comments listed in the City's pre-submission worksheet dated 7/06/2018.

Section 1 - Existing Conditions and Project Narrative

The 52.35-acre site is described as tax parcel #09890050000. It was previously developed and includes Olympia High School and Pioneer Elementary. The majority of the site is impacted by buildings, parking and athletic fields with very little natural area. The exception is the triangular shaped portion to the east of Henderson Blvd. which is an old Christmas tree farm.

The proposed project involves multiple building additions, several new parking areas, new tennis courts and a new synthetic playfield.

A total of 59 trees within the property have been identified as removals based on direct conflict with the improvements (see aerial below). Two public street trees will also be removed due to a new driveway onto North Street. They are 2 Norwegian sunset maples both measuring 16" and in good condition. It should be noted that I was not provided a site plan with the surveyed locations of the trees on site and these numbers are as accurate as I could determine. It should also be noted that I was not provided a copy of the grading plans and that impacts to some trees may be greater than anticipated.

Figure 1 – Olympia High School Parcel with Areas of Tree Removals Circled



Table 1. Inventory of Trees Proposed for Removal

Species	Diameter Range	Number of Trees	Tree Unit Value
Linden	1-6"	4	4
Linden	6-12"	3	4.5
Linen	14"	1	2
Norwegian Sunset Maple	1-6"	4	4
Norwegian Sunset Maple	6-12"	9	13.5
Norwegian Sunset Maple	14"	2	4
Sweetgum	6-12"	9	13.5
Japanese Tree Lilac	1-6"	1	1
Lavelle Hawthorn	1-6"	2	2
Redspire Pear	6-12"	1	1.5
Pine	1-6"	4	4
Serviceberry	6-12"	2	3
Norway Maple	1-6"	4	4
Sugar Maple	6-12"	7	10.5
Sugar Maple	14"	1	2
Kousa Dogwood	1-6"	2	2
Styrax	1-6"	3	3
			Total = 78.5

Section 2 Tree Density Calculations

As stated in the pre-submission worksheet dated 7/06/18, the tree density units presented in the 2016 Pioneer Elementary Level IV Tree Plan can be used for this report.

Size of Parcel = 52.35-acres

Required Tree Units (52.35 x 30) = 1,570

Total Units within Parcel (as of report dated 8/4/16) = 2,744

Units Proposed for Removal = 79

Units to Remain within Parcel = 2,665

This parcel will remain above the minimum tree density

Section 3 Tree and SVPA Protection

Tree protection fencing will be necessary at several locations throughout the property. Without having the locations of the trees shown on the site plans, the exact positions of the fencing are difficult to determine at this time. I have recommended two locations where fencing will definitely be needed but additional locations may be needed. In addition to following the guidelines on the City's fencing details, which have been attached, the following measures are recommended:

- Prior to any work, I will meet the contractor on site to review the placement of the fencing and the expected sequence.
- Prior to any grading or clearing, I will review the installed fencing and notify the City that it is acceptable.
- I will be notified once the project is complete to assess the retained trees for any damage and notify the City with my findings.

Section 4 Planting and Mitigation

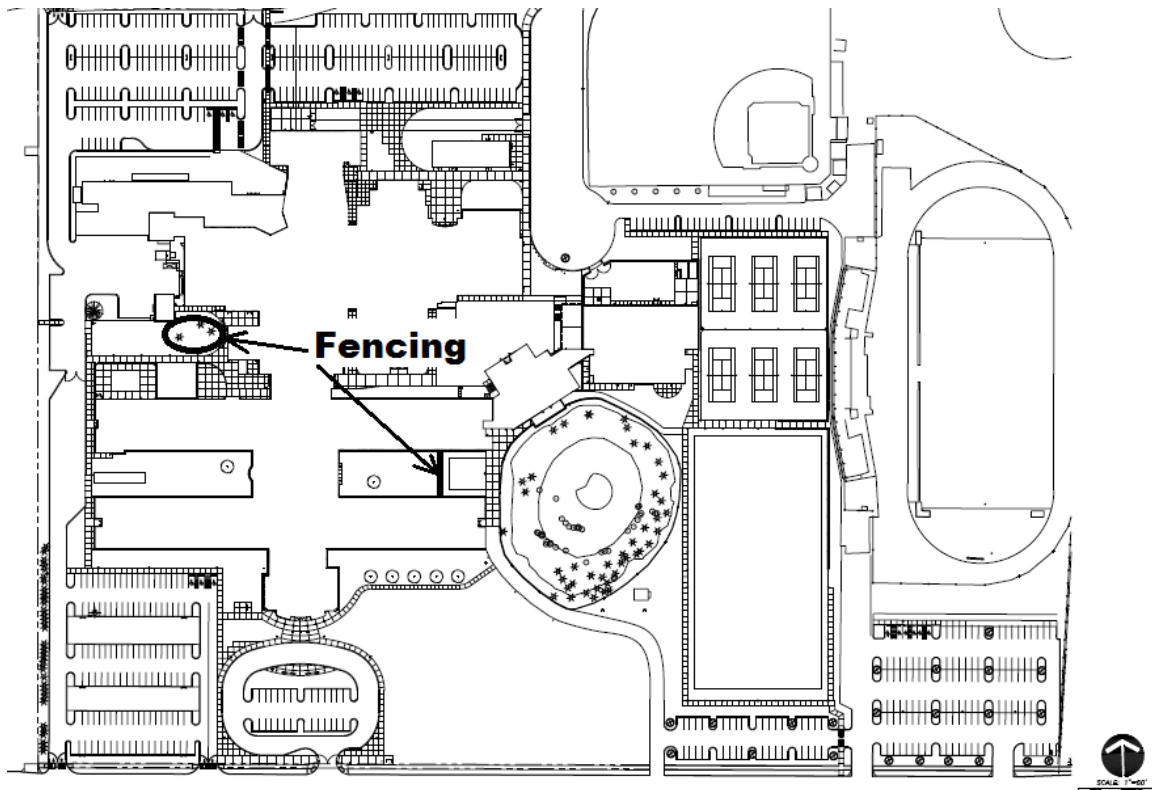
This project remains above the minimum required by the City and planting and mitigation will not be necessary.

Professionally Submitted,



Kevin M. McFarland, Principal
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Minimum Recommended Tree Protection Fencing



Chapter 7

Tree Protection Measures

7.1 Placing Materials near Trees

No person may conduct any activity within the protected area of any tree designated to remain including but not limited to parking equipment, placing solvents, storing building material and soil deposits, dumping concrete washout and locating burn holes

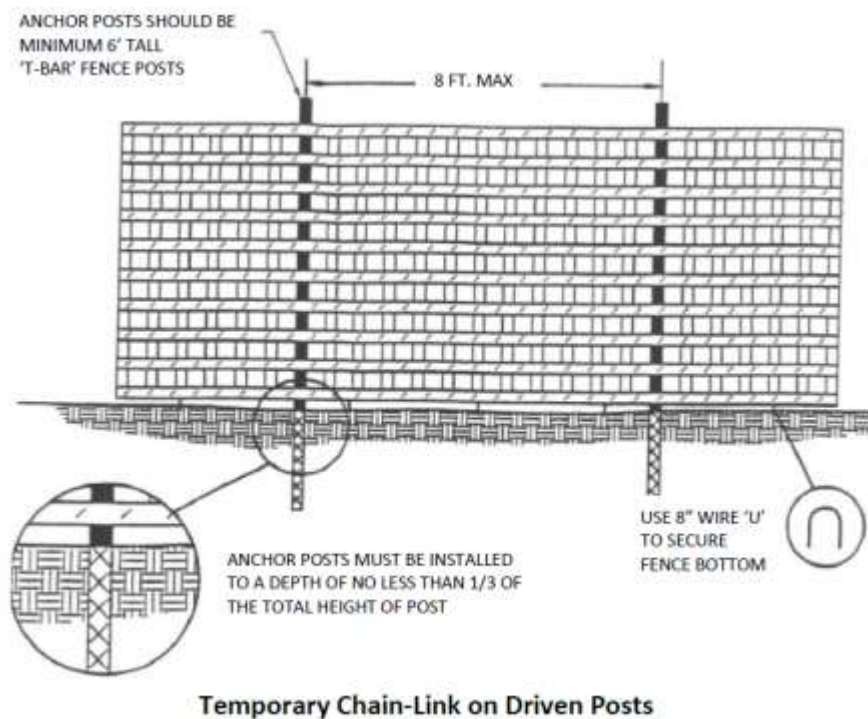
7.2 Attachments to Trees

During construction no person shall attach any object to any tree designated for protection

7.3 Protective Barrier

Before development, land clearing, filling or any land alteration for which a Tree Removal Permit is required, the applicant:

- Shall erect and maintain readily visible protective tree fencing along the outer edge and completely surrounding the protected area of all protected trees or groups of trees. Fences shall be constructed of chain link and at least four feet high, unless other type of fencing is authorized by the Urban Forester



- May be required to cover with mulch to a depth of at least six (6) inches or with plywood or similar material the areas adjoining the critical root zone of a tree in order to protect roots from damage caused by heavy equipment
- Shall prohibit excavation or compaction of earth or other potentially damaging activities within the barriers
- May be required to minimize root damage by excavating a two (2) foot deep trench to cleanly sever the roots of trees to be retained
- Shall maintain the protective barriers in place until the Urban Forester authorizes their removal or a final Certificate of Occupancy is issued, whichever occurs first
- Shall ensure that any landscaping done in the protected zone subsequent to the removal of the barriers shall be accomplished with light machinery or hand labor

7.4 Grade

1. The grade shall not be elevated or reduced within the critical root zone of trees to be preserved without the Urban Forester's authorization. The Urban Forester may allow coverage of up to one-half of the area of the Tree's critical root zone with light soils (no clay) to the minimum depth necessary to carry out grading or landscaping plans, if it will not imperil the survival of the tree. Aeration devices may be required to ensure the tree's survival
2. If the grade adjacent to a preserved tree is raised such that it could slough or erode the tree's critical root zone, it shall be permanently stabilized to prevent suffocation of the roots
3. The applicant shall not install an impervious surface within the critical root zone of any tree to be retained without the authorization of the Urban Forester. The Urban Forester may require specific construction methods and/or use of aeration devices to ensure the tree's survival and to minimize the potential for root induced damage to the impervious surface
4. To the greatest extent practical, utility trenches shall be located outside of the critical root zone of trees to be retained. The Urban Forester may require that utilities be tunneled under the roots of trees to be retained if the Urban forester determines that trenching would significantly reduce the chances of the trees survival
5. Trees and other vegetation to be retained shall be protected from erosion and sedimentation

7.5 Directional Felling

Directional felling of trees shall be used to avoid damage to trees designated for retention

7.6 Additional Requirements

The Urban Forester may require additional tree protection measures which are consistent with accepted urban forestry practices