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City of Benicia
Parks & Community Services
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TREE PRUNING STANDARD SPECIFICATIONS

THE FOLLOWING STANDARD SPECIFICATIONS DEFINE THE MINIMUM REQUIREMENTS FOR TREE PRUNING WITHIN THE CITY OF BENICIA.

ALL WORK TO BE PERFORMED BY CALIFORNIA LICENSED TREE SERVICE CONTRACTOR WITH MINIMUM FIVE YEARS EXPERIENCE.

ALL WORK TO BE PERFORMED UNDER THE DIRECT SUPERVISION OF AN ARBORIST CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE AND COMPLETED IN COMPLIANCE WITH ANSI A300 AND Z133.1 STANDARDS.

The Director of Parks and Community Services or designee can clarify any questions regarding these standard specifications.

A. INTRODUCTION:

- a. The purpose of these specifications is to best preserve and enhance the beauty, structural integrity, and functional values of trees.
- b. These specifications are presented as working guidelines, recognizing that trees are individually unique in form and structure and that their pruning needs may not always fit strict rules.

B. OVERVIEW OF SPECIFICATIONS:

- a. Note that all specifications are based on International Society of Arboriculture, National Arborist Association and American National Standards Institute criteria.
- b. Perform all tree work according to these specifications.
- c. Note that there are different criteria for pruning depending on the purpose for the pruning.
 - i. **Complete Prune Specifications** are used when circumstances deem the entire tree needs to be fully pruned.

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- ii. **Safety Prune Specifications** require less pruning and are used when specific, possibly hazardous (dead/dying) limbs need removal to eliminate all safety concerns. Safety pruning may be recommended in some circumstances instead of a complete prune. Safety pruning specifications are used for "as needed" pruning as outlined above and address only safety concerns. Safety pruning includes only the basic requirements and does not include the fine pruning detail work outlined in a complete prune.
- iii. **Power Line Clearance Prune (PLC) Specifications** are used for private tree power line clearance work and for street tree (PLC) pruning when the tree is pruned between its periodic complete pruning cycles.
- iv. **Palm Pruning Specifications** are used when pruning any type of palm.

C. GENERAL REQUIREMENTS:

- a. The following requirements shall be used during any pruning work to be performed on City trees:
 - i. Dispose of all tree debris generated.
 - ii. Ensure that good traffic control measures are utilized at all times.
 - iii. Minimize disruption of the public.
 - iv. Ensure that adequate safety measures are utilized at all times for employees and the public.
- b. Contact the Director of Parks and Community Services or designee prior to starting any tree work.

D. CERTIFIED ARBORIST:

- a. The Contractor shall ensure that a certified arborist, as accredited by the International Society of Arboriculture oversees the tree work according to these specifications.

E. SPECIFIC TREE PRUNING SPECIFICATIONS:

- a. All persons performing tree work on City trees must be trained according to tree care standards accepted by the International Society of Arboriculture.
- b. All persons performing tree work on City trees in or around primary electrical lines must be trained to do so according to the "Electrical Safety Orders" of the State of California, including all amendments and revisions.
- c. When tree pruning cuts are made to a side limb, such remaining limb must possess a basal thickness of at least one third (1/3) of the diameter of the wound so affected. Such cuts shall be considered proper only when such remaining limb is vigorous enough to maintain adequate foliage to

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produce wood growth capable of callusing the pruning cut so affected within a reasonable amount of time.

- d. All final tree pruning cuts shall be made in such a manner so as to favor the earliest possible covering of the wound by natural callus growth. Flush cuts, which produce large wounds or weaken the tree at the cut, shall not be made. The branch collar shall not be removed.
- e. Tree limbs shall be removed and controlled in such a manner as to cause no damage to other parts of the tree, or to other plants or property.
- f. All tools used on a tree known to contain an infectious tree disease shall be properly disinfected immediately before and after completing work on such tree. All major diseases and/or pest problems shall be promptly reported to the Director of Parks and Community Services or designee.
- g. All cutting tools and saws used in tree pruning shall be kept sharpened to result in final cuts with smooth wood surface and secure bark remaining intact. All trees six (6) inches in diameter or less shall be pruned with hand tools only. Chain saws will not be permitted on any trees six (6) inches in diameter or less. This is to prevent any unnecessary abrasions to cambial tissue that may predispose a tree to insect and/or disease problems.
- h. Whenever pruning cuts are to be made, while removing limbs too large to hold securely in one hand during the cutting operation, the limbs shall be cut off first, one (1) to two (2) feet beyond the intended final cut. Then the final cut shall be made in a manner to prevent unnecessary tearing back of the bark and wood. Such cutting back shall not include the removal of any live, healthy limbs in excess of six (6) inches in diameter without prior approval from the Director of Parks and Community Services or designee.
- i. No more than twenty five (25) percent of the live wood may be removed from the crown of any tree, without approval of the Director of Parks and Community Services or designee, excepting live oaks, which are limited to no more than ten (10) percent. Resulting in keeping as much of the crown of the tree as possible.
- j. Any extraneous metal, wire, rubber or other material (i.e. stakes, ties) interfering with tree growth shall be removed immediately.
- k. Any defective or weakened trees shall be reported to the Director of Parks and Community Services or designee. Specifically, any structural weakness of a tree, decayed trunk or branches, shall be reported in writing, noting the location of the tree by street address and a description of the hazard found in the tree.
- l. The use of climbing spurs or spike shoes in the act of pruning trees is prohibited unless specifically authorized by the Director of Parks and Community Services or designee.
- m. Beneficial animal, bird nests, or other nesting cavities shall be preserved and protected whenever feasible, unless doing so would create a hazard.

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F. COMPLETE TREE PRUNING SPECIFICATIONS:

- a. Complete tree pruning shall consist of the total removal of those dead or living branches as may threaten the future health, strength and attractiveness of trees. Specifically, trees shall be pruned in such a manner as to:
 - i. Prevent branch and foliage interference with requirements of safe public passage. Over street clearance shall be kept to a minimum of sixteen (16) feet above the paved surface of the street, fifteen (15) feet above the curb and eight (8) feet above the surface of a public sidewalk or pedestrian way. Exceptions are allowed for young trees, which would be irreparably damaged by such pruning action.
 - ii. Remove all dead and dying branches and branch stubs that are two (2) inches in diameter or larger.
 - iii. Remove all broken or loose branches.
 - iv. Remove any live branches, which interfere with the tree's structural strength, and healthful development, which will include the following:
 1. Branches, which rub and abrade a more important branch.
 2. Branches of weak structure, which are not important to the framework of the tree.
 3. Branches, which if allowed to grow, would wedge apart the junction of more important branches.
 4. Branches forming multiple leaders in a single leader type tree.
 5. Branches near the end of a limb, which will produce more weight or offer more resistance to wind than the limbs are likely to support.
 6. Selective removal of undesirable sucker and sprout growth paying specific attention not to nick or damage the sprout "burl".
 7. Selective removal of one or more developing leaders where multiple branch growth exists near the end of broken or stubbed limbs.
 8. Selective removal of limbs obstructing buildings or other structures or traffic signs. Generally, limbs closer than five (5) feet to a building or other structure should be removed unless doing so would severely damage a tree.
 9. Removal of branches, which project too far outward beyond an otherwise symmetrical form.

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- v. Cut back ends of branches and reduce weight where excessive overburden appears likely to result in breakage of supporting limbs.
- vi. Clear trees of sprout or sucker growth to a minimum height of eight (8) feet above ground level. Exceptions are allowed for young trees, which would be irreparably damaged by such pruning action.
- vii. Obtain a balanced appearance when viewed from the opposite side of the street immediately opposite the tree, unless authorized by the Director of Parks and Community Services or designee to do otherwise.
- viii. Remove all vines entwined in trees and on tree trunks. Vine tendrils shall be removed without injury to said trees.
- ix. Clear all branches and foliage within ten (10) feet of primary electrical lines and three (3) to five (5) feet of secondary electrical lines.
- x. Clear all branches that interfere with telephone, cable and other utility lines within one (1) foot of lines, wherever feasible.

G. SAFETY TREE PRUNING SPECIFICATIONS:

- a. Safety tree pruning shall consist of the total removal of those dead or living branches as may menace the future health, strength and attractiveness of trees.
- b. Specifically, trees shall be pruned in such a manner as to:
 - i. Prevent branch and foliage interference with requirements of safe public passage. Over street clearance shall be kept to a minimum of sixteen (16) feet above the paved surface of the street, fifteen (15) feet above the curb and eight (8) feet above the surface of a public sidewalk or pedestrian way. Exceptions are allowed for young trees, which would be irreparably damaged by such pruning action.
 - ii. Remove dead and dying branches and branch stubs that are two (2) inches in diameter or more.
 - iii. Remove all broken or loose branches.
 - iv. Removing any live branches, which interfere with the tree's structural strength and healthful development, will include the following:
 - 1. Limbs of weak structure or otherwise hazardous.
 - 2. Selective removal of limbs obstructing buildings or other structures or traffic signs. Generally, limbs closer than five

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(5) feet to a building or other structure should be removed unless doing so would severely damage a tree.

3. Clear trees of sprout or sucker growth to a minimum height of eight (8) feet above ground level. Exceptions are allowed for young trees, which would be irreparably damaged by such pruning action.

H. POWER LINE CLEARANCE (PLC) PRUNING SPECIFICATIONS:

- a. When trees are in the proximity of overhead energized lines and equipment, reliability of service, safety, and governmental standards require a reasonable amount of tree pruning to avoid conductor contacts and grounding of circuits through the trees. Power line clearance pruning, therefore, shall consist of the removal of tree branches for proper electric line clearance in order to minimize the likelihood of power outages and improve safety.
- b. Specifically, trees shall be pruned in such a manner as to:
 - i. Clear all branches and foliage within ten (10) feet of primary electrical lines.
 - ii. Clear all branches that interfere with secondary electric lines within three (3) to five (5) feet.
 - iii. Protect current tree health, condition and symmetry using Dr. Alex Shigo's book, *Pruning Trees Near Electric Utility Lines* as a guide.
- c. During the tree pruning process, all safe minimum working distances for energized conductors shall be observed. These clearances are defined under ANSI Z133.1-2006, *Tree Care Safety Standards*. Current ANSI specifications will supersede these requirements when they take effect. Any contact with energized lines shall be promptly reported to the Director of Parks and Community Services or designee.
- d. Access backyards must be closely coordinated with the property owner, whenever feasible.

I. PALM PRUNING SPECIFICATIONS:

- a. Palm trees shall be pruned according as follows:
 - i. The removal of all dead fronds and other dead plant parts from the trunk. All loose frond sheaths shall be removed along the entire length of the palm trunk.
 - ii. The removal of all flower and fruit parts whether dead or alive.
 - iii. The use of climbing spurs or spike shoes in the act of pruning trees is only allowed on palm trees that are too high to reach with a bucket truck and are prohibited below 30' feet.

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- iv. Canary Island date palm (*Phoenix Canariensis*) trunks shall be cleaned of any weed species. The immediate area below the green fronds shall be trimmed to a symmetrical (pineapple) appearance. The shape shall not exceed a minimum of forty-eight (48) inches or a maximum of sixty- (60) inches length below the green fronds. The trunk when pruning operations are complete shall be left in a clean, unscathed appearance throughout the entire length of the palm trunk. All equipment used to prune Canary Island date palms shall be cleaned and sterilized before and after pruning each tree.
- v. Inspect the entire length of trunk on all *Phoenix canariensis* and *Phoenix dactylifera* Palm Trees, especially the upper zone just below the crown, by tapping with a mallet (sounding) in conjunction with pruning; report any damage, decay, or deterioration.

J. UNACCEPTABLE PRUNING:

- a. The procedures including but not limited to those listed below will result in tree decline and are not allowed (storm damage and other extenuating circumstances exempted):
 - i. Severe cutting back of all growing tips usually referred to as topping, pollarding, or hat racking.
 - ii. Flush cutting where a cut is made even with the surface of the trunk or limb, removing the branch collar and branch bark ridge.
 - iii. Stub cutting where branch removal results in the base of branch removed protruding more than approximately one fourth (1/4) inch beyond the zone of branch collar and branch bark ridge.
 - iv. Removal of a healthy main leader, for reasons other than power line clearance.
 - v. Excessive cutting or lifting that exceeds the International Society of Arboriculture or these specifications.
- b. Contractor shall replace at contractor's sole expense any trees that have declined in health due to use of improper pruning procedures.

K. PUBLIC SAFETY AND COOPERATION:

- a. All tree work shall be conducted in a manner as to cause the least possible interference with, or annoyance to others.
- b. Pedestrian and vehicular traffic shall be allowed to pass through the work areas only under conditions of safety and with as little inconvenience and delay as possible. Unless the work area is totally barricaded or otherwise kept safe, at least one worker shall serve to coordinate safe operations on the ground at all times when work operations are in progress.

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- i. Whenever larger tree sections are being cut in a treetop, which may endanger persons or property, such sections shall be secured by ropes and lowered safely to the ground in a controlled manner.
- ii. All fire hydrants, meter vaults, water and gas shut off valves and similar facilities must remain accessible during the course of work.
- iii. All tree work must comply with all tree related safety requirements as stated in the safety standards ANSI Z133.1-2006 of the American National Standards Institute, Inc. 1430 Broadway, New York, NY 10018.
- iv. Noise levels, resulting from tree work operations, must be kept to a minimum at all times. All tree work operations are subject to compliance with all local Noise Restrictions. Operation of tree work equipment shall not take place between the hours of 7:00 p.m. and 7:00 a.m. weekdays, or between 5:00 p.m. and 10:00 a.m. on weekends (Saturday and Sunday). Emergencies are exempt from any time restrictions.

L. SITE CLEANUP:

- a. Cleanup of any debris resulting from any tree pruning operations shall be promptly and properly accomplished. The work area shall be kept safe at all times until all operations are completed. Under no circumstances shall the accumulation of debris be allowed in such a manner as to result in a hazard to the public. All debris from tree operations shall be cleaned up each day before the work crew leaves the site, unless permission is given by the Director of Parks and Community Services or designee to do otherwise. All lawn areas, parkways, streets and sidewalks shall be raked and/or blown clean, and all brush, branches, or other debris shall be removed from the site. Areas are to be left in a condition equal to or better than that which existed prior to the commencement of tree pruning operations.
- b. All cuttings, branches, wood chips and other debris shall be cleared from the site and disposed of by the Contractor. The Contractor shall obtain any permits that may be required for this purpose. Disposal expenses will be the Contractor's responsibility. Debris, such as wood chips, shall be left on property only at the direct and specific request of the Director of Parks and Community Services or designee.

M. INSPECTIONS:

- a. The Director of Parks and Community Services or designee will inspect the work performed by the contractor to ensure completion of the pruning in accordance with these specifications.
- b. Should more than two inspections be required on trees needing additional work, the contractor will be billed for City staff time.