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Tree Assessment/
Forest Management Plan
Amatya Residence

Prepared for:

Mr. and Mrs. Pradyumna and Ying Amatya

Prepared by:

Frank Ono
Forester
Society of American Foresters I.D.# 48004
Certified Arborist #536
1213 Miles Avenue
Pacific Grove, CA 93950

October 19, 2018

Owner:

Mr. and Mrs. Pradyumna and Ying Amatya
9735 Maul Oak Place
Salinas, CA 93907

Designer:

TISC Design
109 B Central Ave
Salinas, CA 93901

Forester and Arborist

Frank Ono, Society of American Foresters # 048004, Certified Arborist #536
F.O. Consulting
1213 Miles Ave
Pacific Grove, CA 93950

SUMMARY

Development is proposed for this site located at 24723 Handley Drive in Carmel CA. Because native trees forest this site, a tree assessment/arborist report has been prepared that identifies and addresses the affects that the project will have to the existing tree resources on site as well as a list of recommendations for the project.

The project proposes to build a new single-family home near existing Monterey pine and Coast live oak trees which require the pruning/removal of trees located on site and protection of others identified for retention. In studying the project, one (1) tree is proposed for removal with this project due to its location within the driveway and slope access to the property. Remaining trees adjacent to the proposed construction were found to range from poor to good condition both structurally and in health and are to be protected and retained.

ASSIGNMENT/SCOPE OF PROJECT

To ensure protection of the tree resources on site, the property owners, Mr. and Mrs. Pradyumna and Ying Amatya have requested an assessment of the trees in proximity to proposed development areas and an arborist report for trees that are adjacent to these areas on this property. To accomplish this assignment, the following tasks have been completed;

- Evaluate health, structure and preservation suitability for each tree within or adjacent (15 feet or less) to proposed development of trees greater than or equal to six diameter inches at 24 inches above grade.
- Review proposed building site plans as provided by TISC Designs, Designers.
- Make recommendations for alternative methods and preconstruction treatments to facilitate tree retention.
- Create preservation specifications, as it relates to numbered trees keyed to an annotated Tree Location Map.
- Determine the quantity of trees affected by construction that meet “Landmark” criteria as defined by the County of Monterey, Title 20 Monterey County Coastal Zoning Ordinance; as well as mitigation requirements for those to be affected.
- Document findings in the form of a report as required by the County of Monterey Planning Department.

LIMITATIONS

This assignment is limited to the review of plans submitted to me by Mr. Pradyumna Amatya dated May 8, 2018 to assess affects from potential construction to trees within or adjacent to construction activities. The assessment has been made of these plans specifically and no other plans were reviewed. Only minor grading and erosion details are discussed in this report as it relates to tree health.

PURPOSE

This tree Assessment/Forest management report is prepared for this parcel due to proposed construction activities that are intent on improving the existing structure located at 24723 Handley Drive in Carmel CA. The purpose of this report is to give an independent assessment of the existing trees on site and to determine if any of the trees will be affected by the proposed project. Oak and pine trees are considered protected trees as defined by the County of Monterey, Title 20 Monterey County Coastal Zoning Ordinance.

GOAL

The goal of this plan is to protect and maintain the Carmel area forested resources through the adherence of development standards, which allow the protection, and maintenance of its forest resources. Furthermore it is the intended goal of this Arborist report to aid in planning to offset any potential effects of proposed development on the property while encouraging forest stability and sustainability, perpetuating the forested character of the property and the immediate vicinity.

INTRODUCTION

This forest management plan is prepared for Mr. and Mrs. Pradyumna and Ying Amatya owners of the lot located at 24723 Handley Drive in Carmel CA by Frank Ono, Urban Forester and Certified Arborist, S.A.F. Member #48004 and ISA #536 due to construction. Monterey County's Coastal Implementation Plan Sec. 20.146.060 requires a forest management plan when tree removal is necessary of native trees six inches diameter or greater so as to preserve and maintain the forest and its beneficial uses. The County identifies Monterey pine and Coast live oak trees as native tree species that require special consideration for management.

SITE DESCRIPTION

- 1) Assessor's Parcel Number: 009-591-006-000
- 2) Location: 24723 Handley Drive, Carmel, CA 93923.
- 3) Parcel size: 0.21 Acres
- 4) Existing Land Use: The parcel is developed and is zoned MDR/2-D(CZ) for residential use.
- 5) Slope: The parcel is on a slope. Slopes range from 15% to over 25%, no development is planned on slopes greater than 25%.
- 6) Soils: The parcel is located on soil classified by the Monterey County Soils Report as "Santa Lucia Channery Clay Loam" about 25 to 35 inches deep. Shale bedrock is found generally at a depth of 24 to 33 inches. Runoff is high and erosion hazard is low.
- 7) Vegetation: The vegetation is of the Monterey Pine Forest type. It is a mixture of some Monterey Pine forest with Monterey cypress and coastal live oak understory present. The site has been previously disturbed and understory shrubs consist mostly of African daisy (*Osteospermum spp.*) and French broom (*Genista monspessulana.*).
- 8) Forest Condition and Health: The forest condition and health are evaluated with the use of the residual trees and those of the surrounding Monterey Pine Forest as a stand. This site is disturbed and degraded with the mature pine trees in poor to fair condition and has previously been cleared and mowed. The site also has several previous tree failures observed that have fallen and damaged the remaining trees.

BACKGROUND/PROJECT DESCRIPTION

On October 16, 2018, I (Frank Ono, F.O. Consulting) I was contacted by Mr. Pradyumna Amatya who requested that I visit the site for an assessment of trees adjacent or within the proposed construction areas. Mr. Amatya requested the findings from the review and assessment of trees that occupy the land at 24723 Handley Drive in Carmel CA be prepared and documented in a report that would work in conjunction with other conditions for approval of the building permit application.

A site visit was taken to the property on October 18, 2018 where trees were assessed for health and condition at that time. The assessment focused on incorporating the preliminary location of site improvements coupled with consideration for the general goals of site improvement desired of the landowner. During this site visit, the proposed improvements assessed included preserving trees to the greatest extent feasible, maintaining the view shed and general aesthetic quality of the area while complying with county codes. A study of the individual trees was made to determine the treatments necessary to complete the project and meet the goals of the landowner. As a result trees within and immediately adjacent to the proposed development area were located, measured, inspected, and recorded. The assessment of each tree concluded with an opinion of whether the tree should be removed, or preserved, based on the extent and effect of construction activity to the short and long term health of the tree. All meetings and field review were focused on the area immediately surrounding the proposed development.

OBSERVATIONS/DISCUSSION

The following list includes observations made while on site, and summarizes details discussed during this stage of the planning process.

- The site is forested mainly with mature Monterey pine trees.
- One (1) trees is proposed for removal due to its location within the driveway which is necessary given the slope and access to the property. This tree has two stems that are weakly attached and appears to be splitting. The tree has a tree hazard evaluation form (THEF) score of 10. The THEF score sheet is attached with this report.
- Most of the trees on the property are of moderate size (less than 24” in diameter) which compose the majority of existing trees.
- One (1) tree is located along the property line and will need root pruning to accommodate construction. This is considered a landmark tree (24” in diameter or more). This tree #129 is a 29” diameter Monterey pine. It is located on the neighboring property; it is in poor health and should be removed. Efforts should be made to contact that property owner as the tree will represent significant risk once the development occurs on this property.
- No alternate building sites were considered for this assessment as the site constrained by pre-existing conditions. Slope, and lack of available space.

TREE CHART

The following trees were found on site and assessed for condition and health:

ID#	Species	Diameter	Structure	Health	Remove	Comments
123	Pine	26+36	Poor	Fair	x	splitting down center, in driveway
124	Oak	7	Poor	Good		codominant stems
125	Oak	7	Poor	Good		codominant stems
126	Oak	6	Good	Good		
127	Pine	13	Poor	Fair		
128	Pine	22	Fair	Fair		
129	Pine	29	Fair	Poor		On neighboring property

PROJECT ASSESSMENT/CONCLUSION

This proposal to build a single-family residence and driveway is planned to maintain the existing Monterey pine forested environment and will allow the forest to continue to exist and regenerate over time. One tree is to be removed because it is located within the driveway footprint. This tree has a structural defect at its base where the two stems are weakly attached. The remainder of the property contains some tree cover, which is to remain undisturbed. No watercourses are near the planned construction. Whenever construction activities take place near trees, there is the potential for those trees to experience decline in the long-term as well. The greatest attempt has been made to identify and remove those trees likely to experience such a decline.

Short Term Impacts

Site disturbance will occur during driveway and home construction. Approximately 3000 square feet of the parcel will be occupied by the improvements planned (home site, driveway, and leach line). This is approximately 33% of the parcel size. Short term site impacts are confined to the construction envelope and immediate surroundings where trees will be removed and trimmed and root systems reduced. The pruning of tree crowns above 30% and reduction of root area may have a short term impact on those trees treated, including a reduction of growth, dieback, and potentially death. Every attempt has been made to recommend removing those trees likely to experience severe decline and death as a result of planned activities.

Long Term Impacts

No significant long-term impacts to the forest ecosystem are anticipated due to the amount of area without previous tree cover. This is a relatively minor amount of area to be will be occupied by the proposed residence and driveway. Approximately 33% of the parcel will be permanently altered by the project. The project as proposed is not likely to significantly reduce the availability of wildlife habitat over the long-term.

RECOMMENDATIONS

Pre-Construction Meeting

It is recommended that a project arborist/forester be retained and prior to the start of construction a meeting and training session shall be conducted in order to be communicate and instruct personnel about tree removal, retention, and protection. The pre-construction meeting will include instruction on required tree protection and exclusionary fencing installed prior to grading, excavation and construction procedures. Meeting attendees should include all involved parties such as site clearance personnel, construction managers, heavy equipment operators, and tree service operators. A certified professional such as a Monterey County qualified forester or County qualified arborist will conduct training. A list of pre-construction attendees and the materials discussed may be maintained to be provided to the county. Meeting attendees must agree to abide to tree protection and instructions as indicated during the meeting and agree to insure tree protection will remain in place during entire construction period.

Tree Removal

One (1) tree is to be removed (#123) with the design as stated in the previous tree removal chart. Also, though it is not a detriment to the project construction at this point, efforts should be made to contact the adjacent property owner of tree #129 for its removal. A hazard tree assessment should be made for that property owner as part of their removal process.

The tree removal contractor shall verify absence of active animal or bird nesting sites prior to any tree removal. If any active animal or bird nesting sites are found prior to tree removal, work shall be stopped until a qualified biologist is consulted for further recommendations.

Tree Planting

Because it is recommended that replacement of removed trees be undertaken replacement planting is necessary. The County requires a 1:1 ratio replacement for trees measuring less than 24" in diameter. It is therefore recommended replanting be with two (2) five gallon Coast live oaks in locations with the greatest opening in the stand to allow for a minimum of competition and maximum sunlight (if five gallon is unavailable, smaller sizes may be substituted). Replacement trees should be five gallon stock or larger, if available. Spacing between trees should be at least 10 feet. Occasional deep watering (more than two weeks apart) during the late spring, summer, and fall is recommended during the first two years after establishment.

Tree Protection

The health of trees remaining should not be affected if the following practices are adhered to:

- A) Do not deposit any fill around trees, which may compact soils and alter water and air relationships. Avoid depositing fill, parking equipment, or staging construction materials near existing trees. Covering and compacting soil around trees can alter water and air relationships with the roots. Fill placed within the drip-line may encourage the development of oak root fungus (*Armillaria mellea*). As necessary, trees may be protected by boards, fencing or other materials to delineate protection zones.
- B) Pruning shall be conducted so as not to unnecessarily injure the tree. General principals of pruning include placing cuts immediately beyond the branch collar, making clean cuts by scoring the underside of the branch first, and for live oak, avoiding the period from February through May.
- C) Native live oaks are not adapted to summer watering and may develop crown or root rot as a result. Do not regularly irrigate within the drip line of oaks. Native, locally adapted, drought resistant species are the most compatible with this goal.
- D) Root cutting should occur outside of the springtime. Late June and July would likely be the best. Pruning of the live crown should not occur February through May.
- E) Oak material greater than 3 inches in diameter remaining on site more than one month that is not cut and split into firewood should be covered with black plastic that is dug in securely around the pile. This will discourage infestation and dispersion of bark beetles.
- F) A mulch layer up to approximately 4 inches deep should be applied to the ground under selected oaks following construction. Only 1 to 2 inches of mulch should be applied within 1 to 2 feet of the trunk, and under no circumstances should any soil or mulch be placed against the root crown (base) of trees. The best source of mulch would be from chipped material generated on site.
- G) If trees along near the development are visibly declining in vigor, a Professional Forester or Certified Arborist should be contacted to inspect the site to recommend a course of action.

Tree Protection Standards

Prior to the commencement of any construction activity the following tree protection measures shall be implemented and approved by a qualified arborist or forester:

- Trees located adjacent to the construction area shall be protected from damage by construction equipment by the use of temporary fencing and through wrapping of trunks with protective materials. No stripping of top soil or grubbing of understory shall occur in tree preservation zones.
- Fenced areas and the trunk protection materials shall remain in place during the

entire construction period. Should access to the area be necessary a Professional Forester or Certified Arborist must be contacted to inspect the site for a recommended a course of action.

- Fencing shall consist of chain link, snowdrift, plastic mesh, hay bales, or field fence. Existing fencing may also be used.
- Fencing is not to be attached to the tree but free standing or self-supporting so as not to damage trees. Fencing shall be rigidly supported and shall stand a minimum of height of four feet above grade and should be placed to the farthest extent possible from the trees base to protect the area within the trees drip line (typically 10-12 feet away from the base of a tree).
- In cases where access or space is limited for tree protection it is permissible to protect the tree within the 10-12 foot distance after determination and approval by a qualified forester or arborist.
- Soil compaction, parking of vehicles or heavy equipment, stockpiling of construction materials, cleaning of concrete or plaster, and/or dumping of spoils or materials shall not be allowed adjacent to trees on the property especially within or near fenced areas.

During grading and excavation activities:

- All trenching, grading or any other digging or soil removal that is expected to encounter tree roots should be monitored by a qualified arborist or forester to ensure against drilling or cutting into or through major roots. Again, no stripping of top soil or grubbing of understory shall occur in tree preservation zones.
- The project architect and qualified arborist should be on site during excavation activities to direct any minor field adjustments that may be needed.
- Trenching for retaining walls or footings located adjacent to any tree shall be done by hand where practical and any roots greater than 3-inches diameter shall be bridged or pruned appropriately.
- Any roots that must be cut shall be cut by manually digging a trench and cutting exposed roots with a saw, vibrating knife, rock saw, narrow trencher with sharp blades, or other approved root pruning equipment.
- Any roots damaged during grading or excavation shall be exposed to sound tissue and cut cleanly with a saw.

If at any time potentially significant roots are discovered:

- The arborist/forester will be authorized to halt excavation until appropriate mitigation measures are formulated and implemented.
- If significant roots are identified that must be removed that will destabilize or negatively affects the target trees negatively, the property owner will be notified immediately and a determination for removal will be assessed and made as required by law for treatment of the area that will not risk death decline or instability of the tree consistent with the implementation of appropriate construction design approaches to minimize affects, such as hand digging, bridging or tunneling under roots, etc..

Tree Pruning

It is understood that the pruning of retained trees will be expected for this site, especially where the proposed addition is to be constructed. Pruning will also include the trees that have deadwood or are exhibiting some minor structural defect or minor disease that must be compensated. Those trees that may require pruning and possible monitoring are the closest to the proposed structure improvements. Trees should be monitored on occasion for health and vigor after pruning. Should the health and vigor of any tree decline it will be treated as appropriately recommended by a certified arborist or qualified forester.

The following are offered as guidelines when pruning

- In general the trees will be pruned first for safety, next for health, and finally for aesthetics.
- Type of pruning is determined by the size of branches to be removed. General guidelines for branch removal are:
 1. Fine Detail pruning- limbs under 2 inch diameter are removed
 2. Medium Detail Pruning – Limbs between 2 and 4 inch diameter
 3. Structural Enhancement – limbs greater than 4 inch diameter.
 4. Broken and cracked limbs-removed will be removed in high traffic areas of concern.

Remedial pruning should occur prior to construction. Following construction, any above ground tree pruning/trimming should be delayed until one year after completion of construction.

Following construction, a qualified forester/arborist should monitor trees adjacent to the improvements area and if any decline in health that is attributable to the construction is noted, additional trees should be planted on the site.

Agreement by Landowner

The following standard conditions are made a part of all Monterey County Forest Management Plans:

A. Management Objectives

1. Minimize erosion in order to prevent soil loss and siltation.
2. Preserve natural habitat including native forest, understory vegetation and associated wildlife.
3. Prevent forest fire.
4. Preserve scenic forest canopy as located within the Critical View shed (any public viewing area).
5. Preserve landmark trees to the greatest extent possible as defined below.

B. Management Measures

1. Tree Removal: No tree will be removed without a Forest Management Plan or an Amended Forest Management Plan.
2. Application Requirements: Trees proposed for removal will be conspicuously marked by flagging or by paint. Proposed removal of native trees greater than six inches will be the minimum necessary for the proposed development. Removal not necessary for the proposed development will be limited to that required for the overall health and long term maintenance of the forest, as verified in this plan or in subsequent amendments to this plan.
3. Landmark Trees: All landmark trees will be protected from damage if not permitted to be removed as a diseased tree, which threatens to spread the disease to nearby healthy trees or as a dangerous tree, which presents an immediate danger to human life or structures. Landmark oaks are trees that are visually, historically, or botanically significant specimens or are greater than 24 inches or more in diameter at breast height (DBH), or more than 1.000 years old.
4. Dead Trees: Because of their great value for wildlife habitat (particularly as nesting sites for insect eating birds) large dead trees will normally be left in place. Smaller dead trees will normally be removed in order to reduce the fire hazard. Dead trees may be removed at the convenience of the owner.
5. Thinning: Trees less than six inches diameter breast height may be thinned to promote the growth of neighboring trees, without first developing a Forest Management Plan.
6. Protection of Trees: All trees other than those approved for removal shall be retained and maintained in good condition. Trimming, where not injurious to the health of the tree, may be performed wherever necessary in the judgment of the owner, particularly to reduce personal safety and fire hazards. Retained trees which are located close to the construction site shall be protected from inadvertent damage by construction equipment through wrapping of trunks with protective materials, bridging or tunneling under major roots where exposed in foundation or utility trenches and other measures appropriate and necessary to protect the well-being of the retained trees.
7. Fire prevention: In addition to any measures required by the local California Department of Forestry fire authorities, the owner will;
 - A) Maintain a spark arrester screen atop each chimney.
 - B) Maintain spark arresters on gasoline-powered equipment.
 - C) Establish a "greenbelt" by keeping vegetation in a green growing condition to a distance of at least 50 feet around the house.
 - D) Break up and clear away any dense accumulation of dead or dry underbrush or plant litter, especially near landmark trees and around the greenbelt.

8. Use of fire (for clearing, etc.): Open fires will be set or allowed on the parcel only as a forest management tool under the direction of the Department of Forestry authorities, pursuant to local fire ordinances and directives.

9. Clearing Methods: Brush and other undergrowth, if removed, will be cleared through methods, which will not materially disturb the ground surface. Hand grubbing, crushing and mowing will normally be the methods of choice

10. Irrigation: In order to avoid further depletion of groundwater resource, prevent root diseases and otherwise maintain favorable conditions for the native forest, the parcel will not be irrigated except within developed areas. Caution will be exercised to avoid over watering around trees.

11. Exotic Plants: Care will be taken to eradicate and to avoid introduction of the following pest species:

- A) Pampas grass
- B) Genista (Scotch broom, French broom)
- C) Eucalyptus (large types)

Amendments

The Monterey County Director of Planning may approve amendments to this plan, provided that such amendments are consistent with the provisions of the discretionary permit or building submittal. Amendments to this Forest Management Plan will be required for proposed tree removal not shown as part of this Plan, when the proposed removal falls within the description of a Forest Management Plan or Amendment to an existing Forest Management Plan.

Amended Forest Management Plan

A) An amended forest Management Plan shall be required when:

- 1. The Monterey County Director of Planning has previously approved a Forest Management Plan for the parcel.
- 2. The proposed tree removal as reviewed as part of a development has not been shown in the previously approved Forest management plan

B) At a minimum, the Amended Forest Management Plan shall consist of:

- 1. A plot showing the location, type and size of each tree proposed for removal, as well as the location and type of trees to be replanted,
- 2. A narrative describing reasons for the proposed removal, alternatives to minimize the amount and impacts of the proposed tree removal, tree replanting information and justification for removal of trees outside of the developed area if proposed.

Compliance

It is further understood that failure to comply with this Plan will be considered as failure to comply with the conditions of the Use Permit.

Transfer of Responsibility

This plan is intended to create a permanent forest management program for the site. It is understood, therefore, that in the event of a change of ownership, this plan shall be as binding on the new owner as it is on the present owner. As a permanent management program, this Plan will be conveyed to the future owner upon sale of the property.

Report Prepared By:

 October 9, 2018
Frank Ono, SAF Forester #48004 and ISA Certified Arborist #536 Date

Recommendations Agreed to by landowner:

Landowner Date

Forest Management Plan approved by:

Director of Planning Date

PHOTOGRAPHS



Tree #123.



Tree #123 bulging and splitting seam down center. This is typical of tree with narrow tight crotches and a common failure point



Seam between two stems of tree #123.



Trees #126, #124, and #125.



Tree #127 and previous tree failure.



Trees #129 (on adjacent property) and tree #128.



Tree #129 in declining shape. Property owner should be contacted to seek permission for its removal

123



A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas TREE HAZARD EVALUATION FORM 2nd Edition

Site/Address: 24723 HANDLEY DRIVE
 Map/Location: _____
 Owner: public _____ private unknown _____ other _____
 Date: 10-16-19 Inspector: ONO
 Date of last inspection: _____

HAZARD RATING:						
<u>4</u>	+	<u>4</u>	+	<u>2</u>	=	<u>10</u>
Failure Potential		Size of part		Target Rating	=	Hazard Rating
_____ Immediate action needed						
_____ Needs further inspection						
_____ Dead tree						

TREE CHARACTERISTICS

Tree #: 123 Species: M. PINE
 DBH: 26.36 # of trunks: 2 Height: 85 Spread: 30
 Form: generally symmetric minor asymmetry major asymmetry stump sprout stag-headed
 Crown class: dominant co-dominant intermediate suppressed
 Live crown ratio: 75 % Age class: young semi-mature mature over-mature/senescent
 Pruning history: crown cleaned excessively thinned topped crown raised pollarded crown reduced flush cuts cabled/braced
 none multiple pruning events Approx. dates: _____
 Special Value: specimen heritage/historic wildlife unusual street tree screen shade indigenous protected by gov. agency

TREE HEALTH

Foliage color: normal chlorotic necrotic Epicormics? Y N
 Foliage density: normal sparse Leaf size: normal small
 Annual shoot growth: excellent average poor Twig Dieback? Y N
 Woundwood development: excellent average poor none
 Vigor class: excellent average fair poor
 Major pests/diseases: _____

SITE CONDITIONS

Site Character: residence commercial industrial park open space natural woodland/forest
 Landscape type: parkway raised bed container mound lawn shrub border wind break
 Irrigation: none adequate inadequate excessive trunk wetted
 Recent site disturbance? Y N construction soil disturbance grade change line clearing site clearing
 % dripline paved: 0% 10-25% 25-50% 50-75% 75-100% Pavement lifted? Y N
 % dripline w/ fill soil: 0% 10-25% 25-50% 50-75% 75-100%
 % dripline grade lowered: 0% 10-25% 25-50% 50-75% 75-100%
 Soil problems: drainage shallow compacted droughty saline alkaline acidic small volume disease center history of fail
 clay expansive slope _____° aspect: _____
 Obstructions: lights signage line-of-sight view overhead lines underground utilities traffic adjacent veg. _____
 Exposure to wind: single tree below canopy above canopy recently exposed windward, canopy edge area prone to windthrow
 Prevailing wind direction: NW Occurrence of snow/ice storms never seldom regularly

TARGET

Use Under Tree: building parking traffic pedestrian recreation landscape hardscape small features utility lines
 Can target be moved? Y N Can use be restricted? Y N
 Occupancy: occasional use intermittent use frequent use constant use

The International Society of Arboriculture assumes no responsibility for conclusions or recommendations derived from use of this form.

123

TREE DEFECTS

ROOT DEFECTS:

Suspect root rot: Y N Mushroom/conk/bracket present: Y N ID: _____

Exposed roots: severe moderate low Undermined: severe moderate low

Root pruned: _____ distance from trunk Root area affected: _____ % Buttress wounded: Y N When: _____

Restricted root area: severe moderate low Potential for root failure: severe moderate low

LEAN: _____ deg. from vertical natural unnatural self-corrected Soil heaving: Y N

Decay in plane of lean: Y N Roots broken Y N Soil cracking: Y N

Compounding factors: TREE IS SPLITTING Lean severity: severe moderate low

CROWN DEFECTS: Indicate presence of individual defects and rate their severity (s = severe, m = moderate, l = low)

DEFECT	ROOT CROWN	TRUNK	SCAFFOLDS	BRANCHES
Poor taper		S		
Bow, sweep		S		
Codominants/forks		S		
Multiple attachments				
Included bark				
Excessive end weight				
Cracks/splits				
Hangers				
Girdling				
Wounds/seam		S		
Decay				
Cavity				
Conks/mushrooms/bracket				
Bleeding/sap flow				
Loose/cracked bark				
Nesting hole/bee hive				
Deadwood/stubs				
Borers/termites/ants				
Cankers/galls/burls				
Previous failure				

HAZARD RATING

Tree part most likely to fail: STEM

Inspection period: _____ annual _____ biannual _____ other _____

Failure Potential + Size of Part + Target Rating = Hazard Rating

4 + 4 + 2 = 10

Failure potential: 1 - low; 2 - medium; 3 - high; 4 - severe
 Size of part: 1 - <6" (15 cm); 2 - 6-18" (15-45 cm);
 3 - 18-30" (45-75 cm); 4 - >30" (75 cm)
 Target rating: 1 - occasional use; 2 - intermittent use;
 3 - frequent use; 4 - constant use

HAZARD ABATEMENT

Prune: remove defective part reduce end weight crown clean thin raise canopy crown reduce restructure shape

Cable/Brace: _____ Inspect further: root crown decay aerial monitor

Remove tree: Y N Replace? Y N Move target: Y N Other: _____

Effect on adjacent trees: none evaluate

Notification: owner manager governing agency Date: 10/16/10

COMMENTS