

STREET TREES INFORMATION & STANDARDS

The intent of this packet is to provide information regarding the planting, pruning, or removal of Street trees¹ in the City of Port Angeles, per the Port Angeles Municipal Code (PAMC) Section 11.13.050.

Prior to any planting, pruning, or removal of Street trees, approval for the work must be obtained from the Community Forester and the Public Works and Utilities Department. In order to receive approval for any proposed work, interested parties must complete the following requirements:

1. Submit for review a plan for the proposed work, including project narrative, project site, tree species, and planting/pruning/removal techniques;
2. Locate all utilities and potential underground hazards; and
3. Obtain a Right-of-way Use Permit from the Department of Public Works and Utilities, per Section 11.12 of the PAMC (See enclosed).

For major pruning or removal of a large / significant Street Tree, the applicant must demonstrate that the proposed work is necessary for one or more of the following reasons:

1. The tree, or portion of the tree, proposed for removal is deemed a hazard tree by a Certified Arborist or Community Forester;
2. The tree, or portion of the tree, proposed for removal is dead;
3. The tree, or portion of the tree, proposed for removal is diseased or infested with an invasive insect pest and no remedial treatment is available; or
4. The retention of the tree will have a material, adverse, and unavoidable impact on the use of the property.

The following conditions are exempt from the above requirements:

1. Work required as a result of emergencies involving, but not limited to, windstorms, floods, freezes, or other natural disasters.
2. Work required to maintain and protect public safety, public utilities, and infrastructure when deemed necessary by the Director of Public Works and Utilities.
3. Other requirements as recommended by the Community Forester.

Where new Street trees cannot be planted due to portions of right-of-way having been previously paved or otherwise rendered unsuitable to planting trees, a fee-in-lieu of planting is required. Such fee shall be determined by the Community Forester per City Policy and deposited into the Community Forestry Fund.

When Street trees are removed, they shall be in accordance with the following requirements:

1. Trees being removed that are less than 6 inches in diameter (at 4.5 inches above ground level) shall be replaced with 1 new trees.
2. Trees being removed that are greater than 6 inches in diameter (at 4.5 inches above ground level) shall be replaced with 2 new trees.
3. All stumps of Street trees must be removed so that the top of the stump shall not project above the surface of the ground.

An applicant may appeal any decision made by the Community Forester to the Director of Public Works and Utilities in writing, within 30 days of the decision being rendered. Additionally, the applicant may appeal the decision of the Public Works and Utilities Director to the City Manager within 30 days of the Director's decision.

For more information contact the Public Works and Utilities Department at 360.417.4812 or rves@cityofpa.us

¹ Street trees are any trees within the public right-of-way.

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3I. STREET TREES AND LANDSCAPING

3I.01 GENERAL

It is the goal of the City to plant street trees on arterial streets in the City and in other specified areas by parks. The street trees and landscaping in Table D shall be employed when required along public right-of-way.

3I.02 TREE STANDARDS

Trees planted in the public right-of-way shall meet ANSI Z60 standards for nursery stock, selected from the list of approved trees in Table D of this section, and be a minimum 3-inch caliper, measured 6 inches above the base. See Standard Detail for proper planning techniques.

3I.03 LOCATION

If a planting strip is available between the curb and sidewalk, trees shall be located midway between the curb and sidewalk. Trees shall be spaced approximately 35 feet on center, as appropriate based on mature canopy diameter/spread specified in Table D, starting 15 feet from the property line, and may be in the vision triangle. If the tree is in the vision triangle the limbs shall be pruned to a height of 6 feet up measured from the ground. Tree spacing may be adjusted slightly to allow a 10 foot clear zone on either side of a driveway.

Additional standards or requirements may be included in the applicable standard detail(s) in the appendices of this chapter.

3I.04 MAINTENANCE

All developments required to plant street trees will also be required to maintain the trees for the life of the development, regardless of ownership.

TABLE D
APPROVED STREET TREES

Common Name	Botanical Name	Height/Spread*	Comments
LARGE TREES	Large trees should be located in planting strips over 6 feet in width.		
American Beech	<i>Fagus grandifolia</i>	50/40	More difficult to find than the European, but worth the effort
European Beech	<i>Fagus sylvatica</i>	100/60	
Thornless Honey Locust	<i>Gleditsia triacanthos finermis</i>	80/40	
Sweet Gum	<i>Liquidambar styraciflua</i>	80/40	Careful with this around hardscape: powerful roots; also burr-like fruit not pedestrian-friendly
Tulip Tree	<i>Liriodendron tulipifera</i>	90/40	

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London Plane	Platanus x acerifolia	100/65	Use only in areas with large planting strips.
Burr Oak	Quercus macrocarpa	80/40	
Pin Oak	Quercus palustris	70/40	Very good urban tree. Strong branch structure.
Willow Oak	Quercus phellos	70/50	
Red Oak	Quercus rubra	75/70	
Shumardii Oak	Quercus shumardii	70/50	
Accolade Elm	Ulmus japonica x wilsoniana 'Morton'	70/60	Resistant to DED & Elm Yellows
Emerald Sunshine Elm	Ulmus propinqua 'JFS-Bieberich'	50/35	Resistant to DED & Elm Yellows; needs a firm hand when young to develop good structure

MEDIUM SIZE TREES	Medium trees are typically the best choice for most urban streets.		
Miyabei Maple	Acer miyabei	50/40	Very hardy
Hedge Maple	Acer campestre	30/30	'Queen Elizabeth' has better form than the straight species
Sugar Maple	Acer saccharum	60/35	
Red Horse Chestnut	Aesculus carnea	40/30	May produce seeds that interfere with walking.
Horse Chestnut	Aesculus hippocastanum	60/40	May produce seeds that interfere with walking.
European Hornbeam	Carpinus betulus	50/25	
American Hornbeam	Carpinus caroliniana	35/30	
Western Catalpa	Catalpa speciosa	60/35	Look for seedless varieties to avoid the messy pods
Katsuratree	Cercidiphyllum japonicum	40/40	Needs irrigation to establish well
Turkish Hazelnut	Corylus colurna	45/30	Very tough & attractive
Swedish Columnar Aspen	P. tremula 'Erecta'	40/10	Narrow columnar form
Ginkgo (male only)	Ginkgo biloba	40/25	Avoid female trees. They produce fruit with an objectionable odor.
Kentucky Coffee Tree	Gymnocladus dioica	50/35	Seedpods may be objectionable (big & messy); 'Espresso' is a seedless variety
Mountain Silverbell	Halesia monticola	40-60	
Osage Orange	Maclura pomifera	35/35	Drought-tolerant & tough; 'White Shield' is fruitless and thornless
Tupelo	Nyssa sylvatica	60/40	
Hop Hornbeam	Ostrya virginiana	40/30	Very handsome in a quiet way

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Cork Tree	Phellodendron amurense	40/35	'Eye Stopper' and 'His Majesty' are seedless
Swamp Oak	Quercus bicolor	60/45	
Scarlet Oak	Quercus coccinea	60/45	
English Oak	Quercus robur	60/40	
Oregon White or Garry Oak	Quercus garryana	65/45	Native to Olympic Peninsula
Silver Linden	Tilia tomentosa	60/40	
Frontier Elm	Ulmus 'Frontier'	40/30	Good burgundy fall color; resistant to DED & Elm Yellows; needs a firm hand when young to develop good structure
Japanese Zelkova	Zelkova serrata	60/40	
Japanese Pagoda Tree	Sophora japonica	45/35	

The following Small Size Trees may be allowed when limiting site conditions warrant their use and the choice is approved by the City Engineer:

SMALL SIZE TREES Not generally recommended	Small trees should only be planted in locations of limited space, either narrow planting area or overhead obstruction. Small trees require specific approval for planting as street trees.		
Rocky Mountain Maple	Acer glabrum	20/15	
Wasatch Maple	Acer grandidentatum	25/20	Small cousin to sugar maple
Trident Maple	Acer buergerianum	25/30	
David Maple	Acer davidii	20/35	
Amur Maple	Acer ginalla	20/20	Should only be used under wires.
Paperbark Maple	Acer griseum	25/20	Should only be used under wires. VERY SLOW growth.
Serviceberry	Amelanchier sp.	25/18	Be sure to use TREE FORM varieties only: Robin Hill, Spring Flurry, Snowcloud are all good
Japanese Hornbeam	Carpinus japonica	30/35	
Eastern Redbud	Cercis canadensis	25/30	
Yellow Wood	Cladrastis lutea	35/25	
Flowering Dogwood	Cornus florida	20/15	
Chinese Kousa Dogwood	Cornus kousa 'Chinensis'	20/20	Produce fruit
Cornelian Cherry Dogwood	Cornus mas	25/20	Produce fruit
Venus Dogwood	C. (kousa x nuttalli) x kousa	25/20	

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Washington Hawthorn	<i>Crataegus phaenopyrum</i>	25/20	May produce fruit that becomes objectionable to walk on. Produces significant thorns.
Carriere Hawthorns	<i>Crataegus lavalleyi</i>	25/20	
Witch Hazel	<i>Hamamelis</i> spp.	20/20	
Golden Rain	<i>Koelreuteria paniculata</i>	30/30	
Golden Chain Tree	<i>Laburnum x watereri</i> 'Vossii'	30/20	Seed/fruit is toxic to children; should not be used in parks or near schools
Amur Maackia	<i>Maackia amurensis</i>	30/30	
Wada's Memory Magnolia	<i>Magnolia x kewensis</i> 'Wada's Memory'	30/20	Deciduous, great bloom
Galaxy Magnolia	<i>Magnolia</i> 'Galaxy'	30/15	One of the best forms for deciduous magnolias
Star Magnolia	<i>Magnolia stellata</i>	20/10	
Sourwood	<i>Oxydendrum arboreum</i>	25/20	
Persian Parrotia	<i>Parrotia persica</i>	30/20	
Canada Red Chokecherry	<i>Prunus virginiana</i>	25/25	
Stewartia	<i>Stewartia</i> sp.	30/20	Beautiful elegant tree; many species
Snowbell	<i>Styrax</i> sp.	25/20	Two species; a couple good cultivars with better form
Ivory Silk Japanese Tree Lilac	<i>Syringe reticulata</i> 'Ivory Silk'	20/15	A true tree-form lilac

* All height and spread dimensions are for trees at approximately 30 to 50 years of age and are listed for growth expected in urban areas. The same tree in a forested or more natural setting is likely to be larger.

3I.05 PROHIBITED TREES

The following trees are too large for most planting areas. They may have aggressive and invasive root systems. Some may have weak-wood that tend to break apart at relatively young age. Others are notorious for damage to curbs and sidewalks.

(Some of these trees may be used appropriately in landscapes without problems)

Large evergreens	Firs, cedars, hemlocks, spruce, pine.
Cottonwood or Poplars	<u>Populous</u> sp.
Willows	<u>Salix</u> sp.
Silver Maple	<u>Acer saccharinum</u>
Norway Maple	<u>Acer platanoides</u>
Tree-of-Heaven	<u>Ailanthus altissima</u>
American Sycamore	<u>Plantanus occidentalis</u>
Palm trees	All species

These trees are severely attacked by insects or diseases that weaken or defoliate branches, decrease tree vigor and shorten lifespan.

Box Elder	<u>Acer negundo</u>
Black Locust	<u>Robinia pseudoacacia</u>
Crabapples	<u>Malus</u> sp.
American Sycamore	<u>Plantanus occidentalis</u>

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<u>American, Green, or White Ash</u>	<u>Fraxinus sp.</u>
<u>Flowering Cherry</u>	<u>Prunus sp.</u>
<u>Lindens (little & large leaf varieties)</u>	<u>Tilia cordata & platyphyllos</u>
<u>European White Birch</u>	<u>Betula pendula</u>

These trees either produce and drop large or messy fruit that may cause hazardous conditions for pedestrians and extra clean-up work for the homeowner/resident or are not structurally sound and may break apart.

Horsechestnut	Aesculus hippocastanum
Black Walnut	<u>Juglans nigra</u>
Fruit bearing trees	Crabapples, apples, cherries, plums, apricots, or pears
Mountain Ash	<u>Sorbus sp.</u>
Hawthorn	Crataegus sp.
Ornamental pear	Pyrus calleryana

The following trees have been overplanted and comprise a larger percentage of the City's street trees than is recommended for long term urban forest sustainability:

Purple Leaf Plum
Flowering Cherries
Red Maples

3I.06 EXCEPTIONS

Exceptions to this section may be made by City Engineer on a site-specific basis. Exceptions include but are not limited to: vegetation within stormwater BMPs/ facilities, screening an industrial area; planting around historical sites; maintaining natural vegetation that better serves as street landscaping or beautification.



STANDARD DETAIL

NOTES:

1. PLANTING INCLUDES REMOVAL OF STAKES ONE YEAR AFTER INSTALLATION.
2. SHAPE SOIL SURFACE TO PROVIDE 4' DIA WATERING RING.
3. ADJUST TREE TIES DURING ESTABLISHMENT TO ALLOW ROOM FOR GROWTH (1" SLACK).
4. ROOT BARRIER REQUIRED ALONG EDGE OF ROADWAY, CURB, DRIVEWAY, TRAIL, SIDEWALK, OR OTHER STRUCTURES WHERE ROOT BALL IS LESS THAN TWO AND ONE HALF FEET; PLACE VERTICAL ROOT BARRIER AS SHOWN. INSTALL ROOT BARRIERS FOR NEWLY PLANTED TREES ONLY.

STAKE TREE WITH (2) TREATED 2"Ø LODGEPOLE PINE DOWELED TREE STAKES (8'-0" LENGTH) LOOP EACH TIE AROUND HALF TREE LOOSELY TO PROVIDE 1" SLACK FOR TRUNK GROWTH.

"CHAINLOCK" OR EQUAL TREE TIE MATERIAL (1" SIZE) NAIL OR STAPLE TREE TIE MATERIAL TO STAKE TO HOLD VERTICALLY. LOOP EACH TIE AROUND HALF TREE LOOSELY TO PROVIDE 1" SLACK FOR TRUNK GROWTH.

2"-3" MULCH DEPTH (TAPERED AT TRUNK)

MULCH TREE PIT MIN 5'-0" LENGTH X FULL PLANTING STRIP WIDTH BETWEEN CURB AND SIDEWALK (FOR PLANTING STRIPS LESS THAN 6'-0" WIDE) OR PROVIDE 5'-0" DIA MULCH RING FOR PLANTING STRIPS WIDER THAN 6'-0".

SIDEWALK

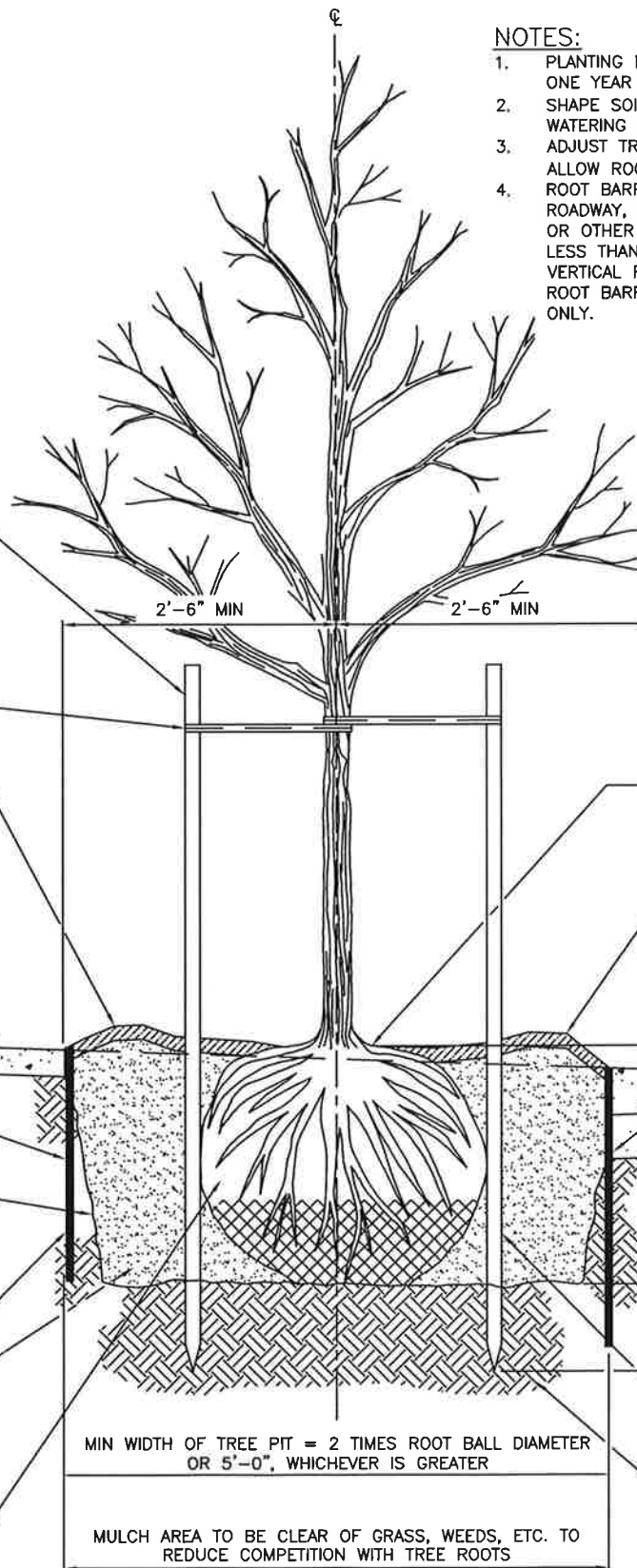
18" ROOT BARRIER AT SIDEWALK.

ROUGHEN SIDES OF PLANTING HOLE MAXIMIZE EXCAVATED AREA WITHOUT UNDERMINING ADJACENT PAVING/CURB.

ROOT BARRIER; PLACE AT EDGE OF PAVEMENT/SIDEWALK/ETC.; PLACE PRIOR TO PLACEMENT OF NEW SIDEWALK OR CURB TO PREVENT UNDERMINING.

COMPOST AMENDED SOIL.

REMOVE ALL WIRE, STRINGS, AND OTHER NON-BURLAP MATERIAL; AND REMOVE BURLAP FROM TOP 2/3 OF ROOTBALL MINIMUM. REMOVE ENTIRELY WHEN DIRECTED BY THE ENGINEER.



SET TOP OF ROOT CROWN 2" ABOVE ADJACENT CURB & SIDEWALK GRADE.

3" TO 4" HIGH WATERING RING (SEE NOTE 2)

24" ROOT BARRIER AT CURB WHEN SHOWN ON THE DRAWINGS.

TREE PIT DEPTH = ROOT BALL DEPTH (MEASURE BEFORE DIGGING TO AVOID OVEREXCAVATION).

DRIVE STAKES 6" TO 1'-0" INTO UNDISTURBED SOIL BELOW ROOT BALL.

DRIVE STAKE AT ROOT BALL EDGE (TYP)(SEE NOTE 1)

UNDISTURBED SUBGRADE (PROVIDES FIRM BASE SO THAT ROOT BALL WILL NOT SINK.

MIN WIDTH OF TREE PIT = 2 TIMES ROOT BALL DIAMETER OR 5'-0", WHICHEVER IS GREATER

MULCH AREA TO BE CLEAR OF GRASS, WEEDS, ETC. TO REDUCE COMPETITION WITH TREE ROOTS

APPROVED BY CITY ENGINEER :	DATE : 1/1/17 REVISED :	TREE PLANTING WITHIN PLANTING STRIP
FILE NAME: TREE IN PLANT STR		