

13.32.010

Chapter 13.32

STANDARD SPECIFICATIONS FOR  
PUBLIC WORKS CONSTRUCTION

Sections:

13.32.010 Adopted by reference.

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(Scappoose 9/03)  
Approved Street Trees

182-4

Street trees under 25 feet tall and less than 16 feet wide at maturity to be spaced no further than 15 feet apart in planting areas four feet wide or greater containing no less than 16 square feet of porous surface:

Tree Species	Height/Spread	Structure	Foliage	Flowers, fruit and other special interest
Rocky Mountain Glow Maple (Acer grandidentatum)	25'/15'	Oval	Dark Green turning bright red	Requires well drained soil
Crimson Sentry Norway Maple (acer platanoides 'Crimson Sentry')	25'/12'	Upright	Red turning maroon to bronze in fall	Smaller than most Norway Maple cultivars
Allegheny Serviceberry (Amelanchier laevis)	25'/15'	Upright and oval	Green turning orange in fall	White flowers in spring, purple blue fruit attractive to birds
Centurion Crab (Malus 'Centurion')	25'/15'	Upright	Purple to bronze	Rose red flowers and red fruit, disease tolerant
Japanese tree Lilac (Syringa reticulata)	25'/15'	Pyramidal	Green	White panicles and yellow brown fruit

Robinson Crab (Malus 'Robinson')	25'/20'	Upright, round	Red to bronze green	Deep pink flowers and red fruit, disease resistant
Blireiana Plum	25'/20'	Round	Purple to reddish bronze	Bright pink, semi double, fragrant flowers
Flowering Cherry (Prunus) including Akebono, Autumnalis, Mt. Fuji, Shirofugen, Tai Haku, Whitcomb's Yoshino	25'/25'	Vase shaped to rounded	Green to bronze	Fragrant pink or white flowers. Should be framed early or grafted on 7 foot standards

**Street trees between 25 feet and 40 feet tall and less than 25 feet wide at maturity to be spaced no further than 25 feet apart in planting areas six feet wide or greater containing no less than 24 square feet of porous surface:**

Tree Species	Height/Spread	Structure	Foliage	Flowers, fruit and other special interest
Columnar Hawthorn (Crataegus monogyna 'Stricta')	30'/10'	Tightly upright	Green turning yellow	White flowers, small clusters of red fruit
Columnar Siberian Crab (Malus baccata 'Columnaris')	35'/10'	Narrow, upright	Dense green	White flowers and yellow red fruit, resistant to rust
Columnar Sargent Cherry (Prunus sargentii 'Columnaris')	35'/15'	Columnar	Green turning orange red	Deep pink flowers
Columnar Norway Maple Compact (Acer platanoides 'Columnar- Compact')	35'/15'	Fastigate	Dark green turning yellow	Ascending branches. Good for very narrow spaces.
Skyrocket Oak (Quercus robur 'Fastigiata')	45'/15'	Fastigate	Dark green turning yellow brown	Interesting oak for very narrow spaces
Paperbark Maple (Acer griseum)	30'/20'	Round	Green with silver under turning bright red orange	Interesting cinnamon brown under exfoliating bark
Lavelle	30'/20'	Upright	Dark glossy	White flowers.

Street trees greater than 40 feet tall at maturity to be spaced no further than 40 feet apart in planting areas eight feet wide or greater containing no less than 48 square feet of porous surface:

Tree Species	Height/Spread	Structure	Foliage	Flowers, fruit and other special interest
Emerald Queen Norway Maple (Acer platanoides 'Emerald Queen')	50'/40'	Oval, dense	Dark green to bright yellow	
Urbanite Ash (Fraxinus pennsylvanica 'Urbanite')	50'/40'	Broad pyramidal	Lustrous green turning bronze	
Scarlet Oak (Quercus coccinea)	50'/40'	Broad oval	Glossy green turning scarlet	
Red Horsechestnut	60'/40'	Round	Dark green turning yellow	Red flowers
Purple River Beech (Fagus sylvatica 'Riversi')	60'/40'	Oval	Deep purple turning bronze	
Schwedler Norway Maple (Acer platanoides 'Schwedleri')	50'/45'	Round	Green turning yellow	
Red Oak (Quercus rubra)	70'/50'	Round	Green turning red	

## SCAPPOOSE COMPREHENSIVE URBAN FORESTRY MANAGEMENT PLAN

### APPENDIX A Street Trees

#### Trees Not Permitted for Street Tree Plantings

The following trees are NOT permitted to be planted as street trees in the City of Scappoose for the reasons cited.

**Box Elder (Acer Nugando):** Shallow root system, soft wood and very brittle short lived habit. Subject to wind fail and wind damages which can damage property. Takes soil nutrients from lawns and damages sidewalks.

**Cottonwoods, Poplars, Willows and Quaking Aspen:** Very brittle, relatively short-lived, shallow root system raises sidewalks, infiltrates sewer lines

susceptible to scale and aphids.

**Sycamore (Platanus Occidentalis):** Susceptible to anthracnose, a fungus disease which tends to weaken branches. Premature leaf drop in the spring is difficult to control. Needs frequent pruning.

**Fruit Trees:** High maintenance trees with frequent pruning, spraying and clean up required.

Except as specifically identified on the approved street tree list, all evergreens and shrubs with ultimate height exceeding three feet are prohibited as street tree plantings.

## **Appendix B PRUNING TERMINOLOGY**

**BRANCH** - A secondary shoot or stem arising from one of the main axes trunk or leader of a tree.

**BRANCH BARK RIDGE** - The raised area of bark in the branch crotch that marks where the branch wood and trunk wood meet.

**BRANCH COLLAR** - Trunk tissue that forms around the base of a branch between the main stem and the branch. As a branch decreases in vigor or begins to die, the branch collar becomes more pronounced.

**CALLUS** - Tissue formed by the cambium layer around and over a wound.

**CANOPY** - Upper portion of the tree consisting of limbs, branches, and leaves.

**CAMBIUM** - Dividing layer of plant cells that forms sapwood (xylem) to the inside and bark phloem to the outside.

**CLEAN CUTS** - Cuts made using a sharp tool, with no nicks or tears on the branch collar or the trunk.

**CLOSURE** - Refers to callus growth covering of a cut or other tree wound.

**CROWN** - Technically, the juncture of the trunk above the roots, but in common usage, it refers to the foliage comprising the uppermost branch structure.

**CROWN ELEVATION** - A regional term synonymous with underclearance. See UNDERCLEARANCE.

**CUT** - The exposed wood area that remains after the branch has been removed.

**CUTTING BACK** - Pruning designed to reduce the crown of a tree or individual branch. Sometimes referred to as heading back, drop crotch pruning, natural pruning, lateral pruning, or directional pruning. It is distinctly different from "topping" see *definition*) in that an effort is made to keep the symmetry of the tree on the sides as well as the top.

**DECAY** - The degradation of plant tissue, including wood, by pathogens such as fungus organisms. Wood decay can reduce the structural integrity of a tree or its individual limbs.

**DORMANT** - A state of inactivity, or no growth. Deciduous trees are considered to be dormant from the time the leaves fall until new foliage begins to appear.

**DROP CROTCH PRUNING** - It is the specific cutting back of a branch or leader to a lateral branch at least one-third to one-half the diameter of the cut being made.

**GIRDLING ROOTS** - Roots located above or below ground level whose circular growth around the base of the trunk or over individual roots applies pressure to the bark area, thereby choking or restricting the flow of sap.

**LATERAL** - A side branch or twig.

**LEADER** - A dominant upright stem, usually the main trunk.

**LIFTING** - The removal of lower branches for under-clearance.

**LIMB** - Same as branch.

**LINE CLEARANCE** - Pruning for the safe operation and maintenance of uninterrupted electric service.

**PARENT STEM** - The main trunk system of the tree: also, the dominant leader of a major limb.

**PHOTOSYNTHESIS** - The process by which green plants manufacture food (carbohydrates) in cells containing chlorophyll, utilizing sunlight for energy.

**POLLARDING** - Trees cut back to essentially the same point seasonally, resulting in multiple sprouts above the cuts.

**PRECUT or PRECUTTING** - The removal of the branch far enough beyond the finished cut so as to prevent splitting into the parent stem.

**PRUNING** - The removal of plant parts, dead or alive, in a careful and systematic manner so as to not damage other parts of the plant.

**SAP FLOW** - The course assumed by sap in its movement through a tree.

**SAPWOOD** - A wood layer of variable thickness found immediately inside the cambium, comprised of water-conducting vessels and living plant cells. Also known as Xylem.

**SCARS or INJURIES** - Natural or man-made lesions of the bark in which wood is exposed.

**SUCKER** - A vigorous shoot arising at or below the graft union. See **WATERSPROUT**.

**SUNBURN** - Bark injury caused by extreme heat from the sun.

**SUNSCALD** - Bark splitting or injury caused by temperature extremes or sudden temperature fluctuation.

**THINNING** - The removal of branches where they arise in order to let in light, reduce wind resistance, remove unwanted branches, or to retain a tree's natural shape.

**TOPIARY** - Trees sheared or pruned carefully in a formal shape.

**TOPPING** - A term used to describe a generally undesirable pruning practice, but more often refers to the severe cutting back of branches with very little regard for the shape of the tree.

**TRACING** - Careful removal of the loose or damaged bark along the edges of a wound to encourage closure.

**TRIMMING** - See **PRUNING**.

**UNDER-CLEARANCE** - The removal of lower tree limbs to allow clearance beneath the tree crown. The same as **CROWN ELEVATION**.

**WATER SPROUT** - A vigorous shoot arising from the above-ground portion of the tree or above the graft union. See **SUCKER**.

**WOUND** - The opening that is created any time the tree's protective bark covering is penetrated, cut, or removed, injuring or destroying living tissue. Pruning a live branch creates a wound, even when the cut is properly made.

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## **CROWN REDUCTION PRUNING**

### **Pruning Standard for Class IV Pruning**

**This standard, revised in 1989, is provided by the National Arborist Association to assist tree service companies, utilities, municipalities, governmental agencies, architects, landscape architects, and others in writing contract specifications for tree pruning. It is not intended to be a “how-to” guide but to define the limits and criteria for arboricultural work, recognizing that regional practices may dictate variations in this standard. It was prepared by the Standard Practices Committee of the National Arborist Association. Inc., a professional trade association founded in 1938.**

**Crown reduction pruning shall consist of the reduction of tops, sides or individual limbs. The terms “cutting back” and “drop crotch pruning” are sometimes used interchangeably with the term crown reduction pruning. By contrast, the term “topping” is often used to refer to a generally unacceptable arboricultural practice. The correct technique for crown reduction involves the removal of a parent limb or dominant leader at the point or attachment of a lateral branch, as illustrated in Diagram A. This practice is to be undertaken only for the following reasons:**

- a. In situations where branches interfere with utility lines.**
- b. When there has been significant crown dieback.**
- c. When it is necessary to achieve specific topiary training or dwarfing.**
- d. In cases where due to storm damage or prior incorrect pruning, it is appropriate to prune for safety and aesthetic reasons.**

**The following are the specifications for Class IV, Crown Reduction Pruning:**

- a. All branches too large to support with one hand shall be precut to avoid splitting or tearing of the bark (see Diagram B). Where necessary, ropes or other equipment should be used to lower large branches or stubs to the ground.**
- c. Treatment of cuts and wounds with wound dressing or paints has not been shown to be effective in preventing or reducing decay, and is not generally recommended for that reason. Wound dressing over infected wood may stimulate the decay process. If wounds are painted for cosmetic or other reasons, then materials non-toxic to the cambium layer of meristematic tissue must be used. Care must be taken to apply a thin coating of the material only to the exposed wood.**

**DIAGRAM A MISSING**

## **DIAGRAM B**

- d. Old injuries are to be inspected. Those not closing properly and where the callus growth is not already completely established should be bark traced if the bark appears loose or damaged. Such tracing shall not penetrate the xylem (sapwood), and margins shall be kept rounded.**
- e. Equipment that will damage the bark and cambium layer should not be used on or in the tree. For example, the use of climbing spurs (hooks, irons) is not an acceptable work practice for pruning operations on live trees. Sharp tools shall be used so that clean cuts will be made at all times.**
- f. All cut limbs shall be removed from the crown upon completion of the pruning.**
- g. Trees susceptible to serious infectious diseases should not be pruned at the time of year during which the pathogens causing the diseases or the insect vectors are most active. Similarly, if pruning wounds may attract harmful insects, pruning should be timed so as to avoid insect infestation.**
- h. When removing a parent leader or limb to a lateral branch, the final cut should be made as close to parallel as possible with the branch bark ridge and the lateral limb. The cut should be made as close to the bark ridge as possible without cutting into it. Care should be taken to avoid damaging the lateral limb when the final cut is made.**
- i. Remove the weaker or less desirable of crossed or rubbing branches. Such removal should not leave large open spaces in the general outline of the tree.**
- j. Generally in crown reduction pruning, not more than one-third of the total area should be reduced at a single operation. Every effort should be made to cut back to a lateral at least one-third to one-half the diameter of the parent limb or leader that is being removed. Cuts not made to a suitable lateral, sometimes called topping cuts, shall not be permitted.**
- k. Before a branch is cut back, the ratio of live wood in the branch to leaf surface area in the branch should be considered carefully. The leaves must supply sufficient carbohydrates (food) to maintain the wood in the branch as well as send excess carbohydrates to the trunk and roots for storage and later use. Generally, not more than one-third the total leaf surface area should be removed at any one time.**
- l. Trees should be pruned to a shape typical of their species.**
- m. To prevent sunburn on thin barked trees, just enough limbs shall be removed to get the desired effect without admitting too much sunlight to**

the trunk of the tree or the top of large branches. Care should be taken with the following species: Linden (*Tilia* spp.), maple (*Acer* spp.), beech (*Fagus* spp.), apple (*Malus* spp.), oak (*Quercus* spp.), and other trees susceptible to sunburn. The above damage may be minimized by doing work on susceptible species during the dormant season.

n. When removing the lower branches of trees for crown elevation or underclearance, care should be taken to maintain a symmetrical appearance, and cuts should not be made so large or so numerous that they will prevent normal sap flow.

o. Periodic crown reduction for certain species such as silver maple, the true poplars, and other trees with brittle and soft wood is an established arboricultural practice. This procedure has proven beneficial in maintaining safety over long periods of time. In all cases, it is preferable to make cuts when branches are small so as to avoid developing stem decay, and to begin training these trees when they are young and prune them regularly thereafter so as to avoid removing an excessive amount of leaf surface in one operation.

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**FINE PRUNING**

**Pruning Standard for Class I Pruning**

This standard, revised in 1989, is provided by the National Arborist Association to assist tree service companies, utilities, municipalities, governmental agencies, architects, landscape architects, and others in writing contract specifications for tree pruning. It is not intended to be a "how-to" guide but to define the limits and criteria for arboricultural work, recognizing that regional practices may dictate variations in this standard. It was prepared by the Standard Practices Committee of the National Arborist Association, Inc., a professional trade association founded in 1938.

Fine pruning is recommended for premium quality work with an emphasis on aesthetic considerations in addition to structural integrity. Fine pruning shall consist of the removal of dead, dying, diseased, decayed, interfering, objectionable, obstructing, and weak branches, as well as selective thinning to lessen wind resistance. The removal of such described branches is to include those on the main trunks, as well as those inside the leaf area. An occasional undesirable branch, up to one-half inch (1.25 cm) in diameter, as described above, may remain within the main leaf area to its full length when it is not practical to remove it. All of the specifications listed below apply to Class I.

**Fine Pruning:**

a. All cuts shall be made as close as possible to the trunk or parent limb, without cutting into the branch collar or leaving a protruding stub (see

**Diagram A). Bark at the edge of all pruning cuts should remain firmly attached.**

**b. All branches too large to support with one hand shall be precut to avoid splitting or tearing of the bark (see Diagram B). Where necessary, ropes or other equipment should be used to lower large branches or stubs to the ground.**

**DIAGRAM A missing**

**DIAGRAM B**

**c. Treatment of cuts and wounds with wound dressing or paints has not been shown to be effective in preventing or reducing decay, and is not generally recommended for that reason. Wound dressing over infected wood may stimulate the decay process. If wounds are painted for cosmetic or other reasons, then materials non-toxic to the cambium layer of meristematic tissue must be used. Care must be taken to apply a thin coating of the material only to the exposed wood.**

**d. Old injuries are to be inspected. Those not closing properly and where the callus growth is not already completely established should be bark traced if the bark appears loose or damaged. Such tracing shall not penetrate the xylem (sapwood), and margins shall be kept rounded.**

**e. Equipment that will damage the bark and cambium layer should not be used on or in the tree. For example, the use of climbing spurs (hooks, irons) is not an acceptable work practice for pruning operations on live trees. Sharp tools shall be used so that clean cuts will be made at all times.**

**f. All cut limbs shall be removed from the crown upon completion of the pruning.**

**g. Trees susceptible to serious infectious diseases should not be pruned at the time of year during which the pathogens causing the diseases or the insect vectors are most active. Similarly, if pruning wounds may attract harmful insects, pruning should be timed so as to avoid insect infestation.**

**h. Remove the weaker or less desirable of crossed or rubbing branches. Such removal, if possible, should not leave large open spaces in the general outline of the tree.**

**i. Where practical, all visible girdling roots shall be treated as follows: 1) Cut root at either end, or 2) Sever root in center with a chisel and allow growing tree to push root away; 3) Remove section of root.**

**j. The presence of any disease condition, fungus fruit bodies, decayed trunk or branches, split crotches or branches, cracks, or other structural weakness shall be reported in writing to a supervisor and/or the owner, and corrective measures recommended.**

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## **HAZARD PRUNING**

### **Pruning Standard for Class III Pruning**

**This standard, revised in 1989, is provided by the National Arborist Association to assist tree service companies, utilities, municipalities, governmental agencies, architects, landscape architects, and others in writing contract specifications for tree pruning. It is not intended to be a “how-to” guide but to define the limits and criteria for arboricultural work, recognizing that regional practices may dictate variations in this standard. It was prepared by the Standard Practices Committee of the National Arborist Association, Inc., a professional trade association founded in 1938.**

**Hazard pruning is recommended where safety considerations are paramount. Hazard pruning shall consist of the removal of dead, diseased, decayed, and obviously weak branches, two inches (5 cm) in diameter or greater**

- a. All cuts shall be made as close as possible to the trunk or parent limb, without cutting into the branch collar or leaving a protruding stub (see Diagram A). Bark at the edge of all pruning cuts should remain firmly attached.**
  
- b. All branches too large to support with one hand shall be precut to avoid splitting or tearing of the bark (see Diagram B). Where necessary, ropes or other equipment should be used to lower large branches or stubs to the ground.**
  
- c. Treatment of cuts and wounds with wound dressing or paints has not been shown to be effective in preventing or reducing decay, and is not generally recommended for that reason. Wound dressing over infected wood may stimulate the decay process. If wounds are painted for cosmetic**

or other reasons, then materials non-toxic to the cambium layer of meristematic tissue must be used. Care must be taken to apply a thin coating of the material only to the exposed wood.

**DIAGRAM A missing**  
**DIAGRAM B**

**d. Old injuries are to be inspected. Those not closing properly and where the callus growth is not already completely established should be bark traced if the bark appears loose or damaged. Such tracing shall not penetrate the xylem (sapwood), and margins shall be kept rounded.**

**e. Equipment that will damage the bark and cambium layer should not be used on or in the tree. For example, the use of climbing spurs (hooks, irons) is not an acceptable work practice for pruning operations on live trees. Sharp tools shall be used so that clean cuts will be made at all times.**

**f. All cut limbs shall be removed from the crown upon completion of the pruning.**

**g. Trees susceptible to serious infectious diseases should not be pruned at the time of year during which the pathogens causing the diseases or the insect vectors are most active. Similarly, if pruning wounds may attract harmful insects, pruning should be timed so as to avoid insect infestation.**

**h. All visible girdling roots are to be reported to a supervisor and/or the owner.**

**i. The presence of any disease condition, fungus fruit bodies, decayed trunk or branches, split crotches or branches, cracks, or other structural weakness should be reported in writing to a supervisor and/or the owner, and corrective measures recommended.**

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