Agenda Report

TO: CITY COUNCIL DATE: April 15, 2002

FROM: CITY MANAGER

SUBJECT: AN ORDINANCE OF THE CITY OF PASADENA AMENDING CHAPTER 8.52 OF THE PASADENA MUNICIPAL CODE, ENTITLED "CITY TREES AND TREE PROTECTION ORDINANCE" AND AMENDING RELATED SECTIONS OF TITLE 17 AND CHAPTER 1.25

RECOMMENDATION:

It is recommended that following the Public Hearing the City Council:

1. Hold the first reading of the ordinance to adopt the proposed amendments to Pasadena Municipal Code (PMC) Chapter 8.52 (City Trees) and Title 17 (Zoning) and Chapter 1.25 with staff's recommended changes (Attachment A); and
2. Adopt by resolution the Tree Protection Guidelines; and Specimen Tree List; and
3. Acknowledge that the Tree Protection Ordinance is exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines sections 15061(b)(3); and
4. Direct the City Clerk to file a Notice of Exemption with the Los Angeles County Recorder; and
5. Direct the City Attorney to prepare an amendment to the PMC Chapter 2.80 to add the Urban Forestry Advisory Committee as a subcommittee of the Design Commission

ADVISORY RECOMMENDATIONS:

Planning Commission Recommendations:

The Planning Commission held a public hearing to receive public comment on the Tree Protection Ordinance, Tree Protection Guidelines, Tree Protection Plan Submittal Requirements, and Specimen Tree List on April 3, 2002. After the hearing, the Commission voted unanimously to approve the ordinance with staff recommendations and supporting materials included in this report with the following additional recommendations:

Comm. Rec. #1: Modify 8.52.030 J to include a record of the tree's status including the need for replacement in the comprehensive inventory of public trees
Staff Response: Do not concur because the ordinance contains a requirement for a comprehensive tree inventory. This inventory includes thorough and detailed records of tree replacement and maintenance.

Comm. Rec. #2: Modify 8.52.050 to establish the UFAC as a separate commission, and to replace the Design Commission as it applies to this ordinance.
Staff Response: Instead recommend that UFAC be a subcommittee of the Design Commission. Staff recommends a five member subcommittee: two representatives from Design Review Commission; two representatives from Recreation and Parks Commission; and one representatives from Pasadena Beautiful Foundation

Comm. Rec. #3: Modify 8.52.075 A (1) to remove 'there is a public benefit' because it is not defined in the present ordinance
Staff Response: Staff did not remove but agreed it was not clearly defined so a definition of public benefit has been added to read 'a public purpose, service or use which affects residents as a community and not merely as particular individuals.' This will allow for tree removal in situations where it can be proven that the community as a whole will derive a greater benefit from the tree removal than from its protection.

Comm. Rec. #4: Modify 8.52.075 A (6) to delete finding which states "the project will result in a greater tree canopy coverage."
Staff Response: Modify the finding to allow removal of a protected tree if the project includes a landscape design plan which will result in a tree canopy coverage of greater significance than the tree canopy coverage being removed, within a reasonable time after completion of the project. The modified finding is needed to address circumstances that can arise where the protection of a tree, due to its location on the site, dictate an inferior landscape design in order to accommodate the tree.

Comm. Rec. #5: Modify 8.52.120 to add 'nail' after 'sign'.
Staff Response: Concur and include in the revised ordinance

Comm. Rec. #6: Modify 8.53.170 to add the ability of the City Council to 'call up' a decision made by the City Manager.
Staff Response: Concur and include in the revised ordinance.

Comm. Rec. #7: Modify Section 15 to add 'and/or health' following 'To ensure the protection…'.
Staff Response: Concur and include in the revised ordinance

Comm. Rec. #8: Modify Section 15 - Add "public trees" following "specimen trees".
Staff Response: Concur and include in revised ordinance

Urban Forestry Advisory Committee (UFAC) Recommendations:

At their special meeting of March 26, 2002, UFAC members received copies of the draft Tree Protection Ordinance, the Tree Protection Ordinance Staff Recommended Changes, draft Tree Protection Plan Guidelines, and a draft Specimen Tree List. UFAC supported the Tree Protection Guidelines and Tree Protection Plan. UFAC supported the draft Tree Protection Ordinance with some recommended changes and comments as follows:

UFAC Rec. #1: Modify 8.52.015 E. to change 'animals' to 'wildlife'.
Staff Response: Concur and include in the revised ordinance

UFAC Rec. #2: Modify 8.52.020 to add a definition for DBH (Diameter at Breast Height).
Staff Response: The actual height as indicated in the ordinance of 4 ½ feet provides a more accurate definition for prosecution of violations.

UFAC Rec. #3: Modify 8.52.020 E. to use International Society of Arboriculture (ISA) standards used to define hazard or hazardous.
Staff Response: Hazard is not specifically defined by the ISA. Staff currently uses the ISA Tree Hazard Evaluation Form in their evaluation of trees. This process looks at the tree's characteristics and health, the site conditions, and any potential targets below or underneath the tree. For the purposes of this ordinance, staff has summarized this for the definition.

UFAC Rec. #4: Modify 8.52.020 F. to add 'or omission' following 'act' to the definition of injure.
Staff Response: Concur and include in revised ordinance

UFAC Rec. #5: Modify 8.52.020 G. to add to the definition of landmark trees in regards to historical significance…'person or event'.
Staff Response: Concur and include in revised ordinance

UFAC Rec. #6: Modify 8.52.030 to add the qualification for Public Trees under City Manager Responsibilities. UFAC expressed concern on the vagueness of the City Manager's responsibilities for public versus private trees.
Staff Response: Concur and include in the revised ordinance.

UFAC Rec. #7: Modify 8.52.075 A (1) add clear definition to 'public benefit'
Staff Response: Concur and include in the revised ordinance

UFAC Rec. #8: Modify 8.52.075 A (6) to define reasonable time frame for a project to provide greater tree canopy coverage and to consider a 'landscape design plan' that provides a solution for the canopy replacement.
Staff Response: Concur and include in revised ordinance

UFAC Rec. #9: Modify 8.52.080 D. to remove 'or required by approved construction or development plans consistent with this chapter'
Staff Response: Concur and include in revised ordinance

UFAC Rec. #10: Modify 10. 8.52.150 to remove design commission from this noticing requirement.
Staff Response: The Design Commission should not be removed, because it is the advisory body to the City Council and therefore needs to be informed of decisions relating to tree removals.

UFAC Rec. #11: Modify 11. 8.52.165 to include replanting or replacing included in the penalties.
Staff Response: The administrative options that are already available can include the cost for replanting and replacing trees. Staff does not support violators having an option to plant a tree when they have violated this ordinance.

UFAC Rec. #12: Reflect in the zoning code that every effort should be made to build around protected trees.
Staff Response: The current recommended language allows that the building may be modulated to accommodate a protected tree.

UFAC Rec. #13: Modify 8.52.050 regarding the make up of UFAC. The committee would like a total of nine members: two representatives from Design Review Commission; two representatives from Recreation and Parks Commission; two representatives from Pasadena Beautiful Foundation; and three at-large, of which two should be technically capable of making findings and recommendations for public and private trees.
Staff Response: Instead staff recommends a five member subcommittee: two representatives from Design Review Commission; two representatives from Recreation and Parks Commission; and one representatives from Pasadena Beautiful Foundation

BACKGROUND:

At the September 17, 2001 City Council meeting, the City Council directed the City Attorney to prepare a Tree Protection Ordinance amending PMC Chapter 8.52. The materials presented in and attached to this report are a response to that directive, and were prepared jointly by staff from the City Attorney's Office, the City Prosecutor's Office, the Public Works and Transportation Department, and the Planning and Development Department.

Staff has prepared a revised Tree Protection Ordinance (Attachment A) which incorporates recommendation # 5,6,7, and 8 by the Planning Commission and recommendations #1,4,5,7,8, and 9 by the Urban Forestry Advisory Committee. The revision also includes staff recommendations on technical refinements designed to eliminate ambiguity which were also raised as recommendations by the Advisory Committees.

The purpose of the Tree Protection Ordinance presented as Attachment A with staff recommended changes is to recognize the substantial economic, environmental and aesthetic importance of trees within the community. Protection measures will apply to trees on public property and landmark, native and specimen trees in specified areas of private property. The tools of compliance orders and administrative citations are provided to enforce the provisions of the ordinance, and civil and criminal penalties are specified for defined violation of the ordinance. An appeal process is created for certain permit related decisions.

During discussions at the Planning Commission and thereafter, ambiguities in the ordinance were identified. In an effort to continue to refine the Ordinance, revisions were made to eliminate ambiguities and to clarify the intent and operation of the ordinance without changing the meaning. This included eliminating redundancy by combining sections and additional revisions as follows: The version of the ordinance which was reviewed by the Planning Commission did not clearly differentiate the sections which related to work on private trees and those which related to work on public trees; therefore, Sections 8.52.070 to 8.52.076 were rearranged conceptually to make this distinction. Likewise, the civil and criminal penalty and administrative remedy sections of the version which was reviewed by the Planning Commission were not entirely consistent with the similar sections of the Code relating to Code Enforcement, and those Sections 8.52.155 and 8.52.160 were reworked for consistency and language which was redundant was removed from other sections. Because the ordinance cannot be legally retroactive where a permit or approval has been issued, Section 8.52.080(E) was revised to insure that there is no ambiguity over the fact that the ordinance cannot apply retroactively. In addition, the section on the request for work on public trees, Section 8.52.076 was revised so that it is a request, not an application per se, and to indicate better the standards upon which the request would be considered. Finally, a subsection on permits for pruning of Landmark Trees was added to Section 8.52.070 to correct its inadvertent omission from an earlier draft. To respond to the recommendation of the Planning Commission that decisions with respect to tree removal applications be subject to appeal and call up procedures, Sections 8.52.070 and related sections were revised to incorporate the standard application

procedures and submittal requirements of the zoning code, including related appeal and call up procedures.

Some of the other key provisions of the report are as follows:

Landmark Trees
A Landmark tree is a tree with a historic or cultural significance due to its association with a historic building, site, street, event or person; it is the largest or oldest of the species located in the city; or it is a defining landmark or significant outstanding feature of a neighborhood. A designation process for landmark trees is created which is the same process for the designation of other city landmarks, and requires review by the Cultural Heritage Commission, action by the City Council, and recordation of a notice of designation with the Los Angeles County Recorder. This process also requires the property owner be notified in writing of the public hearing to consider the landmark designation. Designated landmark trees are protected in all areas of the city and require a permit for pruning to ensure proper pruning methods are employed.

Native and Specimen Trees
Native trees include thirteen species including oak, walnut and sycamore, and must have a trunk diameter of at least 8 inches as measured 4 ½ feet above natural grade. Further, Specimen trees must possess distinctive form, size, and age, and must be an outstanding specimen of a desirable species. Native and specimen trees are protected in established front and corner yards, and required side and rear yards in single family residential and RM-12 multifamily zoning districts; and in all areas of other zones.. Provisions for protection are automatically afforded to trees meeting the definition of specimen or native. Protection means no specimen or native tree can be removed or injured by a private party without a permit, however, pruning is allowed.

Public Trees
All public trees are protected under the ordinance and it is an unlawful to plant, prune, injure or remove a public tree. Any person desiring to initiate special maintenance or removal of a public tree must make an application for review of such request to the city manager. A request for public tree removal will be evaluated based on established public tree removal criteria.

Protection Guidelines for Public, Landmark, Native and Specimen Trees
Tree Protection Guidelines will provide the specific standards with respect to the protection of trees under this ordinance. Primarily, these guidelines offer tree protection measures for projects involving site construction or other site alterations. These guidelines will become effective on acceptance by resolution of the City Council.

Removal of Landmark, Native or Specimen Trees
No permit, which will result in injury to or removal of a landmark, native or specimen tree will be issued unless one of the following findings is made:

1. There is a public benefit (as defined in the ordinance), or a public health and safety benefit, to the injury or removal that outweighs the protection of the tree; or
2. The present condition of the tree is such that it is not reasonably likely to survive; or
3. There is an objective feature of the tree that makes the tree not suitable for the protections of the tree protection chapter; or
4. There would be a substantial hardship to a private property owner in the enjoyment and use of real property if the injury or removal is not permitted; or
5. To not permit injury to or removal of a tree would constitute a taking of the underlying real property; or
6. The project, as defined in the Zoning Code, includes a landscape design plan which will result in tree canopy coverage of greater significance than the tree canopy coverage being removed, within a reasonable time after completion of the project.

In addition, prior to approval of a Landmark tree removal request, the procedures in Chapter 2.75 (Cultural Heritage Commission) for removal must be followed, specifically requiring the issuance of a certificate of appropriateness. Relocation of any protected tree, either on- or off-site, will be treated as a removal.

Tree Protection Exceptions

Under the ordinance, there are exceptions created that allow removal of hazardous trees and trees that must be removed for a number of public purposes including the East Side Storm Drain project, compliance with statewide regulations for electric utility tree pruining operations, and projects approved as of the date of the ordinance. Where immediate action is required for the protection of life or property, no permit is required to remove or injure a protected tree. Where the city manager has determined it is necessary or prudent for the public health, safety or welfare no permit is required to remove a native, specimen, or public tree.

Title 17 (Zoning Code)

Related sections of the Zoning Code are amended to incorporate the explicit protections of the tree protection ordinance. In the Central District, the design authority may require modification of the building setback requirements to ensure the protection of landmark, specimen, native and public trees.

STAFF RECOMMENDED CHANGES TO SEPTEMBER 17, 2001 COUNCIL DIRECTIVE:

When the City Council first directed staff to prepare the tree ordinance, many of the details of had not yet been thoroughly reviewed to ensure compliance with other sections of the PMC and to eliminate any language ambiguities. The following staff recommended changes have been incorporated into the revised ordinance:

1. Specimen Tree Definition:
Delete the minimum 25-inch diameter size requirement for specimen trees as it excludes a substantial number of desirable species. Instead, it is recommended that the City Council adopt by resolution a list of specimen trees (Attachment B) with minimum size requirements for each species.

2. Native Tree Species:
Increase the number of native tree species from five to thirteen with the inclusion of the species listed below. The additional species are indigenous to areas of Pasadena and their growth and physical form is an adaptation to regional climatic and habitat conditions including topography, geology, soils, and rainfall. As such, the environmental benefits derived from these native tree species justify their inclusion to the native tree definition.

Quercus berberidifolia - Scrub Oak
Quercus lobata - Valley Oak
Umbellularia californica - California Bay
Populus fremontii - Cottonwood
Alnus rhombifolia - California Alder
Populus trichocarpa - Black Cottonwood
Salix lasiolepis - Arroyo Willow
Aesculus californica - California Buckeye

3. Landmark Tree Definition:
Enhance the definition of a landmark tree by referencing the designation provisions under Chapter 2.75 (Cultural Heritage Commission) and to include 'person' and 'event' in the definition. The proposed modified definition reads as follows: 'A landmark tree means a tree designated as a landmark under Chapter 2.75 of this code as a tree of historic or cultural significance due to an association with a historic building, site, street, person or event.'

4. Landmark Tree Designation:
Delete the requirement for the property owner's consent, and instead apply the same designation procedures for historic resources codified in PMC Section 2.75.140 entitled 'Procedure for designating landmarks and historic treasures.' The provisions of this section allow the property owner to file a written objection with the City Clerk. In the absence of a written objection, the City Council may determine the tree is eligible for designation as a landmark and direct a covenant be recorded with the County Recorder.

5. Landmark Tree Removal:
For a landmark tree, any permit or request for removal must first be reviewed for compliance with the procedures specified in Chapter 2.75, specifically a granting of a certificate of appropriateness. Additionally, a permit for landmark tree removal will be denied unless one of the six findings recommended in Section 8.52.075 is made.

6. Tree Protection Agreement Signed By Owner and Contractor:
Delete the requirement for the owner and contractor to jointly and severally sign a tree protection agreement. The city does not require similar signed agreements for compliance with other permit related approvals impacting the public health, safety, and welfare. Tree protection will be assured through the review of required submittals and site inspections during various construction phases.

7. Single Family Residential (RS) and RM-12 Multifamily (two units on a lot) Residential Tree Protection:
The RM-12 Multifamily development standards are more closely aligned with the single family residential standards than with the RM Multifamily (City of Gardens) or the RM Multifamily (Urban) standards, therefore it is recommended that the RM-12 yard requirements for tree protection be the same as those stipulated for the RS zones.

8. Urban Forestry Advisory Committee:
Amending Chapter 2.80 entitled 'Design Commission' is recommended to be amended to establish the Urban Forestry Advisory Committee as a subcommittee with the purpose to review the Master Street Tree Plan and review projects involving the removal or injury of three or more public trees. Committee membership is proposed to consist of five members: two Design Commissioners, two Recreation and Parks Commissioners, and one Pasadena Beautiful Foundation member.

PUBLIC TREE REMOVAL CRITERIA:

The Tree Protection Ordinance requires any person desiring to initiate special maintenance or removal of a public tree to make an application to the City. The following criteria will be considered by the City in evaluating non-emergency removal requests associated with a project:

1. The condition of the tree in regards to health, age, viability, and performance,
2. Public tree consistency with the Master Street Tree Plan,
3. Project consistency with the General Plan policies and objectives,
4. The project will enhance the urban design strategy as set forth in the General Plan, Specific Plan, or applicable long-term planning document (i.e. Master Development Plan), and
5. After thoroughly exhausting feasible design alternatives, the only recourse is to remove the tree so that the prevailing setback along the block face can be enhanced.

FUTURE ACTIONS:

Future actions associated with the Tree Protection Ordinance include incorporating into the revised Zoning Code incentives for projects that protect trees. These incentives will make it possible for project applicants to be afforded relaxation of specified development standards related to site layout and landscaping in order to accommodate a protected tree.

Incentives may include decreasing the number of required parking stalls, and crediting the site area covered by the protected tree as part of landscape area requirement. The City Council will be able to comment on the proposed tree protection incentives at a future date when the revised Zoning Code is presented for review and adoption.

ENVIRONMENTAL DETERMINATION:

The Environmental Administrator has determined that the tree protection ordinance is exempt from environmental review pursuant to the guidelines of the California Environmental Qualify Act (CEQA) Section 15061(b) (3) which states 'a project is exempt from CEQA if the activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Here it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.'

FISCAL IMPACT:

Adoption of the Tree Protection Ordinance will broaden the scope of work for staff in the City Prosecutor's Office, Public Works and Transportation Department, and Planning and Development Department, however, the impact on regular staffing duties is not known at this time. It is anticipated that implementation of the ordinance can be accomplished by utilizing existing processes such as initial code enforcement site inspections, prosecution, issuance of citations, mitigation monitoring, and public outreach/education. New procedures created in the ordinance include processing landmark tree pruning applications, and tree removal requests.

Staff will return to the City Council six months after the ordinance effective date and will provide an assessment of the workload impact. In the interim, the City Manager will utilize existing staff and may retain consultants as needed.

Fees for various applications, violation, and costs specified in the tree protection ordinance will be included in the General Fee Schedule. Staff is anticipating returning to Council as soon as the fee information is available. These may include fees for tree removal applications, tree protection plan review (including staff tree evaluation), inspections for tree protection plan compliance, fines imposed for violation to the tree protection plan, other violations, appeals, and tree replacement costs. The City will not collect fees for Landmark Tree applications, and for Tree Protection Plan compliance for projects in single-family (RS) and multi-family residential (RM-12) zoning districts.

Respectfully submitted,

CYNTHIA J. KURTZ
City Manager

Prepared by:

Roderick A. Olguin,
Building & Neighborhood Revitalization Manager

Approved by:

Richard Bruckner, Director
Planning & Development Department

Concurred by:

Julie A. Gutierrez Acting Director
Public Works

ATTACHMENTS
Exhibit 1 - Specimen Tree List
Exhibit 2 - Tree Protection Plan Guidelines
Exhibit 3 - Tree Protection Plan Submittal Requirements
Attachment 'A' - Tree Protection Ordinance

Proposed Specimen Tree List
To Be Adopted By Resolution

Genus	Species	Common Name	Protection Size
Acer	Macrophyllum	Bigleaf Maple	12"
Acer	Buegeranum	Trident Maple	12"
Acer	Negundo	Boxleaf Maple	12"
Acer	Palmaturn	Japanese Maple	12"
Aesculus	Carnea	Red Horse Chestnut	12"
Aesculus	Hippocastanum	Horse Chestnut Tree	12"
Agathis	Robusta	Queensland Kauri	25"
Agonis	Flexuosa	Peppermint Tree	12"
Albizia	Julibrissin	Mimosa Tree	25"
Angophora	Costata	Gum Myrtle	25"
Araucaria	Araucana	Monkey Puzzle Tree	25"
Araucaria	Bidwillii	Bunya-Bunya Tree	25"
Araucaria	Cunninghamii	Hoop Pine	25"
Arbutus	Unedo	Strawberry Tree	12"
Archontophoenix	Cunninghamii	King Palm	12"
Bauhinia	Blakeana	Hong Kong Orchid Tree	12"
Bauhinia	Candida	White Orchid Tree	12"
Bauhinia	Variegata	Variegated Orchid Tree	12"
Brachychiton	Acerifolius	Australian Flame Tree	25"
Brachychiton	Discolor	Hat Tree	25"
Brachea	Edulis	Guadalupe	12"
Butia	Capitata	Pindo Palm	12"
Calodedrum	Capense	Cape Chestnut	12"
Casurina	Equisitifolia	Horsetail Tree	25"
Casurina	Cunninghamii	River She-Oak	25"
Casurina	Stricta	Beefwood	25"
Catalpa	Speciosa	Western Catalpa	25"
Chitalpa	Taskentensis	Chitalpa	12"
Chorisia	Insignis	White Silk Floss	25"
Chorisia	Speciosa	Silk Floss	25"
Cocculus	Laurifolius	Laurel Leafed Snail See	12"
Cinnamomum	Camphora	Camphor	25"
Cedrus	Deodora	Deodar Cedar	25"
Cedrus	Atlantica	Atlas Cedar	25"
Erythea	Armata	Mexican Blue Palm	12"
Erythrina	Caffra	Coral Tree	25"
Erythrina	Coralloides	Naked Coral Tree	25"
Erythrina	Crista-Galli	Cockspur Coral Tree	12"
Eucalyptus	Citriodora	Lemon Scented Gum	30"
Eucalyptus	Ficifolia	Red Flowering Gum	25"
Eucalyptus	Nicholii	Willow Leafed Peppermi	25"
Eucalyptus	Leucoxylon	White Ironbark	25"
Eucalyptus	Parviflora	Small Leaved Gum	25"

Proposed Specimen Tree List
To Be Adopted By Resolution

Ficus	Macrophylla	Morton Bay Fig	30"
Ficus	Microcarpa Nitida	Indian Laurel Fig	30"
Fraxinus	Oxycarpa	Raywood Ash	30"
Ginkgo	Biloba	Maidenhair Tree	25"
Juglans	Regia	English Walnut	25"
Juglans	Nigra	Black Walnut	25"
Leptospermum	Laevigatum	Australian Tea Tree	12"
Lithocarpus	Densiflora	Tanbark Oak	25"
Magnolia	Grandiflora	Southern Magnolia	25"
Melaleuca	Liniarifolica	Flax Leafed Paperbark	25"
Melaleuca	Quinquenervia	Cajeput Tree	25"
Phoenix	Reclinata	Senegal Date Palm	12"
Pinus	Pinea	Italian Stone Pine	25"
Pinus	Torreyana	Torrey Island Pine	25"
Quercus	Kelloggii	California Black Oak	25"
Quercus	Suber	Cork Oak	25"
Washingtonia	Filifera	California Fan Palm	12"

City of Pasadena
Tree Protection Guidelines

Purpose:

Tree protection guidelines are established for projects subject to Chapter 8.52 'City Trees and Tree Protection' and for projects for which compliance with the Tree Protection Guidelines is a condition of approval. Specifically, the guidelines seek to avoid negative impacts that may occur during construction such as:

- Mechanical injury to roots, trunks or branches
- Compaction of soil
- Changes to existing grade which may expose or suffocate roots

Definitions for standardized terms and diagrams are included in the guidelines.

A. General Requirements:

1. Applicants may be asked to place a construction bond in the amount of the assessed value of the tree as determined using the most recent version of the International Society of Arboriculture guide to plant appraisal. In addition, fees for three years of maintenance may be required. The bond will be returned to the applicant upon successful completion of the project and upon verification that the trees have not sustained damage during construction. If damage has been sustained during construction, the City Manager or designee may hold the bond for an additional period of time.

2. Violations to the Tree Protection Plan may result in fines assessed per day and imposed per violation, and the potential generation of a stop work order on the construction project.

3. The tree protection plan may include written recommendations for the health and long-term welfare of the trees during the pre-construction, demolition, construction, and post-construction development phases. Notes on the plans would include specifics on avoiding injury, damage treatment and inspections of protected trees.

B. Root Protection Zone:

Tree roots are generally located in the top 12–24 inches of soil and can extend to a distance exceeding the trees height and/or width. The roots located 3-5 feet from the trunk are often relatively inactive, and if cut, will cause a column of decay that can reach the top of the tree with time. The feeder roots of the tree can sustain damage during construction from lack of water, soil compaction or physical damage resulting from cutting. The following guidelines are designed to minimize damage to the root system of protected trees. These guidelines establish a "Root Protection Zone" to safeguard the health of protected trees.

1. Protective chain-link fencing with an access gate of minimal width should be installed at the Root Protection Zone of protected trees and approved in place by staff prior to the commencement of any construction, or demolition.
2. The protection zone should be irrigated sufficiently with clean potable water to keep the tree in good health and vigor before, during, and after construction. This may mean deeply soaking the ground periodically.

3. No construction staging or disposal of construction materials or byproducts including but not limited to paint, plaster, or chemical solutions is allowed in the Root Protection Zone.

4. The Root Protection Zone should not be subjected to flooding incidental to the construction work.

5. All work conducted in the ground within the Root Protection Zone of any protected tree should be accomplished with hand tools, unless an air spade is utilized. Trenches in the Root Protection

Zone should be tunneled, or completed with an air spade to avoid damage to small feeder roots within the root protection zone. Information regarding air spades is available from staff.

6. Where structural footings are required and major roots (over 3" in diameter) will be impacted, the engineer of record should submit acceptable footing design alternatives and or location alternatives to staff before proceeding with further plan review.

7. Where more than 50% of the root zone is impacted or roots greater than 3 inches in diameter are to be removed within four feet of the trunk, the engineer of record should submit acceptable design alternatives to staff for review.

8. Any required trenching should be routed in such a manner as to minimize root damage. Radial trenching (radial to the tree trunk) is preferred as it is less harmful than tangential trenching. Construction activity should be diverted from the Root Protection Zone. Cutting of roots should be avoided (i.e. place pipes and cables below uncut roots). Wherever possible and in accordance with applicable code requirements, the same trench should be used for multiple utilities.

9. "Natural" or pre-construction grade should be maintained in the Root Protection Zone. At no time during or after construction should soil be in contact with the trunk of the tree above the basal flair.

10. In areas where the grade around the protected tree will be lowered, some root cutting may be unavoidable. Cuts should be clean and made at right angles to the roots. When practical, cut roots back to a branching lateral root.

11. When removing existing pavement in the Root Protection Zone, avoid the use of heavy equipment, which will compact and damage the root system.

12. If staff requires mulch in the Root Protection Zone the mulch materials and location should be shown on the plan. Larger projects will require construction staging plans to indicate where materials will be stored and how the equipment will move in and around the property to minimize damage to the Root Protection Zone and tree canopies. Root damage and soil compaction may be mitigated in some cases by using plywood or mulch in the Root Protection Zone.

C. Pruning:

1. Pruning of all trees should be in accordance with industry standards (International Society of Arboriculture or ANZI 133.1).

2. Pruning of oaks should be limited to the removal of dead wood and the correction of potentially hazardous conditions, as evaluated by a qualified arborist. Excessive pruning is harmful to oaks. Removal or reduction of major structural limbs should be done only as required for actual building clearance or safety. If limbs must be removed, cuts should be made perpendicular to the branch, to limit the size of the cut face. The branch bark collar should be preserved (i. e. no "flush cuts"), and cuts should be made in such a way as to prevent the tearing of bark from the tree.

3. Pruning of trees other than oaks should be limited to the removal or reduction of major structural limbs and should be done only as required for actual building clearance or safety. If limbs must be removed, cuts should be made perpendicular to the branch, to limit the size of the cut face. The branch bark collar should be preserved (i. e. no "flush cuts"), and cuts should be made in such a way as to prevent the tearing of bark from the tree.

4. Landmark Trees must be pruned by or under the direction of a qualified arborist.

D. Inspections:

1. Inspection of Protective Fencing: City staff may require inspection of fencing to verify placement and approval of materials prior to the commencement of construction.

2. Pre-construction meeting. City staff may require an on-site pre-construction meeting with the contractor and or applicant to discuss tree protection with the site supervisor, grading equipment contractors, and demolition crew.

3. Inspection of rough grading. City staff my require inspection to ensure protected trees will not be injured by compaction, cut or fill, drainage and trenching activities.

4. Special Activity in the Tree Protection Zone: City staff may require the direct on-site supervision of work in the tree protection zone.

5. Periodic Inspections: City staff may require inspections verifying adherence to tree protection measures during the on-going construction process. Allow a minimum of 48 hours for scheduling inspections.

E. Definitions:

1. *Basal flair* or *root crown* means the tree trunk where it emerges from the root system and flairs out to create the base of the tree.

2. *Canopy* means the area of a tree that consists primarily of branches and leaves.

3. *Dripline* means the outermost area of the tree canopy (leafy area of tree).

4. *Certified Arborist* means an individual who has demonstrated knowledge and competency through obtainment of the current International Society of Arboriculture arborist certification, or who is a member of the American Society of Consulting Arborists.

5. *Root Protection Zone* means the area within a circle with a radius equal to the greatest distance from the trunk to any overhanging foliage in the tree canopy.

Submittal Requirements for a
Tree Protection Plan

The information listed below must be included or shown on all tree protection plans. Information may be shown on detailed grading, landscape (planting) and irrigation plans as part of the tree protection plan package.

Standard Plan Requirements:

1. Clearly differentiate between existing and proposed site improvements on all plans.
2. Include preparer's name, title, license number, address, and telephone number (preparer must be a Certified Arborist, a Landscape Architect, or other qualified professional as approved by the Director of Planning and Development or Public Works and Transportation Director).
3. Include project title, project address, and property owner's name.
4. Provide date of last revision, north arrow, and scale (no smaller than 1" = 20'-0").
5. Label all property lines.
6. Show existing and proposed contour lines.
7. Show and label existing and proposed easements.
8. Location, name and width of adjacent streets, highways, access driveways, easements, and existing improvements within the public right-of-ways.

Trees:

1. Identify existing trees (all trees with a caliper of 4 inches or more including public trees) and show exact location of tree trunk(s). Trunk diameters to be drawn to scale (as measured at breast height – about four feet above grade).
2. Include the tree genus, species, and common name directly on the plan or keyed to a legend. Indicate whether trees are single- or multi-trunk; to be removed, retained, or relocated. If symbols are used for trees, a different symbol must be used for each species.
3. Show tree canopies of adjacent property trees if the tree canopy extends into the proposed site and will be effected by the proposed site improvements.
4. Draw the Root Protection Zone and label.
5. For all existing trees to be retained on site, clearly show the location of the Root Protection Zone fencing, support poles, and access gate showing direction of swing. Fencing must be located at or beyond the Root Protection Zone. The protective fencing must be chain link and at least 5 feet in height.
6. Where mulch is required, show the mulch area and indicate mulch materials and depth.
7. The above requirements apply to trees existing in all public right-of-ways and street trees.

Utilities:

1. Show location of proposed utility lines (above and below grade), and width and depth of proposed trenches.

2. Show point-of-connection for utilities and controllers.

Drainage:

1. Show approximate width and location of all existing or proposed drainage easements and watercourses; indicate drainage structures.
2. Show areas subject to inundation or storm water overflow (flooding), including Standard Urban Stormwater Mitigation Plan (SUSMP) if applicable.
3. Indicate direction of water flow and drainage on the project site. Show flow lines and water collection system.

Structures:

1. Outline and label all existing or proposed structures (including accessory structures such as pools, trellises, spas, fences, and walls) drawn to scale, and shown in their exact location in relation to existing and proposed streets, lot lines, and distance from any existing trees.
2. Provide outline of all roof overhangs as dotted lines and label.
3. Indicate location, width, and depth of all trenches for footings including excavations for basements, pools, spas or any other subsurface improvement.

Irrigation:

Indicate location, width, and depth of trenches for irrigation lines (mainlines and lateral lines) effecting protected trees.