

CALIFORNIA PEPPER TREES MAINTENANCE PLAN
HIGH STREET - MOORPARK, CALIFORNIA



Joined together, trees growing in the parkway along High Street are a collection; a grove of pepper trees, which unify the district and identify a vivid history

1.1 SCOPE

This tree maintenance plan addresses a discrete collection of 50 California Pepper trees (*Schinus molle*) growing in portions of the public right-of-way along East High Street from its intersection with Moorpark Avenue to the 400 block of East High Street in Moorpark, California. Several of the trees may be remnants of an original planting at this location in the year 1900 by Robert Poindexter, a city founding father. The trees are included in Ventura County's Historical Landmark List. The purpose of this maintenance plan is to provide a realistic framework to accomplish an apparent dichotomy of needs: sustain the legacy of the original trees and deliver appropriate care to maximize the benefits of boulevard shade trees while minimizing increased risk to people and property as a result of their presence in this vital city corridor.

1.2 Joined together, trees growing in the parkway along High Street are a collection: a grove of pepper trees, which unify the High Street district and identify its vivid history. It is fundamentally noteworthy that trees are living organisms and they develop along an evolving progression from their origin to their decline. Furthermore, trees cultivated in congested municipal environments are known to have reduced life spans, with the progression from origin to decline occurring along a shorter timeline. Additionally, note that these are among the oldest remaining specimens of California pepper trees in the region. The species was first introduced to California at the San Luis Rey Mission in San Diego County in the 1830's ([Landscape Plants For Western Regions](#), Bob Perry, 1992) a mere 60 to 70 years before Mr. Poindexter planted them here. Therefore, it is unrealistic to anticipate that the trees can provide benefits as boulevard shade trees in perpetuity, and some degree of risk is unavoidable when the service life of aging trees is extended toward its greatest limits.



Two tree symbols are used to distinguish significant size differences in the study:

- - a smaller tree that was recently planted or which has relatively small canopy architecture
- ★ - a larger tree that has relatively extensive canopy architecture

2.1 REFERENCE

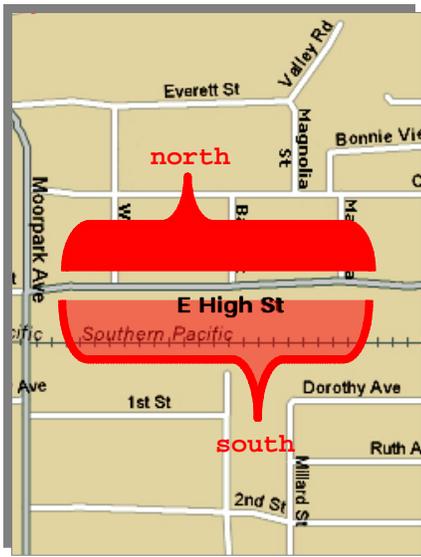
A site sketch has been prepared to distinguish individual trees and to show their relationship to the other trees and basic infrastructure at this locale. This site sketch is not a document prepared to scale and it does not capture each element of the infrastructure; it is intended to represent the trees in a linear fashion – one that simplifies their presence and their progression through the corridor. The format is taken from the earlier study [Arborist's Report: Selected High Street Pepper Trees – December 2003](#), undertaken to identify trees that may or may not merit preservation, provide management concepts to protect specimens that merit preservation, and identify senescent trees with a potential for increased risk of damage or injury that warrant transitioning out of the city's urban forest. Some of the symbols used in this expanded site sketch reflect findings provided in the initial 2003 study. Please see the site sketch, attached.

2.2 Two types of spaces are typically found in this corridor: spaces restricted at the soil surface by pavement on all 4 sides resulting in an approximately 8-foot by 10-foot opening (a restricted growing space) and spaces that are relatively unrestricted - typically setback from the street side curb and gutter by 5-feet and relatively unrestricted on other sides (an unrestricted growing space). Other growing spaces can be found in the grove as determined by individual or distinctive site features.

2.3 The current version of the site sketch captures all California peppers, large and small, which are found in the corridor. Twenty-six of the trees are indicated with the small tree symbol; 15 on the north side of the street and 12 on the south side. Please note that some of these smaller trees were indicated in the site sketch prepared for the previous study, but due to the scope of that work they were not treated in detail. Twenty-four of the trees are indicated with the large tree symbol. Five of the

... young trees, shade trees, veteran trees, and senescent trees...

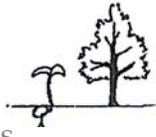
older tree symbols are outlined in red, 11 are outlined in yellow, and 8 are outlined in green. These indicators are used to organize the trees by general maintenance categories. Categories identified here are: young trees, shade trees, veteran trees, and senescent trees; additional descriptive information is provided later in this report.



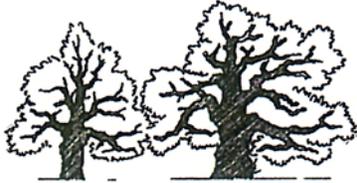
2.4 Reference is made to the trees by 'tag number' or 'no tag number', and the numbering sequence starts at the west end on the north side, and ends on the west end on the south side. The progression begins consistent with the succession of street addresses, but at the east end of the grove the sequence runs in opposite progression on the southern segment. The city-wide inventory of trees uses a reference system that is tied to the street address, and tree numbers are utilized only when more than one tree exists at an address. Sites without addresses are assigned a fictitious address and designated as such. Other conventions are also applied to trees on the side of corner lots, on the backside of lots that run perpendicular from one street to another all the way through a city block, and other contrary site-related features.



2.5 Some significant features become apparent by studying the visual impact of the site sketch. If periodic reforestation did not keep pace gaps might occur in the linear corridor of trees as they progress in the grove. Where a gap in the grove exists at the parkway in front of the new Fire Station (corner of High Street and Magnolia Street), California pepper trees had originally occupied the space, but due to converted land use the space no longer seems appropriate for trees. It is reasonable to expect that vital municipal services and other critical factors may impact the designation of existing and future tree sites, and, while for purposes of long-range management it is most useful to organize the corridor into available tree sites and not existing tree sites, it is foreseeable that some percentage of designated spaces will be modified over time.



young trees...



shade trees...



veteran trees...



senescent trees...

sketches from [Veteran Trees: A guide to good management](#),
English Nature

3.1 TREE MANAGEMENT CATEGORIES

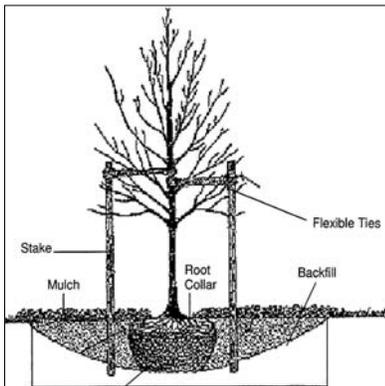
For purposes of this maintenance plan, management categories within a variable-aged grove of trees include:

- **YOUNG TREES** and available sites – these include sites where trees have been removed and no replacement has been installed, recently planted sites, and sites with young expanding tree canopies
- **SHADE TREES** where the canopy is sufficient to produce abundant protection from solar radiation and yet not restrict pedestrian or vehicular traffic
- **VETERAN TREES** with tall, broad canopies that merit ongoing preservation by managing their growth for threats to biological health or mechanical stability
- **SENESCENT TREES** that do not merit preservation; trees in locations that should not be designated as tree sites – i.e., tree to be removed

4.1 YOUNG TREES

Young trees are characterized by their introductory and early developmental status. It is intended that all sites resulting from removal of grove trees, when appropriate for growing trees that attain large proportions, will be filled with new young plants in due course. Note that some existing trees occupy locations that are inadequate for long-term cultivation of California pepper trees. The physical tasks of evaluating the viability of a planting site, situating the new tree appropriately within the confines of a specific location, and physically installing the new tree include important considerations. Services and techniques for maintaining desirable tree characteristics or resolving undesirable tree characteristics within this category include:



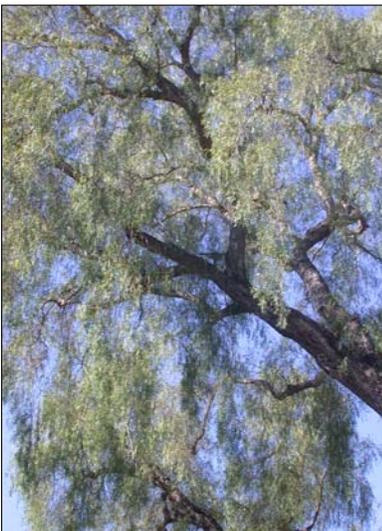


- Tree site designation and allocation of space call for a minimum 8-foot by 8-foot opening in the pavement; the tree must be centered in the opening, and overhead clearance must be available,
- Investigation of underground services; notification of underground services alert,
- Provisions for temporary supplemental irrigation
- Installation of the tree according to current best practices; a 24-inch box specimen tree provides the greatest opportunity to assure a healthy new start,
- Installation of systems for supplemental stability; standard specifications generally indicate two lodge pole stakes installed parallel to the roadway, sufficiently stable and inserted in a vertical orientation slightly beyond the periphery of the soil originally occupied in nursery container (removed at time of installation), one or two tie straps are recommended determined by the degree of excessive flexibility of the young tree stem, the stem should have sufficient room to move in response to a gentle breeze but steady the tree against forces that might over load the young tree's stability,
- Monitor and maintenance of supplemental stability systems,
- Pruning treatments to train and direct growth,
- Pruning treatments to maintain clearance.

4.2 Several interim phases of the young tree category include site preparation, installation, establishment, and early development. As noted previously, site preparation is an important step in maximizing the success of the tree and preparing it for a potentially long service life. Installation procedures, including proper selection of healthy nursery stock prior to installation, also contribute to rapid establishment and healthy future development. Establishment is considered to have occurred when the new tree's roots have colonized the

native or existing soil, growing out beyond the confines of the nursery container and the zone of prepared soil surrounding the periphery of the new tree's root ball, undertaken to encourage new root development. Supplemental stability systems (tree stakes) should be removed once the tree is established. Early development includes management of branches and foliage growing low in the tree's architecture – temporary structures that promote early development but which will eventually be removed, and directing the developing architecture to support a stable and healthy future canopy.

4.3 Studies have shown that installation and establishment of a new tree is improved when an optimum size nursery stock is utilized. Trees smaller than 24-inch box specimens are prone to substantial damage from vandalism and negligence, and they may be somewhat less tolerant of interruptions in their early care. Trees larger than 24-inch box specimens require special handling, are less commonly available, and may have been subjected to maintenance treatments and early care at the nursery that are not consistent with long term health and stability. Twenty-four inch box specimen trees are about 5 years old when they attain that size (older trees in a 24-inch box are cramped, develop poor root structure, and should be avoided). Young trees exist in the landscape for about 10 years before they attain sufficient canopy height and spread to merit a mature size and structure.



5.1 SHADE TREES

Shade trees are characterized by their function as producers of solar shade and their status as major architectural features of the boulevard environment. It is incumbent on these living structures to afford sufficient clearance for pedestrian and vehicular traffic and adequate clearance from adjacent structures and infrastructure so that damage and or injury are avoided. Services and techniques for maintaining desirable tree characteristics or resolving undesirable tree characteristics within this category include:

- Inspections to monitor tree health and stability,
- Pruning treatments to maintain clearance,
- Pruning treatments to manage load and weight distribution,
- Pruning treatments to establish a redundant branching hierarchy throughout the canopy,
- Specialized pruning or other treatments to correct or respond to unforeseen circumstances.

5.2 California peppers that meet the High Street maintenance criteria as shade trees occupy a developmental stage ranging from about 15 years old to an undetermined point in the future when their level of maturity begins to wane, and deterioration and decline become manifest. Various events activities and occurrences may combine to initiate decline; trees that decline along a protracted timeline may have been managed less well, may have been subjected to special circumstances that resulted in injury or damage to the tree, or may have received inadequate interim maintenance. According to normal current conditions that appear to prevail throughout southern California, California peppers thrive as shade trees for about forty or fifty years before they begin to substantially deteriorate. Factors that tend to induce deterioration and decline include restrictive growing environments, encroachment by new development or construction, inclement weather, deferred maintenance, and other potential causes.

6.1 VETERAN TREES

A tree entering the developmental phase where it is relatively static in energy production may or may not respond positively to routine maintenance and corrective pruning. Inspections of shade trees become more significant as the tree ages, and maintenance decisions for the older mature tree should focus primarily on treatments to prolong its life. Ideally, routine maintenance over the first 50 or 60 years included pruning techniques that developed the canopy structure, one which accommodates incremental modifications to reduce its size. Services and techniques for maintaining desirable tree characteristics or resolving undesirable tree characteristics within this category include:

- Inspections to monitor tree health and stability,
- Pruning/treatments to manage load and weight distribution,
- Pruning/treatments to reconstruct a tree canopy,
- Tree removal.

6.2 Deteriorating tree conditions will be evident when primary or secondary branches begin to fail, or when routine pruning has been determined to be insufficient to remedy weight distribution or other architectural conditions within the tree canopy. These factors, or the anticipation of corresponding conditions, should activate authorization of a thorough inspection by a qualified arborist. The distinction between a mature shade tree requiring routine maintenance and a tree that should be categorized as a veteran tree can be a matter of degree. Indications that a tree has reached veteran tree status are determined by a qualified arborist as a result of field evaluations. The qualified arborist should provide a written report to document existing conditions of the tree's health and stability, and provide recommendations to mitigate interim deficiencies. Routine inspections by a qualified arborist should occur on no less frequently than on an annual basis once a tree achieves veteran tree status.



‘Historic tree spaces are conserved, a reasonably safe, shady, tree-lined street is realized, suitable historic relics ... for the sake of posterity’

...mission of the scenario presented in the 2003 study

... trees tend to develop along a certain progression...

... maintain the landscape with variable-aged trees... sustain the landscape in perpetuity...

... removal of old senescent trees ... renewal by installing healthy young replacements ... assure achievement of a perpetual historic resource ...

6.3 Initial inspections of the grove have been prepared using specific formats to perform 1) hazard assessments, and 2) to evaluate the structural integrity and conditions of health. The first format is useful when it is important to identify specific threats to the community from an apparent defective tree; the second format is useful in making fundamental assessments and it should be adopted for future reporting by the qualified arborist. By focusing on five individual attributes: the root zone, trunk, major scaffold limbs, smaller branches and twigs, and the foliage, a thorough examination of the tree is conducted and reported. These attributes are rated from 1 to 4- 1 indicating extreme problems, 2 indicating major problems, 3 indicating minor problems, and 4 indicating no apparent problems. The roots, trunk and scaffolds are assessed both for health and stability; stability is not considered a major factor of the smaller branches and twigs and the foliage. A condition summary is indicated for each tree and a rating assigned to the condition summary. In the 2003 study (see Table 2 [Arborist’s Report: Selected High Street Pepper Trees - December 2003](#)), indications reported correspond to percentage expressions extrapolated as: *fairly low*, *low*, *very low*, and *poor*. Future reports are likely to include some indications ranging from *fairly low* to *very low*. An additional column should be provided to indicate specific notes relevant to each tree.

6.4 Some trees may experience damage or injury so extreme that it would be unreasonable to mitigate the conditions by pruning or other treatments. The impact may be that, if treated, an extremely disfigured tree would result, or, treatments may be insufficient to maintain the public health and safety. It is anticipated that these factors would rarely abound, nevertheless, in such cases it would be appropriate to simply remove and replace the tree thereby excluding other measures that

typically would be taken to prolong the service life of a less severely damaged tree.

7.1 SENESCENT TREES

While some trees may be severely damaged in inclement weather, damaged by negligent or accidental acts, or doomed for other reasons, all living organisms eventually die and cease to contribute useful service. Prevailing conditions that characterize senescent trees include:

- Wasted specimens that attract vermin or otherwise represent a significant public nuisance,
- Specimens producing less than 10 percent live tissues determined by mass,
- Deteriorated specimens in locations where substantial public interest is in favor of replanting with a new tree.



Thresholds for trees that progress to senescent status are apparent and it is highly advisable that such determinations be made prior to catastrophic failure. Such failures may occur as a result of evolving deterioration and progression into senescence, or they may occur as a result of a significant event.

A qualified arborist must carefully evaluate trees that are subjected to significant damage as a result a major storm; struck by vehicle; intentional vandalism; or other unique occurrence very soon after the event. The target vicinity within the fall line of any portion of the remaining tree must be immediately cordoned-off and restricted from the public until the arborist has evaluated the tree's stability. If it is apparent to the arborist that the tree cannot be rehabilitated such that it may eventually be restored as a shade tree, or that it may be transitioned to veteran tree status, the tree should be removed and consideration given for its replacement. Procedures for rehabilitating a damaged or deteriorating tree are indicated elsewhere in this study.

The event that triggers condemnation of a senescent tree is based on assessments and evaluations provided in report(s) prepared by a qualified consulting arborist. These reports must establish a context for the condition of the tree, and show clear evidence of progressive extreme decline and/or significant deterioration, and the documentation must draw upon criteria or evaluation framework that are defensible, acceptable within the standards of the arboricultural industry, and clearly applicable as determined by authorities at the City of Moorpark. Two examples of such a process are described in the hypothetical events as follows:

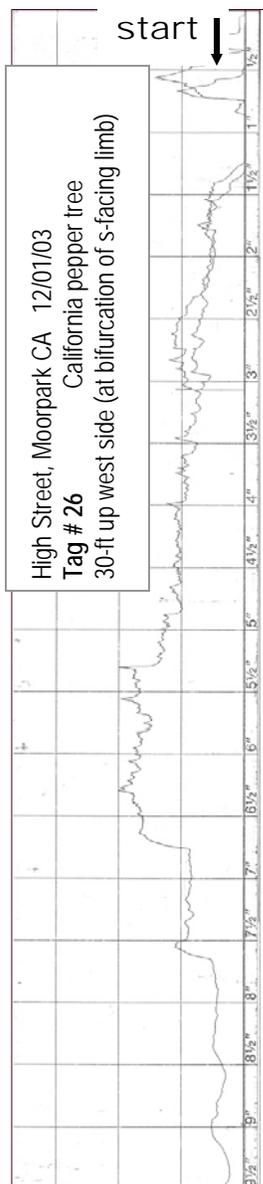
First scenario



'The shade tree tagged #12 in front of the Cactus Patch Restaurant at 197 E. High Street is significantly damaged when a cement truck traveling westbound drifts too close to the pedestrian right-of-way and strikes the tree.' 'The impact breaks two-thirds of the canopy away (red-shaded area in the picture, left).' 'The remaining portion leans over the restaurant at an extreme angle, and a large wound remains in the stem where the broken portion was torn away.' 'Conditions might even be so extreme that, in order to protect public health and welfare a determination is made by safety officers that the remaining portion of the tree should be removed immediately.' 'If it is apparent that the scene can be secured temporarily, a qualified arborist is summoned to inspect the tree, provide an evaluation, and prepare a written report.' 'It is likely that the arborist will condemn this tree due to the severity of the damage inflicted to the otherwise healthy shade tree, and the site would be prepared for a replacement California pepper tree.'

Second scenario

'The large old pepper tree tagged #26 is situated in a very restrictive planter abutting the parking lot entry to Kahoots Feed & Supply at 360 E. High Street.' 'An entry



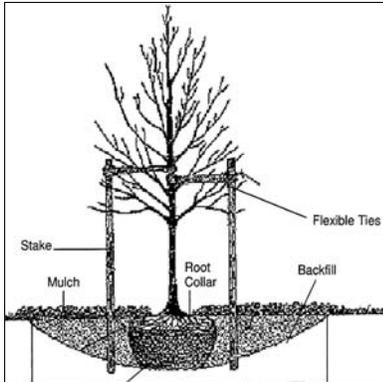
into the adjacent parking lot at the Moorpark METROLINK Station also abutts the restrictive planter.’ ‘Several inspections and evaluations have been conducted on the tree, including the recent inspection in December 2000 by a qualified consulting arborist, when the tree was noted as having a HIGE FAILURE POTENTIAL.’ ‘The hazard rating system utilized in 2000 was based on methodology contained in A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas by Matheny and Clark.’ ‘Another recent inspection provided in August 2003 was more general, but it called for an additional assessment process utilizing special instruments and analysis.’

‘In December 2003 an indepth report was prepared by another qualified consulting arborist, using a Resistograph – an instrument specifically designed and manufactured to determine the relative degree of decay in internal woody tissues and producing a wax strip that displays the results of the measurement.’ ‘Assessment criteria recommended by the Council of Tree and Landscape Appraisers, which includes a thorough assessment of five attribute categories (roots, stem, major limbs, minor limbs, and foliage), and employing a rating methodology, was also used to describe and characterize biological health and mechanical stability of the tree.’ ‘When employed by a qualified diagnostition, as performend here, both the instrument and analysis methology provide a very comprehensive evaluation of the tree.’ ‘Findings conveyed in the assessment report indicated that the tree was senescent and should be removed.’

Accordingly, these scenerios illustrate two different examples of appropriate thresholds to trigger removal of a tree. In each case, evidence is provided by qualified experts to the jurisdictional authority, recommendations are taken into consideration, and, when appropriate, a senescent tree is removed.

8.1 SUMMARY OF MAINTENANCE TASKS AND TRIGGERS

The following is an incremental listing of maintenance tasks, procedures, and their triggers:



- A site becomes available
- Underground services alert is contacted to identify potential subterranean conflicts
- The site is surveyed to determine if adequate space is available to accommodate a mature California pepper tree's canopy
- The site is surveyed to determine if adequate space is available in the pavement opening to cultivate a 24-inch box specimen California pepper tree and raise it to maturity; cut or otherwise modify the pavement to accommodate a minimum 5-foot by 5-foot opening
- Select a new 24-inch box specimen tree conforming to the highest nursery standards available
- Install the new tree according to best management practices
- Provide supplemental support systems according to best management practices
- Provide supplemental irrigation until the tree is established
- Provide pruning treatments to direct growth and avoid conflicts; avoid excessive removal of foliage, retain foliage that originates low in the tree's architecture for an extended period
- Trees attain shade tree status when they provide substantial solar shading, provide clearance for vehicular and pedestrian traffic, and contribute as an engineering and aesthetic attribute in the street side environment
- Provide clearance pruning as needed
- Provide routine pruning on a maximum 4-year cycle according to best management practices
- Task tree care personnel to report any deficiencies that are found during routine tree maintenance activities



veteran trees...



senescent trees...



- Monitor older large shade trees for potential deterioration
- Monitor trees that have been damaged or injured due to inclement weather, negligent or accidental acts, or other reasons
- Trees attain veteran tree status when they become relatively static in energy production and may not respond positively to routine maintenance and corrective pruning
- Authorize a qualified arborist to evaluate the veteran tree on an annual basis (or more frequently)
- Procure and process a written report from the qualified arborist
- Provide pruning treatments to reconstruct a tree canopy, as needed, according to the specifications of a qualified arborist
- Provide maintenance recommendations, including removals, based upon the evaluation of a qualified arborist
- Trees attain senescent tree status when they produce less than 10% live tissues determined by mass, are wasted specimens that attract vermin or otherwise represent a significant public nuisance, or when substantial public interest favors replacement
- Consider the merits of the site and its appropriateness for replacement with a new California pepper tree based upon site restrictions and encroachment criteria; replace the tree when appropriate.

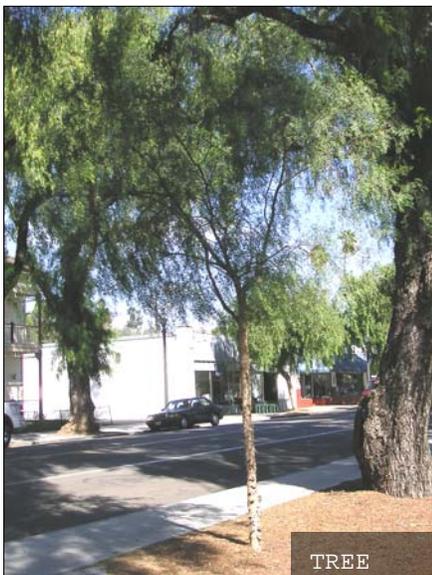
4



TREE



TREE



TREE

9.1 YOUNG TREES FOR INSTALLATION AND ESTABLISHMENT TREATMENTS

Tag/site #15 This 2.5-inch caliper newly installed tree is growing in a typically restricted growing space. It is staked with double stakes. The tree has not yet established. Monitor the tree's progress; provide supplemental irrigation on a regular basis; trim the tops of the stakes away from lower branches (cut the stakes – not the branches) and remove the stakes and ties as soon as it is determined that the tree can stand unaided; avoid removing any live foliage until expansion of the canopy intensifies.

Tag/site #25 This 4-inch diameter tree is growing in a typically restricted growing space. The tree is becoming established. Monitor the tree's progress; provide supplemental irrigation as needed; provide routine pruning techniques as needed, direct the development of temporary major scaffold limbs on an east/west axis, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree (remove up to or less than but no more than 20 percent of the live foliage).

Tag/site #48 This 4-inch diameter tree is growing in a typically unrestricted growing space with a monolithic sidewalk and curb/gutter. The tree is becoming established. Monitor the tree's progress; provide supplemental irrigation as needed; provide routine pruning techniques as needed, direct the development of temporary major scaffold limbs on an east/west axis, thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree (remove up to or less than but no more than 20 percent live foliage).

10.1 YOUNG TREES WITH EXPANDING CANOPIES AND THEIR MAINTENANCE NEEDS



Tag/site #7 This 8-inch diameter tree is growing in a typically restricted growing space. The tree is established and requires routine maintenance treatments. Monitor the tree's progress; provide supplemental irrigation during periods of extended drought, as needed; provide routine pruning techniques as needed, direct the development of temporary major scaffold limbs on an east/west axis, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree (remove up to or less than but no more than 20 percent of the live foliage).



Tag/site #24 This 7-inch diameter tree is growing in a typically restricted growing space. The tree is established and requires routine maintenance treatments. The tree has developed with a pronounced lean to the south (toward High Street) resulting in disproportionate encroachment of the canopy into the roadway. Monitor the tree's progress; provide supplemental irrigation during periods of extended drought, as needed; provide crown reconstruction pruning techniques to counter canopy encroachment; provide routine pruning techniques as needed, direct the development of temporary major scaffold limbs on an east/west axis, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree if possible but take necessary steps to redirect canopy development while maintaining tree health.



Tag/site #40 This 8-inch diameter tree is growing in a typically unrestricted growing space with a monolithic sidewalk and curb/gutter. The tree is established and requires routine maintenance treatments. The tree is situated in very close proximity to the adjacent tree (tagged #41) resulting in an inclusion of the two canopies. This tree has a dominant canopy at this time. Monitor the tree's progress; provide supplemental irrigation as needed; provide crown reconstruction pruning techniques to counter canopy encroachment, provide routine pruning techniques as needed, direct the development of temporary major scaffold limbs on an east/west axis, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree if possible but take necessary steps to redirect canopy development while maintaining tree health.



Tag/site #41 This 7-inch diameter tree is growing in a typically unrestricted growing space with a monolithic sidewalk and curb/gutter. The tree is established and requires routine maintenance treatments. The tree is situated in very close proximity to the adjacent trees (sites #40 and #42) and the canopies are impacting each other. This tree has a subordinate canopy at this time. Monitor the tree's progress; provide supplemental irrigation during periods of extended drought, as needed; provide crown reconstruction pruning techniques to promote development of adjacent tree's canopy; provide routine pruning techniques as needed, direct the development of temporary major scaffold limbs on an east/west axis, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree (remove up to or less than but no more than 20 percent of the live foliage).



Tag/site #50 This 10-inch diameter tree is growing in an atypical growing space – it is set back about 2' from the monolithic boardwalk/sidewalk and a gravel/asphalt parking lot exists about 3' behind the tree; its canopy is restricted by an adjacent tree growing 25 feet to the west. The tree is established and requires routine maintenance treatments. The tree has developed with a pronounced lean to the west (toward tree tagged #51) resulting in an inclusion of the two canopies. Neither tree is subordinated at this time. Monitor the tree's progress; provide supplemental irrigation as needed; provide crown reconstruction pruning techniques to counter canopy encroachment, provide routine pruning techniques as needed, direct the development of temporary major scaffold limbs on an east/west axis, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree if possible but take necessary steps to redirect canopy development while maintaining tree health.



Tag/site #51 This 10-inch diameter tree is growing in an atypical growing space – it is set back about 2' from the monolithic boardwalk/sidewalk and a gravel/asphalt parking lot exists about 3' behind the tree; its canopy is restricted by adjacent trees growing 23 feet to the west and 25 feet to the east. The tree is established and requires routine maintenance treatments. Adjacent trees on each side are situated in very close proximity to this tree resulting in an inclusion of the three canopies. None of these trees are subordinated at this time. Monitor the tree's progress; provide supplemental irrigation as needed; provide crown reconstruction pruning techniques to counter canopy encroachment, provide routine pruning techniques as needed, direct the development of temporary major scaffold limbs on an east/west axis, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible

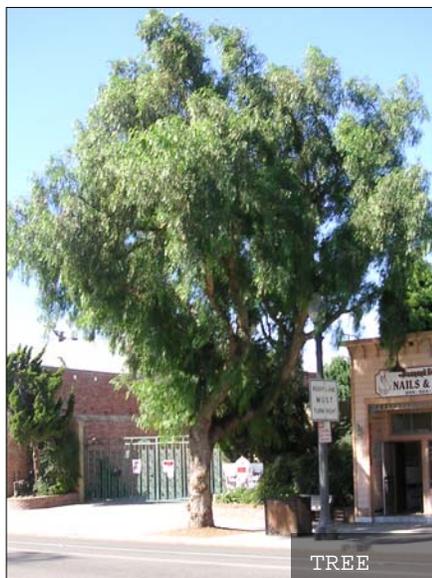
breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree if possible but take necessary steps to redirect canopy development while maintaining tree health.



Tag/site #52 This 7-inch diameter tree is growing in an atypical growing space – it is set back about 2' from the monolithic boardwalk/sidewalk and a gravel/asphalt parking lot exists about 3' behind the tree; its canopy is restricted by an adjacent tree growing 23 feet to the east. The tree is established and requires routine maintenance treatments. The tree has developed with a pronounced lean to the west and their canopies are growing toward each other. Neither tree is subordinated at this time. There is a wire girdling the trunk about 7 feet up from grade – this restrictive device must be removed at the earliest opportunity. Monitor the tree's progress; provide supplemental irrigation as needed; provide crown reconstruction pruning techniques to counter canopy encroachment, provide routine pruning techniques as needed, direct the development of temporary major scaffold limbs on an east/west axis, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree if possible but take necessary steps to redirect canopy development while maintaining tree health.

11.1 SHADE TREES AND THEIR MAINTENANCE NEEDS

Tag/site #1 This 23-inch diameter tree is growing in a typically restricted growing space with a park-style bench located about 10 feet north of the planting site. The tree has a canopy that extends about 30 feet high and as wide. The main stem leans to the north (away from High Street), but its dense canopy has become reoriented toward the south. Multiple primary scaffold limbs originate from the main stem about 12 feet up from grade. Monitor the tree's stability on a routine basis (at least annually and at times of inclement weather), especially sections that extend over (and therefore tend to threaten) the vicinity of the park bench; provide crown reconstruction pruning techniques to improve scaffold branch attachment and arrangement, provide routine pruning techniques as needed, prune to maintain adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree if possible but take necessary steps to redirect canopy development while maintaining tree health.

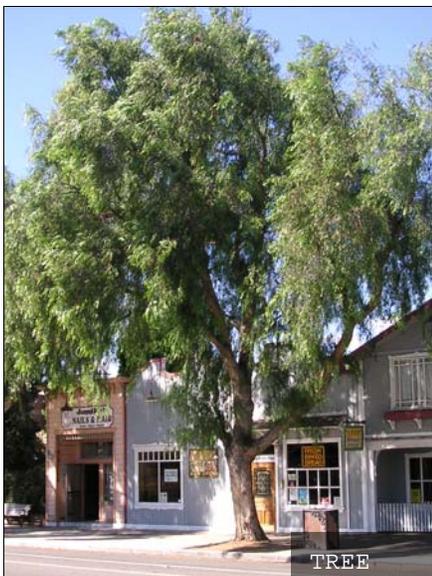


Tag/site #2 This 21-inch diameter tree is growing in a typically restricted growing space with a park-style bench located about 10 feet north of the planting site. The tree has a canopy that extends about 35 feet high and 25 feet wide. One or more of the primary scaffold limbs are oriented toward the east and originate from the main stem about 8 feet up from grade. Monitor the tree's stability on a routine basis (at least annually and at times of inclement weather); provide crown reconstruction pruning techniques to improve scaffold branch attachment and arrangement, provide routine pruning techniques as needed, prune to provide adequate clearance for vehicular traffic on High Street and

pedestrian traffic along the sidewalk, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree remove up to or less than but no more than 20 percent of the live foliage).



Tag/site #3 This 19-inch diameter tree is growing in a typically restricted growing space. The tree has a canopy that extends about 40 feet high and as wide. The main scaffold limbs are well distributed to support the canopy architecture; the lowest one originates about 8 feet up from grade. Monitor the tree's stability on a routine basis; provide routine pruning techniques as needed, prune to maintain adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree (remove up to or less than but no more than 20 percent of the live foliage).

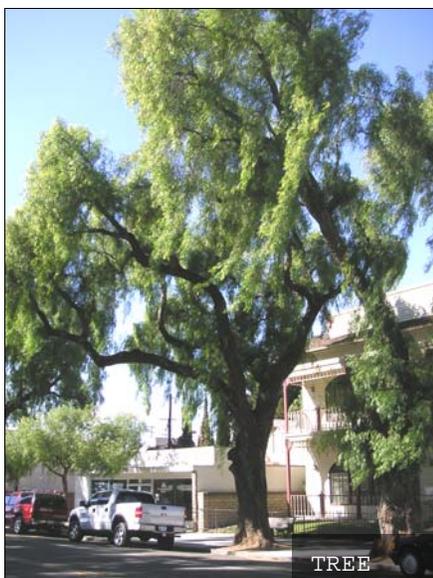


Tag/site #4 This 15-inch diameter tree is growing in a typically restricted growing space. The tree has a canopy that extends about 30 feet high and 25 feet wide. The main stem leans to the west and its dense canopy has regenerated from a branch architecture altered by severe pruning. Monitor the tree's stability on a routine basis; provide crown reconstruction pruning techniques to improve scaffold branch attachment and arrangement, provide routine pruning techniques as needed, prune to provide adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree if

possible but take necessary steps to redirect canopy development while maintaining tree health.



Tag/site #5 This 14-inch diameter tree is growing in a typically restricted growing space. The tree has a canopy that extends about 35 feet high and as wide. The tree was somewhat over pruned previously and the main scaffold limbs originate low in the canopy architecture; the lowest major scaffold limb bifurcates from the stem about 6 feet up from grade and the canopy is raised high and distributed among four roughly co-dominant scaffolds that are oriented on an east/west axis. Monitor the tree's stability on a routine basis; provide crown reconstruction pruning to promote branch develop lower in the canopy, provide routine pruning techniques as needed, prune to maintain adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree if possible but take necessary steps to redirect canopy development while maintaining tree health.

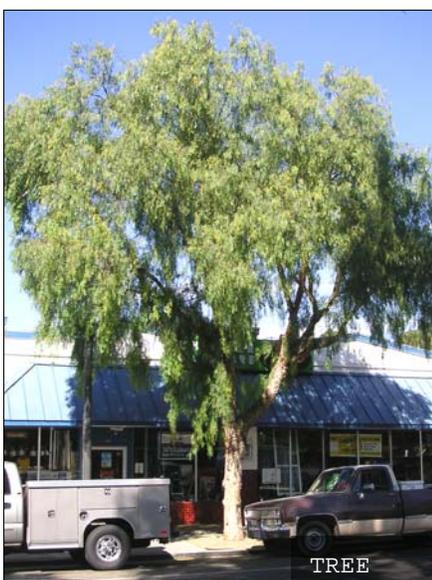


Tag/site #8 This 38-inch diameter tree is growing in a typically restricted growing space with a park-style bench located about 10 feet northwest of the planting site. The tree has a canopy that extends about 50 feet high and 60 feet wide. Initial stem bifurcation occurs about 10 feet up, progressive branching of primary and secondary scaffold limbs occurs throughout the canopy promoting a well distributed branch architecture. Several of the scaffold limbs are long and horizontal and tend to be heavily loaded toward branch ends. Monitor the tree's stability on a routine basis; provide crown reconstruction pruning techniques along the long horizontal limbs to promote branch development and architectural structure closer toward the main stem, provide routine pruning

techniques as needed, prune to maintain adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, routinely reduce horizontal canopy expansion by selectively cutting back terminal ends to appropriate-sized and well-placed lateral branches, avoid over pruning the tree (remove up to or less than but no more than 20 percent of the live foliage).



Tag/site #10 This 12-inch diameter tree is growing in a typically restricted growing space. It does not have a number tag attached to the trunk at this time. The tree has a canopy that extends about 25 feet high and 35 feet wide. Multiple primary scaffold limbs originate from the main stem about 8 feet up from grade with a horizontal orientation. Monitor the tree's stability on a routine basis; provide crown reconstruction pruning techniques to improve scaffold branch attachment and arrangement, provide routine pruning techniques as needed, prune to provide adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree if possible but take necessary steps to redirect canopy development while maintaining tree health.



Tag/site #11 This 15-inch diameter tree is growing in a typically restricted growing space. It does not have a number tag attached to the trunk at this time. The tree has a canopy that extends about 35 feet high and as wide. Initial stem bifurcation occurs about 8 feet up, progressive branching of primary and secondary scaffold limbs occurs throughout the canopy promoting a well distributed branch architecture. Monitor the tree's stability on a routine basis; provide routine pruning

techniques as needed, prune to provide adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree (remove up to or less than but no more than 20 percent of the live foliage).



Tag/site #12 This 18-inch diameter tree is growing in a typically restricted growing space. It does not have a number tag attached to the trunk at this time. The tree has a canopy that extends about 35 feet high and 40 feet wide. Initial stem bifurcation occurs about 6 feet up, progressive branching of primary scaffold limbs with sharp-angled crotches occurs throughout the canopy. Monitor the tree's stability on a routine basis with particular emphasis on the attachment of limbs with sharp-angled crotches; provide crown reconstruction pruning techniques to improve scaffold branch attachment and arrangement, provide routine pruning techniques as needed, prune to maintain adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree if possible but take necessary steps to redirect canopy development while maintaining tree health.

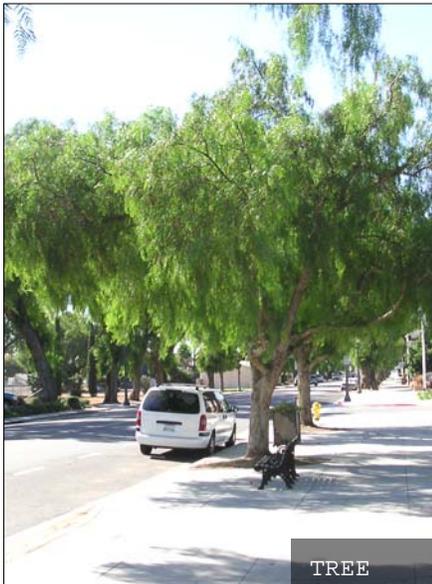
Tag/site #14 This 25-inch diameter tree is growing in a modified typically restricted growing space – the planter pops out into the roadway a distance of about 4 feet. The tree has a canopy that extends about 20 feet high and as wide. Multiple primary scaffold limbs originate from the main stem about 12 feet up from grade and support a dense, asymmetrical canopy. Monitor the tree's stability



on a routine basis; provide crown reconstruction pruning techniques to improve scaffold branch attachment and arrangement, provide routine pruning techniques as needed, prune to provide adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree if possible but take necessary steps to redirect canopy development while maintaining tree health.



Tag/site #16 This 39-inch diameter tree is growing in a modified typically restricted growing space – the planter pops out into the roadway a distance of about 4 feet. The tree has a canopy that extends about 50 feet high and 60 feet wide. Initial stem bifurcation occurs about 20 feet up, progressive branching of primary and secondary scaffold limbs occurs throughout the canopy producing an especially high canopy architecture. Several of the scaffold limbs are long and horizontal and tend to be heavily loaded toward branch ends. Monitor the tree's stability on a routine basis; provide crown reconstruction pruning techniques along the long horizontal limbs to promote branch development and architectural structure closer toward the main stem, provide routine pruning techniques as needed, prune to maintain adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk but, over time, develop well placed new sprouts to extend canopy architecture lower on the stem, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, routinely reduce horizontal canopy expansion by selectively cutting back terminal ends to appropriate-sized and well-placed lateral branches, avoid over pruning the tree (remove up to or less than but no more than 20 percent of the live foliage).



Tag/site #20 This 17-inch diameter tree is growing in a typically restricted growing space. The tree has a canopy that extends about 25 feet high and as wide. Initial stem bifurcation occurs about 8 feet up, progressive branching of primary and secondary scaffold limbs occurs throughout the canopy promoting a well distributed branch architecture. Removal of one or more low horizontal limbs may improve the canopy form and reduce long-term pedestrian clearance requirements. Monitor the tree's stability on a routine basis; provide routine pruning techniques as needed, prune to provide adequate clearance for vehicular traffic on High Street and pedestrian traffic long the sidewalk, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree (remove up to or less than but no more than 20 percent of the live foliage).



Tag/site #21 This 23-inch diameter tree is growing in a typically restricted growing space with a park-style bench located about 10 feet east of the planting site. The tree has a canopy that extends about 20 feet high and 30 feet wide. Initial stem bifurcation occurs about 6 feet up with multiple primary scaffold limbs originating low on the main stem and extending along a horizontal angle. Monitor the tree's stability on a routine basis, especially sections that extend over (and therefore tend to threaten) the vicinity of the park bench; provide crown reconstruction pruning techniques to improve scaffold branch attachment and arrangement, provide routine pruning techniques as needed, prune to provide adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree if possible but

take necessary steps to redirect canopy development while maintaining tree health.



Tag/site #27 This 15-inch diameter tree is growing in an atypical growing space that is 15 feet deep but only 5 feet wide. The tree has developed with a pronounced lean to the south; its canopy extends about 20 feet high and 25 feet wide. Initial stem bifurcation occurs about 4 feet up with multiple primary scaffold limbs originating with narrow crotch angles, low on the main stem, and extending along a low, horizontal angle. Monitor the tree's stability on a routine basis, especially sections that extend over (and therefore tend to threaten) the vicinity of the parking lot; provide crown reconstruction pruning techniques to improve scaffold branch attachment and arrangement, provide routine pruning techniques as needed, prune to provide adequate clearance for vehicular and pedestrian traffic, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree if possible but take necessary steps to redirect canopy development while maintaining tree health.



Tag/site #28 This 11-inch diameter tree is growing in an atypical growing space that is 9 feet wide but the trunk is only 1 foot west and 2 feet south of pavement edges. Large surface roots (6-inches in diameter and 4-inches in diameter – see detail photo) have been cut on the north side, behind the direction of the tree's lean, to avert encroachment with adjacent pavement. This treatment tends to destabilize the tree. The tree has one low horizontal scaffold limb extending to the south; its canopy, 20-foot high and as wide, is otherwise symmetrical. Monitor the tree's stability on a routine basis, especially sections that extend over (and therefore tend to threaten) the vicinity of the parking lot; provide pruning treatments to remove the low branch and



improve the branch distribution, provide routine pruning techniques as needed, prune to provide adequate clearance for vehicular and pedestrian traffic, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree if possible but take necessary steps to redirect canopy development while maintaining tree health. When the opportunity arises to replace the tree the new specimen should be centered in the growing space.



Tag/site #35 This 32-inch diameter tree is growing in a typically unrestricted growing space with a monolithic sidewalk and curb/gutter. The tree has a canopy that extends about 30 feet high and 60 feet wide. Initial stem bifurcation occurs about 20 feet up, progressive branching of primary and secondary scaffold limbs occurs throughout the canopy producing an especially high canopy architecture. Several of the scaffold limbs are long and horizontal and tend to be heavily loaded toward branch ends. Monitor the tree's stability on a routine basis; provide crown reconstruction pruning techniques along the long horizontal limbs to promote branch development and architectural structure closer toward the main stem, provide routine pruning techniques as needed, prune to maintain adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk but, over time, develop well placed new sprouts to extend canopy architecture lower on the stem, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, routinely reduce horizontal canopy expansion by selectively cutting back terminal ends to appropriate-sized and well-placed lateral branches, avoid over pruning the tree (remove up to or less than but no more than 20 percent of the live foliage).

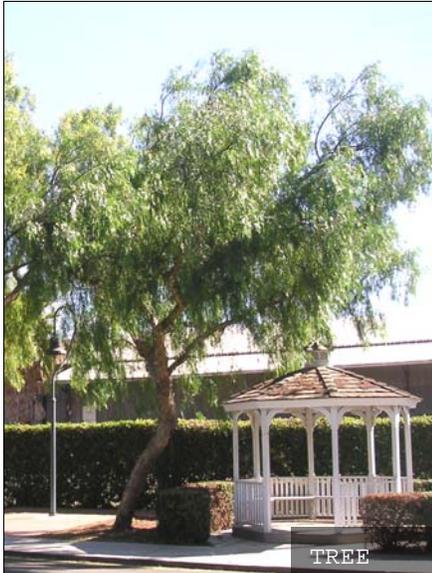


Tag/site #37 This 13-inch diameter tree is growing in an atypical growing space with 9 feet between a building and the monolithic sidewalk. Additionally, the space is essentially unlimited in its width. The tree has developed with a pronounced lean to the north, away from the building. The tree has one low horizontal scaffold limb extending to the north; its canopy, 20 feet high and as wide, would otherwise be symmetrical. Monitor the tree's stability on a routine basis, especially the impact of and potential pressure from the root zone as it develops in the vicinity of the adjacent building; provide pruning treatments to remove the low branch and improve the branch distribution, provide routine pruning techniques as needed, prune to provide adequate clearance for vehicular and pedestrian traffic, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree if possible but take necessary steps to redirect canopy development while maintaining tree health.



Tag/site #38 This 14-inch diameter tree is growing in an atypical growing space that is 5 feet deep – the tree trunk abuts a sidewalk section extended into the planter to accommodate an ornamental street lamppost. Imminent conflict is likely with the adjacent meandering sidewalk. Monitor the tree's stability and its impact on adjacent structure and infrastructure; provide routine pruning techniques as needed, prune to maintain adequate clearance for vehicular and pedestrian traffic and clearance from the building roof, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree (remove up to or less than but no more than 20 percent of the live foliage). When an opportunity arises to replace the tree the new specimen should be accommodated by the growing space.





Tag/site #42 This 11-inch diameter tree is growing in an atypical growing space 4 feet east of brick paving (on the west side) and the tree's stem is 3 feet south of the sidewalk on the north side, which was extended to allow pedestrians to meander around an ornamental street lamppost. A potential future encroachment conflict is likely with the adjacent paved surfaces. The tree has a low, horizontal canopy architecture that extends about 18 feet above ground and westward, somewhat toward the gazebo. Monitor the tree's stability and its impact on adjacent structure and infrastructure; provide crown reconstruction pruning techniques along the long horizontal limbs to promote branch development and architectural structure closer toward the main stem, provide routine pruning techniques as needed, prune to maintain adequate clearance for vehicular and pedestrian traffic and clearance from the gazebo, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, avoid heading-back terminal ends and promote an upward growing canopy architecture, avoid over pruning the tree if possible but take necessary steps to redirect canopy development while maintaining tree health.



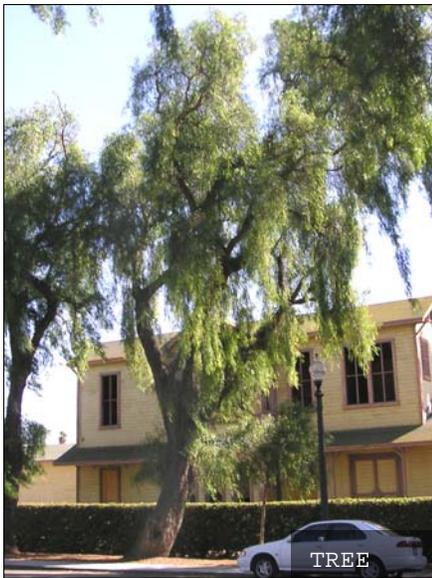
Tag/site #43 This 42-inch diameter tree is growing in an atypical growing space – and potential conflict is likely with the adjacent paved surfaces. Additional conflicts are likely with high voltage utility power lines that run along the south side of the tree. The tree has a canopy that extends about 40 feet high and 55 feet wide. Due to the phototropism and its effect on plant growth, portions of the tree canopy will have an inclination to encroach into the vicinity of these energized conductors. Unless maximum clearance standards are met, clearance pruning will occur by agents of the utility company and the interests of the tree will be secondary at best. (Utility line clearance is conducted in accordance with requirements of General Order 95, Rule 35 of The California Public Utilities Commission). Initial stem

bifurcation occurs about 10 feet up, progressive branching of primary and secondary scaffold limbs occurs throughout the canopy promoting a well distributed branch architecture. Several of the scaffold limbs are long and horizontal and tend to be heavily loaded toward branch ends. Monitor the tree's stability on a routine basis; provide crown reconstruction pruning techniques along the long horizontal limbs to provide maximum clearance from high voltage utility lines, promote branch development and architectural structure closer toward the main stem, provide routine pruning techniques as needed, prune to maintain adequate clearance for vehicular and pedestrian traffic, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, routinely reduce horizontal canopy expansion by selectively cutting back terminal ends to appropriate-sized and well-placed lateral branches, avoid over pruning the tree (remove up to or less than but no more than 20 percent of the live foliage).



Tag/site #46 This 41-inch diameter tree is growing in a typically unrestricted growing space with a monolithic sidewalk and curb/gutter, though there is a concrete pad with a park bench a short distance to the east of the tree base. Other potential conflicts are possible with high voltage utility power lines that run along the south side of the tree. The tree has a canopy that extends about 50 feet high and 50 feet wide. This tree has a co-dominant stem architecture and initial stem bifurcation occurs about 6 feet up. Lateral branching secondary scaffold limbs occurs high in the canopy resulting in severe canopy architecture. Several of the secondary scaffold limbs are long and horizontal, and may develop a tendency to become overloaded toward branch ends. Monitor the tree's stability on a routine basis; provide crown reduction pruning techniques along the long horizontal limbs to promote branch development and architectural structure closer toward the main stem,

provide routine pruning techniques as needed, prune to maintain adequate clearance for vehicular and pedestrian traffic but, over time, develop well placed new sprouts to extend canopy architecture lower on the stem, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, promote an upward growing canopy architecture and routinely reduce horizontal canopy expansion by selectively cutting back terminal ends to appropriate-sized and well-placed lateral branches, avoid over pruning the tree (remove up to or less than but no more than 20 percent of the live foliage).



Tag/site #47 This 40-inch diameter tree is growing in a typically unrestricted growing space with a monolithic sidewalk and curb/gutter, though the adjacent tree (#46) is growing with its trunk only 20 feet away to the east and high voltage utility power lines run along the south side of the tree. The tree's canopy extends about 50 feet high and as wide. The tree leans to the south and little of its canopy architecture extends to the north or to the east. Lateral limbs extending to the south have been truncated due to the high voltage utility lines. Additionally, a new tree has been installed adjacent and to the west, also about 20 feet away. The canopy of this tree must be modified over time if the small new tree is to develop its full form. Monitor the tree's stability on a routine basis; provide crown reconstruction pruning techniques on the north and south side to promote lateral branching and natural branch structure, provide crown reduction pruning techniques on the west side to provide solar radiation exposure for the adjacent new tree, provide routine pruning techniques as needed, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, routinely reduce horizontal canopy expansion by selectively cutting back terminal ends to appropriate-sized and well-placed lateral branches, avoid over pruning the tree (remove up

to or less than but no more than 20 percent of the live foliage).



Tag/site #49 This 51-inch diameter tree is growing in a typically unrestricted growing space with a monolithic sidewalk and curb/gutter. The tree's canopy extends about 50 feet high and 70 feet wide. Three primary scaffold limbs bifurcate from the stem about 6 feet above grade and triangulate in such a fashion as to avoid the vicinity of power lines that run along the south side of the tree. A utility pole and associated communications lines are located beneath and extending through the canopy; this infrastructure has minor relevance to tree maintenance. Monitor the tree's stability on a routine basis; provide crown reconstruction pruning techniques along the long horizontal limbs to promote branch development and architectural structure closer toward the main stem, provide routine pruning techniques as needed, prune to maintain adequate clearance for vehicular traffic on High Street, prune to thin foliage on heavily laden limbs to avoid excessive strain, drooping, and possible breakage, routinely reduce horizontal canopy expansion by selectively cutting back terminal ends to appropriate-sized and well-placed lateral branches, avoid over pruning the tree (remove up to or less than but no more than 20 percent of the live foliage).

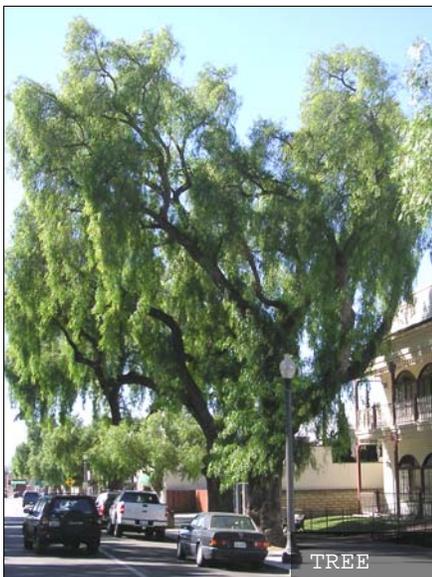


12.1 VETERAN TREES AND THEIR MAINTENANCE NEEDS

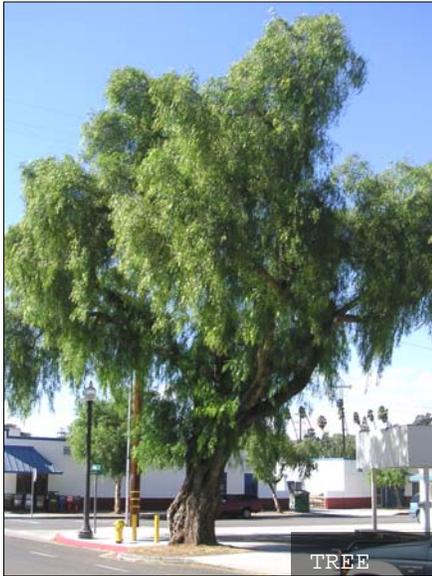
Tag/site #6 This 39-inch diameter tree is growing in a typically restricted growing space. Previous assessments indicate extreme problems with trunk stability and major problems with both the health and stability of scaffold limbs. The tree's canopy extends about 50 feet high and 60 feet wide. The initial stem bifurcation is about 20 feet up, progressive branching of secondary scaffold limbs occurs throughout the canopy producing an extensive but especially high canopy architecture. Several of the

scaffold limbs are long and horizontal and tend to be heavily loaded toward branch ends. Initiate extensive crown reconstruction pruning on an annual schedule for a minimum of 5 years; progressively reduce the length of long vertical and horizontal limbs each year to gradually promote branch development and architectural structure closer toward the main stem, delay other routine pruning techniques until crown reconstruction is well underway, safety prune to maintain adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk but, over time, develop well placed new sprouts to extend canopy architecture lower on the stem.

Tag/site #9 This 40-inch diameter tree is growing in a typically restricted growing space. In addition to paving/surface restrictions the tree is situated in close proximity to the adjacent tree (#8); they were planted 20 feet on center. Allowing for reasonable canopy extension and healthy long-term development, a minimum specification for trees this size should be 30 feet on center. Previous assessments indicate extreme problems with trunk stability and major problems with both the health of scaffold limbs and smaller branches and twigs. The tree's canopy extends about 55 feet high and 60 feet wide. The initial stem bifurcation is about 10 feet up, progressive branching of secondary scaffold limbs occurs throughout the canopy producing an extensive canopy architecture. Most or all of the scaffold limbs are long and horizontal and tend to be heavily loaded toward branch ends. Initiate extensive crown reconstruction pruning on an annual schedule for a minimum of 5 years; progressively reduce the length of long vertical and horizontal limbs each year to gradually promote branch development and architectural structure closer toward the main stem, delay other routine pruning techniques until crown reconstruction is well underway, safety prune to maintain adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk



but, over time, develop well placed new sprouts to extend canopy architecture lower on the stem.



Tag/site #13 This 43-inch diameter tree is growing in a modified typically restricted growing space – the planter pops out into the roadway a distance of about 4 feet. Previous assessments indicate major problems with both root stability and scaffold stability, and extreme problems related to a large trunk cavity and decay. The tree has a pronounced lean to the north and has a canopy extending about 40 feet high and 60 feet wide. The initial stem bifurcation is about 10 feet up with 5 primary scaffold limbs and progressive branching of secondary scaffold and smaller branches and twigs throughout the canopy. Each of the scaffold limbs is long and horizontal and tends to be heavily loaded toward branch ends. Initiate extensive crown reconstruction pruning on an annual schedule for a minimum of 5 years; progressively reduce the length of long vertical and horizontal limbs each year to gradually promote branch development and architectural structure closer toward the main stem, delay other routine pruning techniques until crown reconstruction is well underway, safety prune to maintain adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk but, over time, develop well placed new sprouts to extend canopy architecture lower on the stem.



Tag/site #17 This 41-inch diameter tree is growing in a modified typically restricted growing space – the planter pops out into the roadway a distance of about 4 feet. Previous assessments indicate extreme problems with roots stability and trunk stability and major problems with the health of the roots. This tree's condition warrants ongoing consideration for its useful contribution to the grove. The tree's canopy extends about 50 feet high and 44 feet wide. The one large lateral limb originates about 8 feet up from grade; it is truncated about 10 above its point of origination. The primary

scaffold bifurcation is about 20 feet up and extensive branching of secondary scaffold limbs occurs throughout the canopy producing a narrow and especially high canopy architecture. Several of the scaffold limbs are long and tend to be heavily loaded toward branch ends. Initiate extensive crown reconstruction pruning on an annual schedule for a minimum of 5 years; progressively reduce the length of long limbs each year to gradually promote branch development and architectural structure closer toward the main stem, delay other routine pruning techniques until crown reconstruction is well underway, safety prune to maintain adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk but, over time, develop well placed new sprouts to extend canopy architecture lower on the stem.

Tag/site #23 This 40-inch diameter tree is growing in a typically restricted growing space. Previous assessments indicate major problems with the stability of the trunk and the scaffold limbs. The tree's canopy extends about 40 feet high and 44 feet wide. This tree has co-dominant stem architecture and initial stem bifurcation occurs about 8 feet up. Lateral secondary scaffold limbs occur high in the canopy resulting in canopy architecture exerting severe leverage on weakened primary structure elements. Initiate extensive crown reconstruction pruning on an annual schedule for a minimum of 5 years; progressively reduce the length of long vertical and horizontal limbs each year to gradually promote branch development and architectural structure closer toward the main stem, delay other routine pruning techniques until crown reconstruction is well underway, safety prune to maintain adequate clearance for vehicular traffic on High Street and pedestrian traffic along the sidewalk but, over time, develop well placed new sprouts to extend canopy architecture lower on the stem.





Tag/site #30 This 37-inch diameter tree is growing in an atypical growing space – 19 feet wide and 26 feet deep, with a monolithic sidewalk and curb/gutter. Previous assessments indicate major problems with the health and stability of the trunk and the scaffold limbs. The tree's canopy extends about 40 feet high and 47 feet wide. The initial stem bifurcation is about 15 feet up, with 3 primary scaffold limbs and secondary scaffold and smaller branches and twigs throughout the canopy. Several of the major lateral limbs are long, horizontal, and tend to be heavily loaded toward branch ends. Initiate extensive crown reconstruction pruning on an annual schedule for a minimum of 5 years; progressively reduce the length of long vertical and horizontal limbs each year to gradually promote branch development and architectural structure closer toward the main stem, delay other routine pruning techniques until crown reconstruction is well underway, safety prune to maintain adequate clearance for vehicular and pedestrian traffic.



Tag/site #31 This 36-inch diameter tree is growing in a typically unrestricted growing space with a monolithic sidewalk and curb/gutter. Previous assessments indicate major problems with the health and stability of the trunk and the stability of scaffold limbs. The tree's canopy extends about 35 feet high and 52 feet wide. This tree has a co-dominant stem architecture and initial stem bifurcation occurs about 8 feet up. Lateral primary scaffold limbs occur high in the canopy resulting in an elevated canopy form. Initiate extensive crown reconstruction pruning on an annual schedule for a minimum of 5 years; progressively reduce the length of long vertical and horizontal limbs each year to gradually promote branch development and architectural structure closer toward the main stem, delay other routine pruning techniques until crown reconstruction is well underway, safety prune to maintain adequate clearance for vehicular and pedestrian traffic but, over time, develop well placed

new sprouts to extend canopy architecture lower on the stem.



Tag/site #32 This 25-inch diameter tree is growing in a typically unrestricted growing space with a monolithic sidewalk and curb/gutter. Previous assessments indicate extreme problems with root stability and major problems with trunk and scaffold stability and scaffold health. The tree's canopy extends about 30 feet high and 43 feet wide with most of the canopy on a north south axis due to its close proximity to an adjacent tree (#31). The main stem bifurcation is about 15 feet up. Initiate extensive crown reconstruction pruning on an annual schedule for a minimum of 5 years; progressively reduce the length of long vertical and horizontal limbs each year to gradually promote branch development and architectural structure closer toward the main stem, delay other routine pruning techniques until crown reconstruction is well underway, safety prune to maintain adequate clearance for vehicular and pedestrian traffic but, over time, develop well placed new sprouts to extend canopy architecture lower on the stem.



Tag/site #33 This 30-inch diameter tree is growing in a typically unrestricted growing space with a monolithic sidewalk and curb/gutter. Previous assessments indicate major problems with root stability. The tree's canopy extends about 30 feet high and 39 feet wide. This tree has a co-dominant stem architecture and initial stem bifurcation occurs about 15 feet up. Lateral primary scaffold limbs occur high in the canopy resulting in an elevated canopy form. Initiate extensive crown reconstruction pruning on an annual schedule for a minimum of 5 years; progressively reduce the length of long vertical and horizontal limbs each year to gradually promote branch development and architectural structure closer toward the main stem, delay other routine pruning techniques until crown reconstruction is well underway, safety prune to maintain adequate clearance for vehicular

and pedestrian traffic but, over time, develop well placed new sprouts to extend canopy architecture lower on the stem.



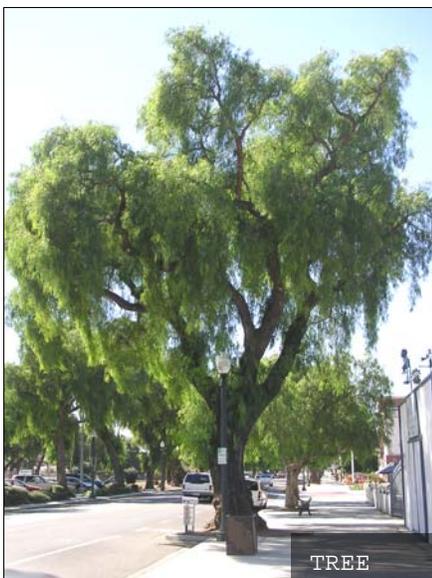
Tag/site #36 This 59-inch diameter tree is growing in a typically unrestricted growing space with a meandering sidewalk, placing the tree in an open space between the sidewalk and High Street. A park bench is located on the north side between the tree and High Street, directly under the lean. Previous assessments indicate extreme problems with root health, major problems with root stability and scaffold limb stability, and due to a large cavity and decay major problems with the trunk health. The tree's canopy extends about 45 feet high and 66 feet wide. This tree has a co-dominant stem architecture and initial stem bifurcation occurs about 15 feet up. Lateral primary scaffold limbs occur high in the canopy resulting in an elevated canopy form. The initial stem bifurcation is about 10 feet up with additional bifurcation of scaffold limbs about 5 feet higher. Many of the scaffold limbs are long and horizontal and tend to be heavily loaded toward branch ends. Remove the park bench away from this location and relocate it where it will not present a potential high risk for damage or injury in case of tree failure. Initiate extensive crown reconstruction pruning on an annual schedule for a minimum of 5 years; progressively reduce the length of long vertical and horizontal limbs each year to gradually promote branch development and architectural structure closer toward the main stem, delay other routine pruning techniques until crown reconstruction is well underway, safety prune to maintain adequate clearance for vehicular and pedestrian traffic but, over time, develop well placed new sprouts to extend canopy architecture lower on the stem.

Tag/site #44 This 33-inch diameter tree is growing in a typically unrestricted growing space with a meandering sidewalk, placing the tree in an open space between the



sidewalk and High Street. A potential aerial conflict exists with high voltage utility power lines that run along the south side of the tree. Previous assessments indicate extreme problems with scaffold limb stability, and major problems with trunk stability and scaffold limb health. The tree bifurcates at about 10 up with 3 primary scaffolds, progressive branching of secondary scaffold limbs occurs producing an extensive canopy supported by long lateral limbs that tend to be heavily loaded toward branch ends. Initiate extensive crown reconstruction pruning on an annual schedule for a minimum of 5 years; progressively reduce the length of long vertical and horizontal limbs each year to gradually promote branch development and architectural structure closer toward the main stem, delay other routine pruning techniques until crown reconstruction is well underway, safety prune to maintain adequate clearance for vehicular and pedestrian traffic but, over time, develop well placed new sprouts to extend canopy architecture lower on the stem.

12.1 SENESCENT TREES – REMOVALS AND REPLACEMENTS



Tag/site #22 This 48-inch diameter tree is growing in a modified typically restricted growing space – the planter pops out into the roadway a distance of about 4 feet. The tree has a canopy that extends about 45 feet high and 53 feet wide. Previous assessments indicate extreme problems with root stability, trunk stability, and scaffold limb stability and the tree has a severe lean to the west. Due to conditions of instability that cannot be mitigated the tree should be removed at the earliest opportunity, the site should be prepared for replanting and a new tree should be installed at this location. Please see planting specifications, enclosed.



Tag/site #26 This 52-inch diameter tree is growing in a modified typically restricted growing space – the planter pops out into the roadway a distance of about 4 feet. The tree has a canopy that extends about 45 feet high and 43 feet wide. Previous assessments indicate extreme problems with trunk stability and scaffold limb stability. Due to conditions of instability that cannot be mitigated the tree should be removed at the earliest opportunity and the site should be studied for its appropriateness as a designated tree site or a site designated as part of the historic California Pepper grove. If it is determined that replanting is appropriate a new tree may be installed at this location. Please see planting specifications, enclosed.



Tag/site #29 This 33-inch diameter tree is growing in a modified typically restricted growing space – the space is a 5-foot by 5-foot planter and the tree's trunk is approximately 1-foot away from the paving in each direction. The tree has a canopy that extends about 35 feet high and 39 feet wide. Previous assessments indicate extreme problems with trunk stability and scaffold limb stability. Due to conditions of instability that cannot be mitigated the tree should be removed at the earliest opportunity and the site should be studied for its appropriateness as a designated tree site or a site designated as part of the historic California Pepper grove. If it is determined that replanting is appropriate a new tree may be installed at this location.





Tag/site #34 This 29-inch diameter tree is growing in a typically unrestricted growing space with a monolithic sidewalk and curb/gutter. The tree has a canopy that extends about 30 feet high and 46 feet wide. Previous assessments indicate extreme problems with root stability and major problems with trunk health and stability and scaffold limb health and stability. Due to conditions of instability and extensive health challenges the tree should be removed at the earliest opportunity, the site should be prepared for replanting and a new tree should be installed at this location. Please see planting specifications, enclosed.



Tag/site #45 This 35-inch diameter tree is growing in a typically unrestricted growing space with a meandering sidewalk and concrete pads with park benches a short distance from the tree base on both the east and west sides. In addition, high voltage utility power lines that run along the south side of the tree. The tree has a canopy that extends about 45 feet high and 45 feet wide. Previous assessments indicate extreme problems with trunk stability and major problems with scaffold limb stability. Due to conditions of instability the tree should be removed at the earliest opportunity, the site should be prepared for replanting and a new tree should be installed at this location. Please see planting specifications, enclosed.

ATTACHMENTS

- Site sketch (1 page, 11x14 format)
- Planting detail and specifications (2 pages)
- Pruning details and specifications (ANSI Documents)