

A photograph of a street lined with tall palm trees and green trees. The sky is clear and blue. The text is overlaid on the image.

# **City of Fontana**

**Public Services Department**

**TREE POLICY MANUAL**

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## INTRODUCTION

### **Statement of Commitment**

The City of Fontana considers trees as one of its most valuable assets. Therefore it is committed to the preservation, proper maintenance and continued growth of its urban forest. The many benefits of the urban forest include greatly improving the aesthetics of the community, improving property value by as much as 30%, reducing the “heat island effect” which results from having extensive amounts of unshaded hardscape, conserving energy by greatly reducing cooling costs, and reducing street noise. Trees improve the environment by moderating the climate, providing oxygen and shade, filtering out particulate matter from air pollutants, stabilizing the soil, preventing erosion, conserving water, and providing food and shelter for wildlife.

To ensure the protection of its urban forest the Public Services Department of the City of Fontana has adopted “The Tree Policy Manual” which will be used by the City to manage its urban forest.

### **Tree Policy Manual** - Adoption F.M.C. 28-34

This Tree Policy Manual defines and illustrates the City adopted policies and procedures that shall be utilized for the care of all trees located on City property or within the City’s public right-of-way. The following pages document the City of Fontana’s official guidelines for the planting, pruning, removal, preservation, and protection of all City-maintained trees, here-in referred to as Fontana’s urban forest. These policies and procedures shall be based on nationally accepted standards set for tree care. They shall act as the source of guidance by the City for the implementation of the duties, authorities and regulations delineated in Chapter 28 of the Fontana Municipal Code.

### **Public Services Department**

Responsibility for the daily management and emergency services in the urban forest belongs to the Public Services Department. The department provides forestation and maintenance services, and oversees all contracted and permitted work on City maintained trees. The Department maintains records and updates the City’s tree inventory, and is the primary resource for residents who contact the City with concerns and questions about trees. The Department also provides: residential educational materials on proper tree care, events held to bring attention to and educate the public on the importance of the urban forest, and an annual Arbor Day celebration in honor of our urban forest.

### **Authority**

Pursuant to Fontana Municipal Code Chapter 28 section 28-27 (purpose), this manual is adopted in the best interests of the City and its citizens as a comprehensive plan for the development of parkways and for the purpose of establishing rules and regulations relating to the selection, planting, care and maintenance within parkways.

## GENERAL PRESERVATION AND PLANNED MANAGEMENT

### Heritage, Significant and Specimen Trees

Specific trees, which by virtue of their species, size, age, condition, location, appearance or historical significance, shall be protected by ordinance. Section 28-63 of the Fontana Municipal Code defines “Heritage, Significant and Specimen Trees” and the protection criteria established for them.

### Fontana’s Adopted Master Tree List

Fontana’s tree population management plan shall be based primarily upon the City’s adopted plan of parkway trees and Master Tree List. Section 28-28 of the Fontana Municipal Code defines and authorizes the creation and implementation of this list. A copy of the Master Tree List is included in the Appendix of this manual. The Master Tree List will designate certain species of trees that may be planted within the City of Fontana. These particular types of trees are species that meet the following criteria:

- **Species Hardiness.** Based upon the trees adaptability to the region in terms of its resistance to frost, freezing temperatures and heat.
- **Drought Tolerance.** Species with the ability to withstand long periods of drought are preferred.
- **Durability and Wind Resistance.** Species that are not brittle in nature and will tolerate the winds.
- **Grow Space.** The amount of parkway size available relative to the expected tree trunk circumference and root flare at maturity.
- **Overhead Clearance.** The potential for conflicts between the tree’s canopy and overhead obstructions, such as utility lines, at the tree’s mature height.
- **Pest and Disease resistance.** Species that are resistant to insect and disease infestation are preferred.
- **Subsurface growth habits.** Species that do not surface root or have the potential to damage infrastructure.
- **Tolerance to a variety of irrigation practices.** Species that will tolerate long periods of drought or abundant moisture are preferred.
- **Soil qualities.** Species that will tolerate the areas soil conditions are preferred.
- **Cleanliness.** Species that do not have an overabundance of fruit or flower litter are preferred.
- **Species Selection.** Species are chosen with regards to the appropriateness of their character. For example, a deciduous tree will be utilized in areas with very strong winter winds; providing a more stable specimen for severe conditions. Species that already are existing in a particular area, have traditionally existed in that area, or are native to the region are preferred.
- **Aesthetics and Shading.** Trees that are aesthetically pleasing with showy flowers or attractive fall color, or that provide a good amount of shade are preferred.
- **Availability.** Trees that are readily available are preferred.

### Inventory Administration

The Public Services Department will develop and maintain a current inventory of all City owned trees, including detailed site characteristics and work histories for each tree. Tree records shall be updated on a routine basis.

## MAINTENANCE GUIDELINES

The Public Services Department shall be responsible for overseeing the planting of all City trees. The following guidelines and procedures have been developed to promote the health and safety of City trees from the time they are planted through maturity. These guidelines and procedures shall be required for any City maintained tree that is to be planted.

### **Planting**

The Public Services Department shall be responsible for administering planting of all trees in the public right-of-way.

### **Viable Planting Sites**

It shall be the objective of the City to plant all viable vacant sites located in the City public right-of-ways, to honor all resident requests for new street trees in City owned locations, and to replace any City tree which has been removed with the provision that the remaining vacant site is viable for planting. Viable planting sites shall be based upon the following criteria:

- **Spacing.** There is adequate spacing present overhead, underground and radially to allow for the healthy, unimpeded growth of the tree to its mature size. Specific examples of spacing conditions that may make a site unsuitable for planting include: inappropriate canopy room between existing trees, proximity of a planting site to existing utilities creating potential conflicts and damage or inadequate width of the location's parkway for accommodating the tree's girth. See "Planting Location Requirements" in appendix for detailed specifications.
- **Traffic Clearance.** There is adequate line of sight visibility between normal vehicular or pedestrian traffic and necessary signage, street lights or views.
- **Maintenance Resources.** There is an adequate and consistent water source available.
- **Funding.** There is funding available in the current fiscal year's budget for tree planting.

### **Nursery Stock Standards**

The City shall make every effort to insure that it plants only vigorous, healthy trees which can easily be trained into an attractive natural form, with strong roots and good crown development. The specifications for acceptable nursery stock shall be as follows:

- All trees shall be selected from the City's master tree list.
- All trees shall be true to type or botanical name as ordered or shown on planting plans.
- All trees shall have a fairly straight trunk with a good taper and good branch distribution vertically, laterally and radially.
- All trees shall be healthy, have a form typical for the species or cultivar, be well-rooted, and shall be properly trained.

- The root ball of all trees shall be moist throughout and the crown shall show no sign of moisture stress.
- All trees shall comply with Federal and State laws requiring inspection for plant diseases and pest infestations.
- No tree shall be accepted that has been severely topped, headed back, pollarded or lion-tailed.
- No tree shall be accepted that has co-dominant stems or excessive weak branch attachments that can not be trained out without jeopardizing the natural form of the species.
- No tree shall be accepted that is root bound, shows evidence of girdling or kinking roots, or has “knees” (roots) protruding above the soil.

The City shall reserve the right to refuse any nursery stock that does not meet these standards, and may require any person who has planted such sub-standard trees, on City property or within City right-of-ways, to have these trees removed and replaced at that person’s own expense.

### **Planting and Staking Standards**

Unless otherwise approved by the Public Services Department, all City trees shall be planted using materials that meet the following criteria:

- **Tree Stakes.** Shall be two (2) sturdy, ten (10') foot long lodgepole pine stakes. Stakes will be placed on the outer edge of the root ball on either side of the tree, perpendicular to prevailing winds. If larger trees are planted and require guying, International Society of Arboriculture standards shall be adhered to.
- **Staking Ties.** Shall be sixteen (16") to eighteen (18") inch rubber cinch ties to be fastened to each stake with galvanized roofing nails. Ties will be pulled around the tree’s trunk in a manner which supports the top-heaviness of the canopy, but is loose enough to allow for free movement of the tree in the wind.
- **Trunk Guards.** An approved trunk guard shall be placed around the base of the trunk just above the soil grade. A trunk guard is a device used to deter mechanical damage, as a result of wounds inflicted on a tree’s trunk by such devices as weed whips and lawnmowers.
- **Wood Chip Mulch.** A four (4") inch uniform layer of City approved wood chip mulch shall be placed within the planting basin of the tree. A space of three (3") inches shall be left between the tree’s stem and the mulch layer to allow airflow and to restrict moisture from remaining static around the base of the trunk.

### **Tree Planting Specifications**

Most nursery tree stock in California is sold in a containerized form. The following guidelines are specific for containerized stock. If utilizing bare root or balled and burlapped trees, refer to the appropriate International Society of Arboriculture (ISA) guidelines for planting instructions.

All trees shall be planted immediately after the planting container has been removed. Containers shall not be cut or otherwise damaged prior to delivery of trees to the planting area.

The planting hole is one of the most important factors in establishing a healthy tree. Measure the width and depth of the root ball prior to digging. The diameter of the planting hole shall be dug at least two (2) times wider than that of the root ball. The depth of the planting hole shall be dug slightly shallower



than the depth of the root ball to allow for the top two (2") inches of the root crown to remain above the finished grade.

Before placing the tree into the planting hole, tamp down the base of the hole to allow the tree to stand straight and to avoid the potential of the tree settling below the finished grade. Scarify or scrape the sides of the planting hole to break down any glazing or compaction which may have occurred as a result of digging.

Position the tree in the hole so that the tree stands upright and the top of the root crown is slightly exposed above the grade. Backfill the planting hole with clean, native soil no higher than halfway up the rootball. Slightly tamp the soil to remove air pockets, but be sure not to compact the soil too much. Complete the backfilling to the finish grade. Once again, tamp the soil slightly to remove air pockets.

Form a watering basin out of backfill material, approximately six (6") inches high, around the dripline of the tree. Remove all nursery stakes, ties and ribbons from the tree, and install the planting and staking materials as specified. Give the tree an initial deep watering. Fill watering basin as many times as necessary to completely saturate root ball.

Tree stakes and ties should be removed from the tree within two years after planting, or when the circumference of the tree's trunk is equal to or exceeds the circumference of the stakes.

For specific details on proper planting procedures refer to the Standard Tree Planting and Staking instructions in the Appendix of this manual.

### **Newly Planted Tree Maintenance**

All newly planted trees shall be placed on a schedule to receive young tree maintenance immediately after completion of a planting program (refer to the Training Young Trees section of this manual for details).

### **Pruning**

The Public Services Department shall be responsible for administering and scheduling pruning of all City trees.

All City trees shall be pruned on a regular basis using professionally accepted standards, as established by the ISA. All City trees shall be pruned in a manner that will encourage good development while preserving their health, structure and natural appearance. Topping, heading back, stubbing, lion-tailing or pollarding of public trees is prohibited. For specific details on proper pruning refer to the Tree Pruning Standards in the Appendix of this manual.

### **Pruning Techniques**

"Thinning"- sometimes called "drop-crotching" in mature trees, shall be the standard pruning technique for City trees. A thinning cut is the removal of a branch at its point of origin, or the shortening of a branch to a lateral that is large enough to assume the terminal role.

When removing a live branch, pruning cuts should be made just outside the branch bark ridge and collar. This location of cut is in contrast to a “flush cut” which is made inside the branch bark ridge and collar. Flush cuts should be avoided because they result in a larger wound and expose trunk tissues to the possibility of decay. If no collar is visible, the angle of the cut should approximate the angle formed by the branch bark ridge and trunk.

When removing a dead branch, the final cut should be made just outside the branch bark ridge and collar of live callus or woundwood tissue. If the collar has grown out along the branch stub, only the dead stub should be removed; the live collar should remain intact.

If it is necessary to reduce the length of a branch, the final cut should be made just beyond (without violating) the branch bark ridge of the branch being cut to. The remaining branch should be no less than one third ( $\frac{1}{3}$ ) the diameter of the branch being removed, and with enough foliage to assume the terminal role.

Pruning cuts should be clean and smooth, leaving the bark at the edge of the cut firmly attached to the wood. A three-cut process, sometimes referred to as “jump-cutting”, should be used to remove larger limbs in order to avoid stripping or tearing of the bark, and to minimize wounding.

### **Training Young Trees**

Properly trained trees will develop into structurally strong trees well-suited for their surrounding environment. These trees should require little corrective pruning as they mature. Young trees that reach a large mature size should have a sturdy, tapered trunk with well-spaced branches that are smaller in diameter than the trunk.

Each City tree shall be scheduled for training at least once within the first three years after being planted, as part of a Young Tree Maintenance Program. The Young Tree Maintenance Program shall entail evaluating the overall condition of the tree, cleaning out of any dead wood and pruning the tree in such a manner as to develop good structure, checking to insure stakes and ties are providing adequate support for the tree, and examining the watering basin to verify that the tree is receiving adequate water.

### **Pruning Mature Trees**

As trees mature, their need for structural pruning should decrease. Pruning should then focus on maintaining tree structure, form, health and appearance. This shall be accomplished through one of the three methods described below.

- **Crown cleaning** - or cleaning out, is the removal of dead, dying, broken, diseased, crossing, weakly attached, and low-vigor branches from a tree’s crown; as well as the elimination of water sprouts, sucker growth and foreign materials from the entire tree.
- **Crown restoration** - is intended to improve structure and appearance of trees that have sprouted vigorously after being broken, topped or severely pruned using heading cuts. One to three sprouts, on main branch stubs, should be selected to form a natural appearing crown. The more vigorous sprouts may need to be thinned or cut to a lateral to control length growth or ensure adequate attachment for the size of the sprout. Crown restoration may require several prunings over a

number of years. Crown restoration shall be completed as is necessary, based upon the specific condition and circumstances surrounding the tree.

- **Crown thinning** - is the selective removal of branches to increase light penetration and air movement through the crown. Thinning opens the foliage of the tree, reduces weight on heavy limbs, distributes ensuing invigoration throughout the tree and helps retain the tree's natural form.

When thinning the crown of mature trees, no more than twenty percent (20%) of the tree's live growth should be removed. In slower growing, or particularly sensitive species (such as native Oaks), no more than ten percent (10%) of live growth should be removed. Trees shall always be thinned to their natural form, and should retain well-spaced inner lateral branches with foliage. Trees and branches so pruned will have mechanical stress more evenly distributed along the branch and throughout the tree.

### **Pruning Cycles**

Frequency of pruning is also important to a tree's health. The City of Fontana is divided into 36 districts, for purposes of scheduling tree trimming in the City's public right-of-way. The City's objective is to service each district within a five year trim cycle. Scheduling is at the discretion of the Public Services Department. Every tree in each district shall be pruned when that particular district is being serviced. If a resident requests tree pruning before or after their district is serviced, it shall be at the discretion of the Public Services Department to schedule. Hazardous conditions shall be evaluated and attended to as soon as possible.

### **Street, Sidewalk and Visibility Clearance**

Street and sidewalk clearance standards shall be achieved through crown raising. Crown raising is the removal of lower branches in order to provide clearance for vehicles, pedestrians and bicyclists. Only those branches that must be removed to achieve the established height clearance standard shall be pruned. All such pruning cuts shall be thinned back to the nearest lateral found above the set minimum height standard.

Where possible, young or developing trees should be maintained in such a manner that at least one half ( $\frac{1}{2}$ ) of the foliage should be on branches that originate in the lower two thirds ( $\frac{2}{3}$ ) of the tree. Similarly, branches should have even distribution of foliage along their lengths. This will ensure a well-formed, tapered structure and will uniformly distribute stress within the tree.

All City trees shall be maintained to the height clearance specifications established below:

- Over sidewalks or park paths, limbs shall be raised to a minimum of seven (7') feet and a maximum of eight (8') feet from grade to first lateral branch. In locations where no sidewalks exist, limbs may be retained below this minimum elevation as long as they conform to the natural shape of the species. In locations where City street trees are set back from, or do not interfere with, sidewalk traffic, limbs may also be retained below this minimum height specification.
- Over residential or collector streets, limbs shall be raised gradually from eight (8') feet at curb to thirteen (13') feet over traffic lanes from the grade to wood giving the appearance of an arch rather

than an angle.

- Over arterial streets, limbs shall be raised to fourteen (14') feet from grade to first lateral branch. A major arterial street may require a higher maximum over central traffic lanes for existing mature canopy-forming limbs.

Visibility clearance for street lights or signage shall be achieved through “windowing” through the foliage of a tree, rather than severely raising or reducing its crown. Only those branches that need to be removed to attain the visibility clearance desired shall be pruned. All such pruning cuts shall be thinned back to the nearest lateral found away from the structure that is to be cleared.

### **Overhead Utility Clearance Pruning**

Line-clearance tree workers must be trained to work safely around high voltage conductors. The United States Occupational Safety and Health Act (OSHA) and the American National Standards Institute (ANSI) have established minimum distances to be maintained by tree workers from electrical conductors. All line-clearance work involving City trees shall adhere to these standards, as well as the utility pruning standards established by the ISA and the Utility Arborists Association (UAA).

The following guidelines are designed to maintain the required clearance of City trees from high voltage transmission lines with a minimum of resprouting and fewer pruning cycles. These guidelines are based upon known tree responses to various pruning techniques. In no sense should they take precedence over safe work practices.

A tree's growth under utility lines is most economically managed by lateral or directional pruning (thinning cuts). Directional pruning is the removal of a branch to the trunk or a significant lateral branch growing away from the conductor. Heading cuts (topping), on the other hand, encourages vigorous sprouting and increases the frequency of pruning cycles and the cost of the maintenance.

All trees in public right-of-way should be examined for hazards before commencing with line-clearance work. Hangers and dead wood should be removed. Where possible, the tree should be allowed to attain normal height, with crown development maturing away from high voltage conductors.

To achieve clearance, pruning should be restricted to removal of branches at crotches within the tree's crown.

As few pruning cuts as are reasonable should be used to achieve the required clearances.

When the pruning of a branch will result in the loss of more than one half (1/2) of the foliage on the branch, it should be removed to the parent stem.

Precautions shall be taken to pre-cut large limbs to avoid stripping or tearing the bark, and minimize unnecessary wounding. Heavy limbs should be lowered on ropes to avoid damaging bark on limbs and trunks below.

The placement of pruning cuts shall be determined by anatomy, structure and branching habit. Limbs

should not be arbitrarily cut off based on a pre-established clearing limit.

Final drop-crotch cuts should be made outside the branch bark ridge on the main stem or lateral branch. The remaining branch shall be no smaller than one third ( $\frac{1}{3}$ ) the diameter of the portion being removed. The removed portion should be pruned out to direct the remaining growth away from conductors.

Line clearance in the City of Fontana is currently being administered by the Edison Co. Every effort has been made to work in cooperation with the Edison Co. The City has shown concern and requested that proper pruning techniques are adhered to by the Edison Co. whenever possible. An example of a situation where proper pruning techniques would not be followed would be with a tree that has grown above the utility lines and must be topped to achieve clearance. With a situation such as this every effort must first be made to drop-crotch or directional prune the tree. As few branches as possible will be topped. When this situation occurs removal and replacement of the tree is at the discretion of the Public Services Department. Palm trees in particular shall be evaluated on an individual basis. Because palms are killed when topped, every effort shall be made to remove and replace tree and when possible obtain compensation for sale of tree.

### **Root Pruning**

The root system of a tree is one of its most important physiological components. Roots are the main source of water and mineral absorption for the tree, they provide a foundation and stability, and they act as one of the principal storage areas for food. The proper pruning of a tree's roots when necessary is as important as the proper pruning of a tree's crown.

Whenever possible, the City, utility companies or contractors shall avoid removing any of a tree's root system. In instances where there exists a need to install subsurface structures or utilities, such as irrigation lines or block wall footings, every effort shall be made to avoid encroachment within the dripline of a tree. If it becomes necessary to excavate within a tree's dripline, every effort, if cost efficient, shall be made to tunnel under or through the tree's root system with a minimal amount of pruning, rather than to trench across the tree's roots.

When root removal becomes necessary for the installation and/or repair of hardscape, such as sidewalks, driveway approaches or curb and gutters, and other utilities, two methods shall be employed by the City to eradicate invasive or encroaching roots. These two methods are specified below and are detailed in the Selective Root Pruning and Shaving Standards detailed in the Appendix of this manual.

- **Selective Root Pruning** is the removal of specific offending roots which are directly interfering with a work area. When pruning out selective roots, great care shall be given to retain as much root surface as possible, including sufficient buttress root dispersal around the radius of the tree. Roots shall be cut back at least four (4") inches away from new hardscape to the nearest node. Pruning cuts shall be made clean and smooth with minimal crushing or tearing of the remaining root.
- **Root Shaving** is the removal of a small portion of a nonessential buttress root or general root with a diameter of four (4") inches or greater. Roots will be shaved down to allow for at least two (2")

inches of clearance between the root and the new hardscape. Shaving cuts shall be made clean and smooth with no crushing or tearing of the remaining root, root shaving shall be undertaken at the discretion of the Public Services Department.

All root pruning activities shall be recorded by the Public Services Department in the City's tree inventory.

### **Certified Arborist**

Any City-contracted tree company shall be required to have in their employment a full-time, permanent Certified Arborist, as accredited by the International Society of Arboriculture (ISA). This person shall be responsible for ensuring that the contractor's crews are performing work according to City specifications.

### **Contractor Qualifications**

All contractors shall be required to have a State contractor's license, which states class of license required for tree work and provide workmen's compensation benefits to their employees. They shall also provide for equal opportunity employment and have appropriate liability insurance as determined by the City. Contractors shall provide all services in compliance with City specifications. Specifications are written based on the policies outlined in this manual.

### **Site Cleanup**

Work areas shall be left in a condition equal to or better than that which existed prior to the commencement of forestry operations and in accordance with all applicable City Municipal Code Requirements. All debris shall be cleaned up each day before the work crew leaves the site, unless permission is given by the City to do otherwise. All lawn areas shall be raked, all streets and sidewalks shall be swept, and all brush, branches, rocks or other debris shall be removed from the site. City inspector shall be responsible for inspection upon completion of work.

### **Removal**

The Public Services Department shall have the authority to remove trees in the public rights-of-way, based upon the following conditions:

- **Hazardous Trees.** Trees that are declared a hazard by virtue of being determined at high risk of failure including but not limited to frequent limb breakage or danger of falling with a high potential of hitting a target (a sidewalk, street or building) shall be removed. A tree with a majority of decayed, dead or damaged foliage, branches, trunk or roots may be determined to be a hazard and require immediate removal.
- **Dead and Dying Trees.** Street and park trees that are dead or have been determined by the Public Services Department to be in a state of severe decline, although perhaps not an immediate hazard, shall be removed.
- **Diseased/Insect Infested Trees.** Trees that become diseased or are infested with an insect that is declared to be an eminent serious pest threat to the other nearby trees shall be removed, if removal is determined to be the best pest control solution. Examples of this include trees infested with the Eucalyptus Longhorn Borer or Pine Bark Beetles.

- **Emergency Removals.** Healthy trees shall be removed if an emergency condition exists, and tree removal is determined to be the only option available. An example would be to gain access in an emergency situation created by an earthquake or to allow repair of a broken water main or sewer line located directly under the tree trunk, or to remove a tree split by a storm or struck by a vehicle when the tree cannot be feasibly restored to a safe condition.
- **Hazardous Condition Removal.** If it is determined that a tree is causing a serious visibility hazard (i.e., corner tree that blocks the visibility of a stop sign) it should be removed. Removal shall be considered only if pruning to correct the hazard would seriously damage the tree or where the continuing cost of repeated pruning would outweigh the value of the tree.
- **Other Removals.** Other examples where a condition shall warrant removal are:
  - **Hardscape damage** - If hardscape repairs cannot be completed without severe root pruning which would jeopardize the health and stability of the tree.
  - **Structural damage** - If a tree is causing structural damage to a building, street, or wall and the condition cannot be corrected without removing the tree.
  - **Sewer blockage** - If a trees roots have blocked a sewer and the public services sewer crew has been called out to clear it more than once a year the tree shall be removed.

#### Reasons that are **NOT** valid for Removal

A City tree shall be removed only if it meets one of the above stated criteria. If a resident does not agree with staff's decision on a removal request, they may appeal to the Public Services Director. The Public Services Department will provide interested residents with information on the City appeal process. The City Manager and City Council serve as the appeal body for Director decisions, pursuant to sec. 28-33 appeals.

## TREE/HARDSCAPE CONFLICTS

In keeping with the City's policies for protecting and preserving the health and well-being of our urban forest while providing for the safety of our citizens, the following guidelines have been established for correcting potentially hazardous situations that result from tree roots disturbing nearby hardscape.

### **Hardscape Damage Response Procedures**

There are several factors that must be considered in determining the course of action necessary for addressing hardscape damage concerns which involve City trees. These actions are driven by the extent of the damages, and whether the damages are located on private property.

The Public Services Department shall inspect all hardscape damage. If the hardscape concerns include potential damage to private property, the matter shall be referred to the Public Services Manager for evaluation. A sample Tree Report, to be used for such assessments, is included in the Appendix of this Manual.

Upon initial inspection of the area, staff must determine what course of action is necessary to respond to the problem. The following are the most commonly occurring hardscape problems, and the courses of action that shall be employed to rectify them:

- Hardscape damage is within public right-of-way and will require a temporary asphalt ramp, followed by permanent repair of the area at a later date. Generally, an asphalt ramp should be installed if there exists a deviation in the concrete that is greater than three-fourths ( $\frac{3}{4}$ " ) of an inch.
- Hardscape damage within public right-of-way, but is of such a minor nature that the damaged area can be "ground down" by a concrete grinding machine. Any deviation in the concrete of less than one-half ( $\frac{1}{2}$ " ) of an inch should be able to be rectified by grinding the raised lip down to grade. If necessary, permanent repair of the area should be scheduled for a later date.
- Hardscape damage within public right-of-way, but the nature of the damages cannot be rectified by temporary measures. Thus, permanent repair of the area will need to be scheduled based upon the potential the damages have for creating a public safety hazard.
- Hardscape damages are on private property and thereby cannot be addressed by the City. However, there are clear cut indications that at least some of the damages that have occurred are a direct result of a tree in the public right-of-way. Thus, the resident may have reason to file a claim for damages with the City. If the resident does elect to file a claim, the Public Services Director or designee shall be responsible for evaluating the damaged area and submitting a tree assessment report to the City Clerk for inclusion with the claim file.
- Hardscape damages are on private property and thereby cannot be addressed by the City, and there exists no clear cut indication that a City tree is the source of the damages. Thus, the resident will be responsible for excavation of the damaged area, for the purpose of exposing any invasive roots, should they wish to file a claim for damages with the City.

Upon excavation of the area, it is the resident's responsibility to contact the Public Services



Department and schedule an evaluation and assessment of the damage. The Public Services Director designee shall be responsible for submitting this assessment report to the City Clerk for inclusion with the resident's claim.

- Hardscape damage is on private property, and is clearly not caused by a City owned street tree, in the public right-of-way.

Once a course of action has been determined, staff shall be responsible for providing written notification to the involved parties informing them of staff's findings and of what measures they or the City will need to take to rectify the problem.

### **Hardscape Installation Guidelines**

The general policy that shall be observed when repairing or replacing hardscape adjacent to a public right-of-way tree is that the health and integrity of the tree shall be taken into consideration before work commences. Every effort shall be made to protect the tree from root or trunk damage.

Several alternatives are available for accommodating the installation of new hardscape without severely infringing upon a tree's root system. Any hardscape installation that may involve the removal of an extensive portion of a tree's root system, shall first be evaluated by the Public Service Department. If it is determined by the Public Services Department that the removal of the offending roots might jeopardize public safety or the health or integrity of the tree, then one of the following alternatives should be considered:

- **Off-Set.** An off-set is the tapering or reduction of a sidewalk's size down to a width no less than forty eight (48") inches.
- **Ramping.** A sidewalk may be constructed to ramp over offending roots, as long as the slope of the grade does not exceed one (1') foot of elevation change within a span of twelve (12') linear feet.
- **Reconfiguration.** Sidewalks do not need to be constructed in a straight line. If the public easement can accommodate it, a sidewalk may be reconfigured to curve around a tree in a suitable manner.
- **Removal.** If no other hardscape installation alternative is feasible, a tree may be removed, as long as it complies with the Tree Removal criteria established in this manual.

## PERMITS

**No person shall plant, remove, cut, prune, apply pesticides or otherwise disturb any City tree in public right-of-way or on City owned property without first obtaining a permit from the Public Services Department.** Applications for permits must be made to the Public Services Department on forms provided by the department, and shall include such information as the Department deems necessary to review the application. Examples of the tree permit forms are included in the Appendix of this manual.

Any business wishing to acquire a permit for tree work must provide an official copy of a current City of Fontana Business License at the time of application.

The Public Services Department shall issue the permit if the proposed work is desirable and the proposed method and workmanship are performed to the standards defined under the Maintenance Guidelines described in this manual. Any permit granted shall contain a date of expiration and the work shall be completed in the time allowed on the permit and in the manner described in it. A permit shall be null and void if its terms are violated. See Fontana Municipal Code sec. 28-74 penalties.

Permittees shall be required to sign a Maintenance Guidelines form as proof of their understanding of the City's tree care specifications. Additional information provided to permittees shall include a copy of this permit policy, as well as any other details or standard plans related to the work that is to be completed.

Permittees shall be required to have a copy of the permit, and a current Fontana Business License (if applicable), present at all times at the work site. Work undertaken by the permittee or their agents may be stopped immediately and the permittee's permit may be revoked by written order of the Public Services Department if it is determined that the program of work or conditions outlined in the permit are not being complied with.

### **Amendments to Policies**

The Public Services Department shall review these policies and procedures on an annual basis. The Department reserves the right to amend the policies, if it is deemed that such revisions or updates are necessary. Any amendments to these policies sought by other public or private interests shall first receive approval from the City Council.

### **City Easements and Right-of-Ways**

The City retains an established right-of-way or easement on each public street. These easements are City controlled areas for the purpose of public improvements, including streets, sidewalks, curb and gutters, driveway approaches, street lights, street signs and street trees.

Easements may vary per street and will usually extend beyond street width including parkways and sidewalks. Generally, the width of these parkways or landscape easements are around ten (10') feet from the face of the curb, but this dimension may vary anywhere between one (1') foot and thirty (30')

feet. The Community Development Department shall keep official record of the City easements.

Any tree located within this public easement is recognized as a City owned tree, and is subject to the policies and procedures described herein and in the Municipal Codes which govern all City trees and public property. Illustrations of typical City right-of-ways or easements are included in the Appendix of this manual.

## DEFINITIONS

**ANSI Z133.1:** The Section of American National Standards which defines safety requirements for pruning, trimming, repairing, maintaining, and removing trees and for cutting brush, and for the use of equipment in such operations.

**Arborist:** A person possessing the technical competence through experience and related training to provide for or supervise the management of trees and other woody plants in the residential, commercial and public landscape and possess a current ISA certification.

**Branch Collar:** Trunk tissue that forms around the base of a branch between the main stem and the branch or a branch and a lateral. As a branch decreases in vigor or begins to die, the collar usually becomes more pronounced and more completely encircles the branch.

**Branch Bark Ridge:** A ridge of bark in a branch that marks where branch and trunk tissues met and often extend down the trunk.

**Callus:** Undifferentiated tissue initially formed by the cambium around and over the wound.

**Co-dominant Stem:** A large branch or secondary leader competing with a tree's leader.

**Crotch:** The angle formed at the attachment between a branch and another branch, leader or trunk of a woody plant.

**Crown:** The leaves and branches of a tree or shrub; the upper portion of a tree from the lowest branches on the trunk to the top.

**DBH:** The Diameter at Breast Height as measured at four (4) feet above the ground is the standard measurement of tree size used by arborists.

**Dripline:** Is the ground area at the outside edge of a tree's branches or canopy.

**ISA:** The International Society of Arboriculture is a professional association of arborists and tree workers recognized internationally as one of the leading agencies in the research and establishment of high standards for all aspects of tree care.

**Lateral:** A branch or twig growing from a parent branch or stem.

**Leader:** A dominant upright stem, usually the main trunk.

**NAA:** The National Arborist Association is a professional trade association whose chief purpose is to raise the standards of the tree care industry and provide useful service to the public.

**Parent Branch or Stem:** The tree trunk, or a larger limb from which lateral branches are growing.

**Root Ball:** The mass of roots growing from the trunk of a tree, including the surrounding soil.

**Root Collar:** The junction between the root of a plant and its stem, often indicated by a trunk flare.

**Topping, Heading Back, Stubbing, Lion-tailing or Pollarding:** Severe types of pruning which usually produce less desirable results than more moderate pruning with respect to the tree's natural form and which are generally hazardous to the overall health and stability of the tree.

**UAA:** The Utility Arborist Association is a professional trade association whose chief purpose is to raise the standards of utility line clearance, while providing the safest conditions possible for line-clearance workers.

**Wound:** An opening that is created when the tree's protective bark is penetrated, cut, or removed, injuring or destroying living tissue. Pruning a live branch creates a wound, even when the cut is properly made.

**Woundwood:** Differentiated woody tissue, also referred to as a callus roll, which forms after callus has formed around the margins of a wound. Wounds are closed primarily by woundwood.

# Exhibit 1



## CITY OF FONTANA PUBLIC SERVICES DEPARTMENT

### Permit to Remove Street Trees

Date: \_\_\_\_\_ \*

I, \_\_\_\_\_ do hereby request authorization of the City of  
Authorized business representative/abutting property owner

Fontana to remove \_\_\_\_\_ street tree(s) from within the public easement along the property at  
number

\_\_\_\_\_ in accordance with all City specifications. Said work  
Street Name/Addresses

will begin on \_\_\_\_\_, and will be completed by \_\_\_\_\_. I further agree to  
date date

bear all costs and liabilities connected with the approved removal project; and that, any contractor

used to complete this project is licensed by the City of Fontana to do approved work; and that,

the approved work will be performed by a certified tree worker based on City Standards; and that, all

work will be performed in a timely and workman like fashion.

\_\_\_\_\_  
Signature of Permit Recipient

\_\_\_\_\_  
Date

\_\_\_\_\_  
Authorized Representative Signature

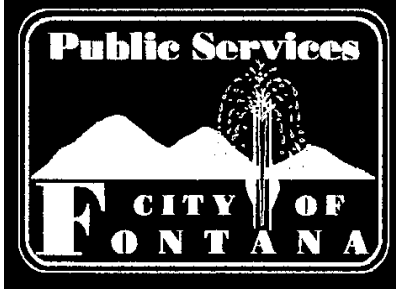
\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

**\* PERMIT EXPIRES 60 CALENDAR DAYS FROM THE ABOVE DATE**

## Exhibit 2



# CITY OF FONTANA PUBLIC SERVICES DEPARTMENT

## Claim for Damage or Injury

**NOTE:** Certain procedures governing the filing of claims for money or damages are set forth in Title I, Division 3.6, Part 3 (Sections 900, et seq) of the Government Code, State of California. This Claim for Damage or Injury has been prepared in accordance with California Government Code, Section 910.4. When this form is used, please submit to the City Clerk's Department, City Hall, 8353 Sierra Avenue, Fontana, CA 92335.

Original Filing

Amendment to Previous Claim

\_\_\_\_\_  
Name of Claimant

\_\_\_\_\_  
Address (City, State & Zip Code)

\_\_\_\_\_  
Address to Send Notices

\_\_\_\_\_  
Telephone Number (Include Area Code)

\_\_\_\_\_  
Place of Occurrence of Damage or Injury

\_\_\_\_\_  
Date of Occurrence of Damage or Injury

General description of damage or injury incurred so far as it is known at the time of presenting this claim:

\_\_\_\_\_

\_\_\_\_\_  
**If submitting PHOTOGRAPHS, PLEASE ATTACH TWO (2) SETS**

What particular action by the City, Agency, Authority or their respective employees caused the damage or injury?  
(Include names of employees if known): \_\_\_\_\_

\_\_\_\_\_

Amount claimed, including the estimated amount of any prospective damage or injury, insofar as may be known at the time of presentation of this claim, together with the basis of computation of the amount claimed (**Attach estimates or invoices, if possible**):

\_\_\_\_\_ \$ \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

Names and addresses of known witnesses to damage or injury: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
Signature of Claimant

\_\_\_\_\_  
Date

# Exhibit 3



## CITY OF FONTANA PUBLIC SERVICES DEPARTMENT

### Permit to Prune Street Trees

Date: \_\_\_\_\_ \*

I, \_\_\_\_\_ do hereby request authorization of the City of Fontana to  
Authorized business representative/abutting property owner  
prune \_\_\_\_\_ street tree(s) along \_\_\_\_\_ in accordance with all City  
number Street Name/Addresses  
specifications. Said work will begin on \_\_\_\_\_, and will be completed by \_\_\_\_\_.  
date date

I further agree to bear all costs and liabilities connected with the approved pruning project; and that,  
any contractor used to complete this project is licensed by the City of Fontana to do approved work;  
and that, the approved work will be performed by a certified tree trimmer based on City Standards; and  
that, all work will be performed in a timely and workman like fashion.

\_\_\_\_\_  
Signature of Permit Recipient

\_\_\_\_\_  
Date

\_\_\_\_\_  
Authorized Representative Signature

\_\_\_\_\_  
Date

**\* PERMIT EXPIRES 60 CALENDAR DAYS FROM THE ABOVE DATE**

# Exhibit 4



## CITY OF FONTANA PUBLIC SERVICES DEPARTMENT Permit to Plant Street Trees

Date: \_\_\_\_\_ \*

I, \_\_\_\_\_ do hereby request authorization of the City of  
Authorized business representative/abutting property owner

Fontana to plant \_\_\_\_\_ street tree(s) from within the public easement along the property at  
number

\_\_\_\_\_. In accordance with all City specifications, I will,  
Street Name/Addresses

within 60 days of said request install the current, designated street tree:

\_\_\_\_\_ ( \_\_\_\_\_ ).  
Botanical Name Common Name

I further agree to bear all costs and liabilities connected with the approved planting project; and that,  
any contractor used to complete this project is licensed by the City of Fontana to do approved work.

Upon completion of the entire project, I shall relinquish the ownership and responsibility for said tree(s)  
to the City of Fontana.

\_\_\_\_\_  
Signature of Permit Recipient

\_\_\_\_\_  
Date

\_\_\_\_\_  
Authorized Representative

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

**\* PERMIT EXPIRES 60 CALENDAR DAYS FROM THE ABOVE DATE**



# Exhibit 5



## City of Fontana Tree Pruning Standards

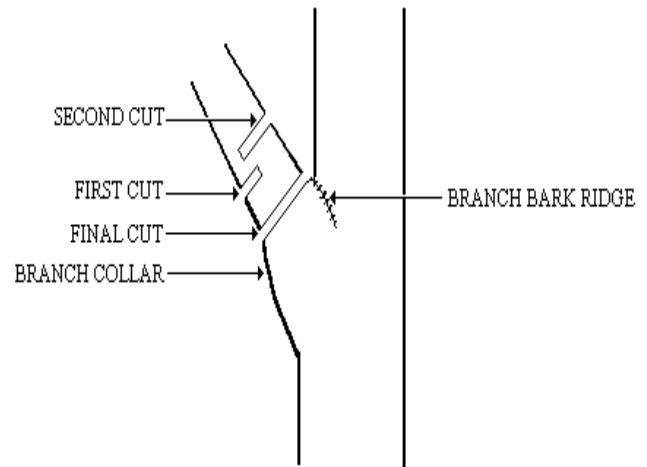
### General Procedures

*Each cut should be made carefully, at the correct location, leaving a smooth surface with no jagged edges or torn bark. The correct anatomical location is just beyond the branch collar.*

### Jump Cutting

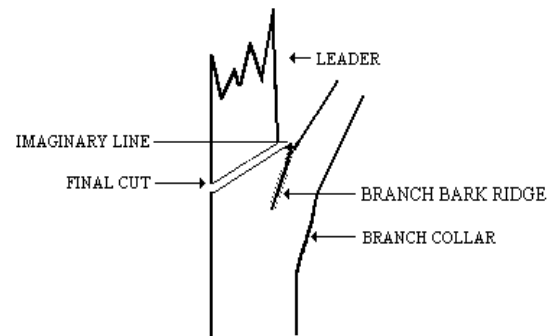
*Large or heavy limbs should be removed using three cuts.*

1. The first undercuts the limb one or two feet out from parent branch or trunk. A properly made undercut will eliminate the chance of the branch "peeling" or tearing bark as it is removed.
2. The second cut is the top cut which is made slightly further out on the limb than the undercut. This allows the limb to drop smoothly when the weight is released.
3. The third cut removes the stub back to just outside the branch collar.



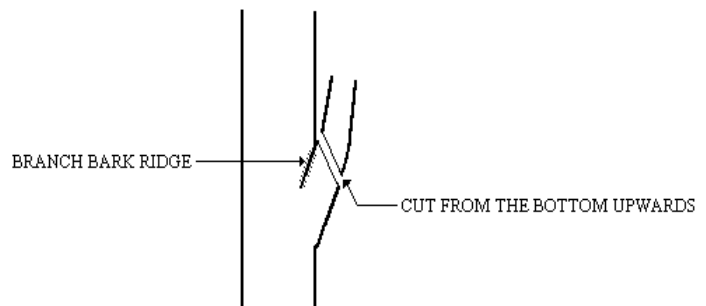
### Drop Crotching Co-dominant or Dead Leaders

Removing a co-dominant or dead leader is best accomplished by cutting the limb back to a lateral that is at least  $\frac{1}{3}$  the size of the parent limb.



### Pruning at Narrow Attachments

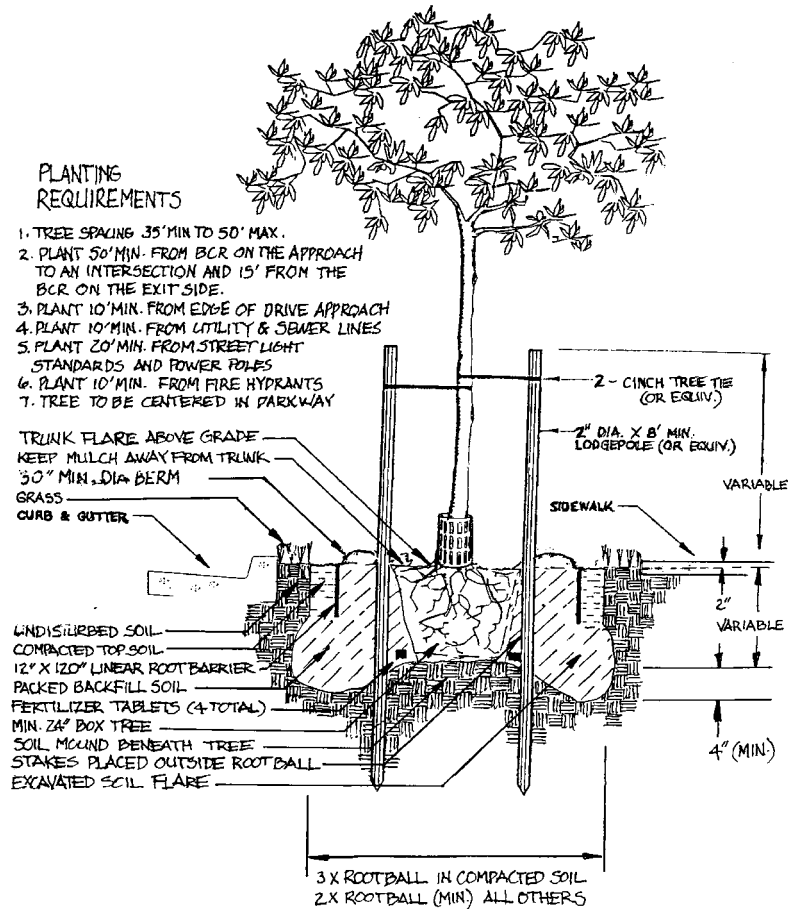
To prevent damage to the parent limb when removing a branch with a narrow attachment, the final cut should be made from the bottom of the branch up.



## Exhibit 6



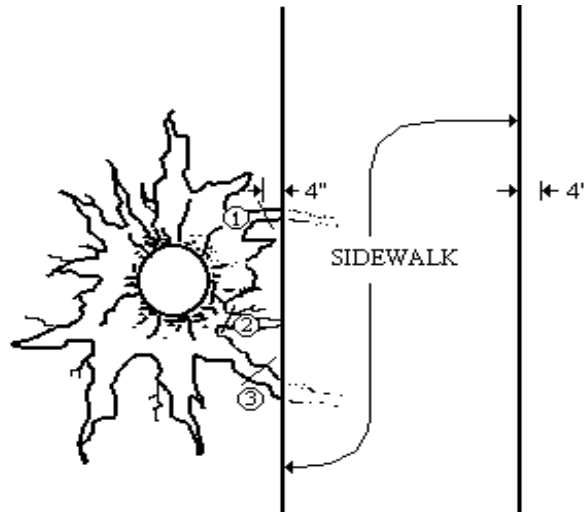
# City of Fontana Tree Planting Detail



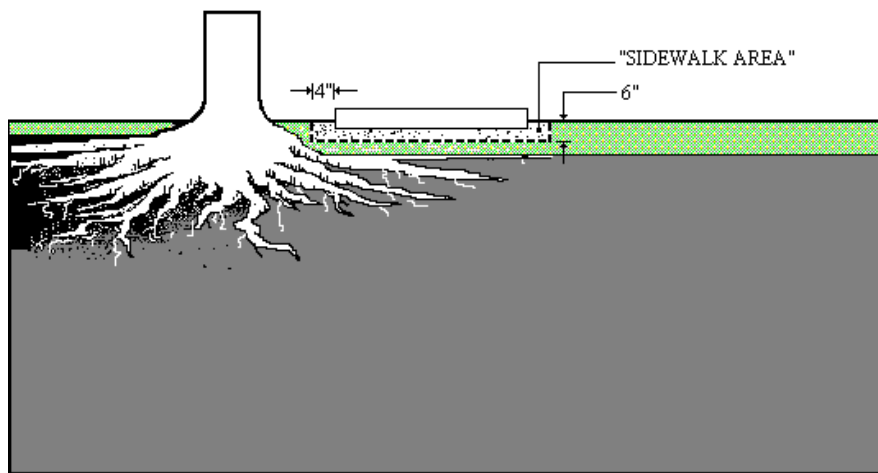
1. Tree spacing 35' minimum to 50' maximum.
2. Plant 50' minimum from the BCR on the approach to an intersection and 15' from the ECR on the exit side.
3. Plant 10' minimum from edge of approach.
4. Plant 10' minimum from utility and sewer lines.
5. Plant 20' minimum from street light standards and power poles.
6. Plant 10' minimum from fire hydrants.
7. Plant 5' from house walks and utility meters.
8. 3'x3' tree well standard unless otherwise specified.
9. Center tree between sidewalk and curb.
10. Where there is no sidewalk, plant tree 18" behind curb.
11. Where public right-of-way is available and sidewalk is adjacent to curb, plant tree 3' behind back of sidewalk.

# Exhibit 7

## City of Fontana Selective Root Pruning Standards



PLAN VIEW



SECTION

VIEW

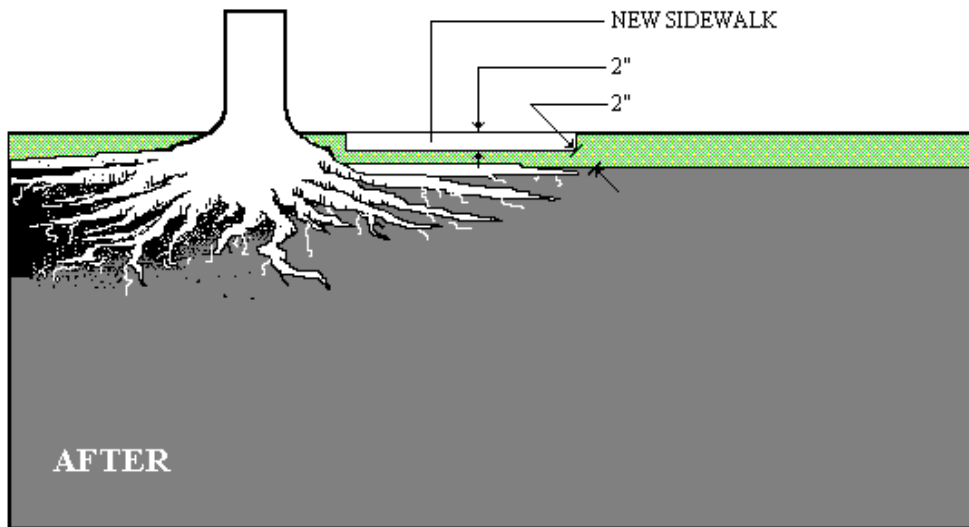
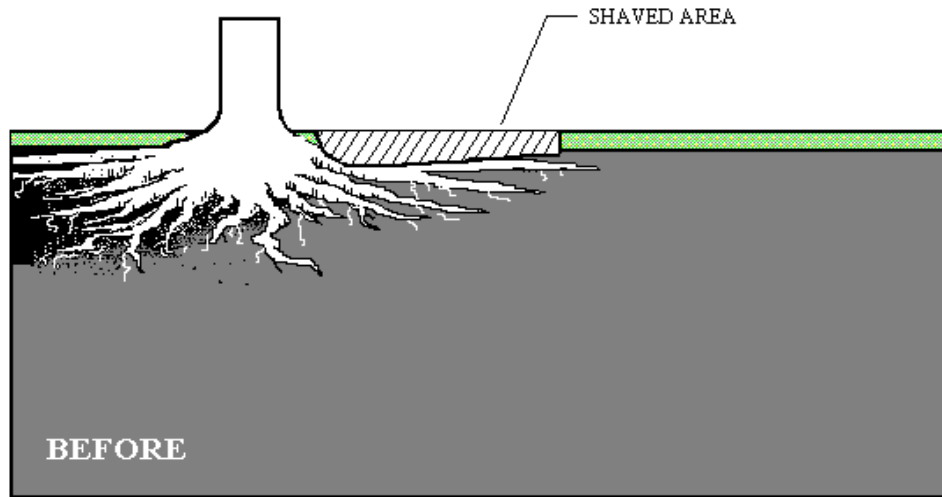
### NOTES:

1. Roots shall be cut at the nearest node to encourage roots that grow away from the sidewalk.
2. Roots must be cleanly cut 4" away from the new sidewalk edge.
3. Backfill excavated areas with soil.

# Exhibit 8



## City of Fontana Root Shaving Standards



### NOTES:

1. Roots are to be shaved down to enable at least 2" clearance between sidewalk and root. Backfill with soil.
2. Root barrier shall not be installed on shaved roots.

# Fontana Street Tree Palette

Botanical name	Common name	Pkwy	Size	Ht/Spr	Type	Avail	Comments
<i>Arecastrum romanzoffiana</i>	Queen Palm	2 - 3'	3 x 3' cutout	40/30	palm	C	FronDs subject to breakage in high winds.
<i>Bauhinia blakeana</i>	Hong Kong Orchid Tree	2 - 3'	3 x 3' cutout	20/20	decid/semi	L	
<i>Cercis occidentalis</i>	Western Redbud	2 - 3'	3 x 3' cutout	20/20	deciduous	L	Tolerates drought & clay soil.
<i>Chionanthus retusus</i>	Chinese Fringe Tree	2 - 3'	3 x 3' cutout	20/20	deciduous	L	Very slow growing. Higher price range tree.
<i>Chitalpa tashkentensis</i>	Chitalpa	2 - 3'	3 x 3' cutout	25/25	deciduous	L	Needs pruning to structure. Drought tolerant.
<i>Eriobotrya deflexa</i>	Bronze Loquat	2 - 3'	3 x 3' cutout	25/25	evergreen	C	Fire blight, powdery mildew, scale & aphids.
<i>Eucalyptus erythrocorys</i>	Red Cap Gum	2 - 3'	3 x 3' cutout	25/20	evergreen	L	Good availability limited to a few growers.
<i>Eucalyptus torquata</i>	Coral Gum	2 - 3'	3 x 3' cutout	20/20	evergreen	L	Needs staking and corrective pruning.
<i>Lagerstroemia indica</i>	Crape Myrtle	2 - 3'	3 x 3' cutout	25/20	deciduous	C	<i>L. indica</i> x <i>L. fauriei</i> are faster growing & have trunk.
<i>Magnolia g. 'St. Mary'</i>	Southern Magnolia 'St. Mary'	2 - 3'	5 x 5' cutout	20/20	evergreen	L	Good availability limited to a few growers.
<i>Prunus cerasifera 'Krauter V.'</i>	Purple Leafed Plum	2 - 3'	5 x 5' cutout	25/20	deciduous	C	'Purple Pony' is a genetic dwarf & sterile. 15' at maturity.
<i>Pyrus kawakami</i>	Evergreen Pear	2 - 3'	3 x 3' cutout	25/25	deciduous	C	Most susceptible of the pears to fireblight.
<i>Tabebuia chrusotricha</i>	Yellow Trumpet Tree	2 - 3'	3 x 3' cutout	20/15	deciduous	C	Most accessible in 24" box; blooms heaviest April - May.
<i>Trachycarpus fortunei</i>	Windmill Palm	2 - 3'	3 x 3' cutout	30'	palm	C	Moderate to fast growth in warm winter areas.
<i>Tristania laurina</i>	Water Gum	2 - 3'	3 x 3' cutout	20/10	evergreen	L	Availability will be very limited.
<i>Washingtonia filifera</i>	California Fan Palm	2 - 3'	3 x 3' cutout	50'	palm	L	Should come with a guarantee of type. Hybrids often sold.
<i>Washingtonia robusta</i>	Mexican Fan Palm	2 - 3'	3 x 3' cutout	90'	palm	C	Seeding in residential yards is a problem.
<i>Xylosma congestum</i>	Xylosma	2 - 3'	3 x 3' cutout	20/10	decid/semi	C	Sun or filtered shade, looks best with moderate watering.
<i>Agonis flexuosa</i>	Peppermint Tree	5 - 6'	5 x 5' cutout	35/35	evergreen	C	Small white flowers carried abundantly in June.
<i>Albizia julibrissen</i>	Silk Tree, Mimosa	5 - 6'	5 x 5' cutout	40/40	deciduous	C	Needs continuous pruning to develop head.
<i>Bauhinia variegata</i>	Purple Orchid Tree	5 - 6'	5 x 5' cutout	30/30	decid/semi	C	Remove seed pods to enhance growth.
<i>Brachychiton acerifolius</i>	Flame Tree	5 - 6'	5 x 5' cutout	40/30	decid/semi	L	Tolerates air pollution & drought, but not excess moisture.
<i>Brachychiton populneus</i>	Bottle Tree	5 - 6'	5 x 5' cutout	50/40	evergreen	C	Withstands heat, sun, dust & drought.
<i>Callistemon viminilis</i>	Weeping Bottle Brush	5 - 6'	5 x 5' cutout	40/20	evergreen	C	Tolerant of heat, cold & most adverse soil conditions.
<i>Calodendrum capense</i>	Cape Chestnut	5 - 6'	5 x 5' cutout	40/40	decid/semi	L	Prefers moderately light clay or loam.
<i>Cassia leptophylla</i>	Gold Medallion Tree	5 - 6'	5 x 5' cutout	25/20	evergreen	C	Zones 21-24; most shapely & graceful of the <i>Cassias</i> .
<i>Cercidium</i>	Palo Verde	5 - 6'	5 x 5' cutout	30/30	deciduous	L	Full sun, tolerates aridity, but better with water.
<i>Eucalyptus nicholii</i>	Nichol's Willow-leaved Peppermint	5 - 6'	5 x 5' cutout	40'	evergreen	C	Needs good drainage. More attractive tree when young.
<i>Geijera parvifolia</i>	Australian Willow	5 - 6'	5 x 5' cutout	40/25	evergreen	C	Tolerates a wide range of moisture levels & soils.
<i>Ginkgo biloba 'Autumn Gold'</i>	Maidenhair Tree	5 - 6'	5 x 5' cutout	60/40	deciduous	L	This cultivar is the most available.
<i>Laurus nobilis</i>	Sweet Bay	5 - 6'	5 x 5' cutout	40/30	evergreen	L	Pest problems are psyllids & scale.
<i>Magnolia g. 'Majestic Beauty'</i>	Southern Magnolia 'Majestic Beauty'	5 - 6'	5 x 5' cutout	35/20	evergreen	C	
<i>Magnolia g. 'Russett'</i>	Southern Magnolia 'Russett'	5 - 6'	5 x 5' cutout	30/20	evergreen	L	Good small tree.
<i>Magnolia g. 'Samuel Sommer'</i>	Southern Magnolia 'Samuel Sommer'	5 - 6'	5 x 5' cutout	35/30	evergreen	C	Supposed to be the best cultivar.
<i>Pistachia chinensis</i>	Chinese Pistache	5 - 6'	5 x 5' cutout	40/40	deciduous	C	Thrives in hot climate & is relatively drought tolerant.
<i>Pyrus c. 'Aristocrat'</i>	Aristocrat Pear	5 - 6'	5 x 5' cutout	30/30	deciduous	C	
<i>Pyrus c. 'Bradford'</i>	Bradford Pear	5 - 6'	5 x 5' cutout	50/30	deciduous	C	Weak branching with age.
<i>Pyrus c. 'Chanticleer'</i>	Chanticleer Pear	5 - 6'	5 x 5' cutout	30/30	deciduous	L	Profuse bloomer. Reddish fall color.
<i>Pyrus c. 'Redspire'</i>	Redspire Pear	5 - 6'	5 x 5' cutout	30/25	deciduous	L	Red/orange fall color.
<i>Pyrus betulifolia</i>	Dancer Pear	5 - 6'	5 x 5' cutout	30/20	deciduous	R	More resistant to fireblight. Has smaller leaf.
<i>Quercus engelmannii</i>	Mesa Oak	5 - 6'	5 x 5' cutout	60/60	evergreen	R	Should be put back into landscape.

## Fontana Street Tree Palette

<i>Quercus ilex</i>	Holly Oak	5 - 6'	5 x 5' cutout	50/50	evergreen	C	Will tolerate low desert, air pollution, alkaline soil, wind.
<i>Quercus lobata</i>	Valley Oak	5 - 6'	5 x 5' cutout	70/70	deciduous	C	
<i>Rhus lancea</i>	African Sumac	5 - 6'	5 x 5' cutout	30/30	evergreen	C	Takes heat, wind, aridity & poor soils.
<i>Sapium sebiferum</i>	Chinese Tallow Tree	5 - 6'	5 x 5' cutout	40/35	deciduous	C	Needs ample water & prefers alkaline soil.
<i>Ulmus parvifolia 'Drake'</i>	Drake Elm	5 - 6'	5 x 5' cutout	60/70	evergreen	C	Small leaves & weeping habit.
<i>Ulmus parvifolia 'True Green'</i>	True Green Elm	5 - 6'	5 x 5' cutout	60/70	evergreen	C	More evergreen , darker green leaves.
<i>Alnus cordata</i>	Italian Alder	8 - 12'	10 - 20' median	40/30	deciduous	L	Has invasive roots. Suffers with Armillaria root rot.
<i>Celtis sinensis</i>	Chinese Hackberry	8 - 12'	10 - 20' median	50/50	deciduous	L	Tolerates strong winds, desert heat, drought & alkaline.
<i>Cinnamomum camphora</i>	Camphor Tree	8 - 12'	10 - 20' median	50/60	evergreen	C	Significant pest problem is Verticillium wilt.
<i>Eucalyptus leucoxylon</i>	White Ironbark	8 - 12'	10 - 20' median	80'	evergreen	L	Cultivar 'Rosea' is more available. Will endure drought.
<i>Fraxinus oxycarpa 'Raywood'</i>	Claret Ash	8 - 12'	10 - 20' median	30/30	deciduous	C	Purple fall color. Does not produce fruit.
<i>Koelreuteria bipinnata</i>	Chinese Flame Tree	8 - 12'	10 - 20' median	50/50	deciduous	C	Grows best in well drained soil.
<i>Koelreuteria paniculata</i>	Goldenrain Tree	8 - 12'	10 - 20' median	25/25	deciduous	C	Takes cold, heat, drought, wind & alkline soil.
<i>Magnolia grandiflora</i>	Southern Magnolia	8 - 12'	10 - 20' median	60/40	evergreen	C	Needs good drainage.
<i>Phoenix dactylifera</i>	Date Palm	8 - 12'	10 - 20' median	70'	palm	L	Tolerant of salt & drought.
<i>Pinus canariensis</i>	Canary Island Pine	8 - 12'	10 - 20' median	80'	evergreen	C	Drought tolerant when established
<i>Podocarpus gracilior</i>	Fern Pine	8 - 12'	10 - 20' median	60/60	evergreen	C	Tolerates drought, most soils, high salinity, cold, seacoast.
<i>Quercus agrifolia</i>	Coast Live Oak	8 - 12'	10 - 20' median	70/80	evergreen	C	Native to coastal ranges; susceptible to oak moth larvae.
<i>Quercus rubra</i>	Red Oak	8 - 12'	10 - 20' median	90/60	deciduous	L	Needs fertile soil & plenty of water. Good fall color.
<i>Quercus suber</i>	Cork Oak	8 - 12'	10 - 20' median	60/40	evergreen	C	
<i>Tabebuia impetiginosa(ipe)</i>	Pink Trumpet Tree	8 - 12'	10 - 20' median	30/30	deciduous	C	Blooms late winter, sometimes again late summer to fall.
<i>Tristania conferta</i>	Brisbane Box	8 - 12'	10 - 20' median	60/40	evergreen	C	Needs tip pruning to develop fullness.