



Silver Rose Arborist Report and Tree Protection Plan

Calistoga, California

December 8, 2011

PREFACE

This report was prepared at the request of Silver Rose Venture, LLC., developer of the Silver Rose project in Calistoga, California. The report is an evaluation of trees growing on the project site as shown on the Project Site Plan prepared by Burton Landscape Architecture Studio and dated December 2011.

James MacNair, principal of MacNair and Associates, ISA Certified Arborist WE-0603A, and Member American Society of Consulting Arborists prepared this evaluation and report.

Unless expressed otherwise, the information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection. The inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees in questions may not arise in the future.

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SILVER ROSE- ARBORIST REPORT AND TREE PROTECTION PLAN

REPORT SUMMARY

This report documents the results of an evaluation of 59 trees growing within or near the proposed Silver Rose resort development. The project is located in the City of Calistoga at the intersection of Silverado Trail and Rosedale Road. The site currently has an existing lodge and winery with associated parking lots, landscape pathways, retaining walls, swimming pools, and retention pond. This report is an update to an earlier report prepared in April 2007 for the project Terrano Napa Valley Resort.

The site topography is generally flat with the exception of the prominent knoll in the western portion of the site. The existing landscape consists of ornamental plantings situated among mature valley oaks (*Quercus lobata*) and coast live oaks (*Quercus agrifolia*) on the western portion of the site. The eastern portion of the site is primarily vineyards with one residence on Rosedale Road.

A majority of the mature oaks are located along the Rosedale Road frontage where they have been subject to clearance pruning from the high voltage electrical lines. For certain trees, this pruning has resulted in severe decay problems and alteration of the natural tree form. Two coast live oaks are recommended for removal due their poor structural condition resulting from decay and limb dieback. Oak decline has also occurred in the extreme western section of the site where poor drainage has caused root disease and the loss of three trees.

The oaks growing in the interior portion of the site are generally in moderate to good condition. With the exception of the utility pruning of the Rosedale Road trees, the project trees have been well managed with the mature trees having a history of arboricultural management including pruning and cabling. One valley oak, tree #46, is especially significant due to its size, age, and visual prominence from the Silverado Trail.

This report evaluates the significant trees occurring within the proposed project limits and trees meeting the 'protected' tree definition as established by the City of Calistoga Tree Ordinance. Small, or young, landscape trees were not included in the evaluation, unless they were considered as appropriate candidates for transplanting as part of the new landscape design. A significant number of young coast live oaks are planted in the winery parking lot off Silverado Trail. These trees are generally in good condition with a majority considered as potential transplant candidates.

This report assess the probable construction impact on the evaluated trees based upon the current project design prepared by Burton Landscape Architecture Studio and dated December 2011. A Tree Protection Plan (TPP) has been prepared for trees designated as preserved. These trees have individual tree protection recommendations and procedures based upon their current health, structural condition, and construction impact. In addition to protecting trees during the construction process, a primary goal of the TPP is to improve and optimize the health and condition of the oaks on the site.

Assignment

The purpose of this evaluation and tree preservation plan is to:

- Assess the health and structural condition of significant or 'protected' trees growing within and bordering the proposed project construction limits. Valley and coast live oaks have special consideration as native trees.

- Assess the probable construction impact of the evaluated trees based upon the current design plan.
- Establish the number of protected trees requiring removal or subject to construction impact as defined by the City of Calistoga Municipal Code 19.01 Trees. These trees will require a tree removal/disturbance permit prior to issuance of building permits.
- Establish tree protection procedures and specifications for the preservation and enhancement of trees retained as part of the project design.

The evaluated trees are tagged and numbered with tree locations shown on the site plan prepared by Burton Landscape Architecture Studio. Fifty-nine trees are evaluated as part of this report with all of the trees located within the project limits. Three trees have declined since the 2007 evaluation and are listed within the database as removed. The individual tree data is provided on the attached Tree Evaluation database (Appendix A). Tree protection requirements for the individual trees are listed in the Tree Protection Checklist (Appendix B).

Tree Condition Discussion:

Following is a summary discussion describing the condition of the various tree species occurring on the project site.

Coast live oak (*Quercus agrifolia*):

The coast live oaks occurring within the project limits range in maturity from young trees to fully mature. The young coast live oaks consist of a tree planting in the winery parking lot along Silverado Trail. These young oaks originate from landscape nursery stock and are not naturally occurring trees. The majority of the trees are in good vigor with no significant structural defects observed. Eight of these trees are being considered for transplanting to new locations within the project limits.

The five remaining mature coast live oaks are in variable condition (one of the original six has been removed). One of the two trees (tree #10) growing along the Rosedale Road frontage is in poor structural condition due to decay and is at risk of structural failure. Although, not impacted by the proposed construction, this tree is recommended for removal due to its location adjacent to the roadway.

The other four mature trees are in generally moderate health and structural condition with the most significant problems relating to decay from old pruning wounds. Three of these four trees are designated for preservation.

Valley oak (*Quercus lobata*):

Nineteen valley oaks remain within the project limits. Two additional trees (#22 and #26) were part of the original evaluation, but have declined and been removed. Twelve are considered mature trees and seven semi-mature. The majority of the trees are in moderate condition, although one tree is in poor vigor, possibly due to old construction impact (tree #45). Trees located along Rosedale Road have been subject to varying degree of electrical line clearance pruning. Old lower trunk damage was also observed on trees near vineyards indicating probable tractor impact.

Of the 19 evaluated valley oaks, two are proposed for removal due to locations within grading and construction limits (trees #16 and #32). Thirteen valley oaks are subject to construction impact and require protection and four are outside the construction limits and not impacted.

Black locust (*Robinia pseudoacacia*)

Two black locusts (trees #27 and #28) are located adjacent to an existing parking lot. One is in marginal condition and the other is rated as moderate. Both trees are designated for removal due to their location within the future grading limits.

Douglas fir (*Pseudotsuga menziesii*)

One semi-mature Douglas fir (tree #13) in moderate condition is located on the northwest side of the knoll. The tree is shading a valley oak (tree #14) located 10 feet to the northwest. The fir is recommended for removal to allow improved solar exposure for the valley oak.

Deodar cedar (*Cedrus deodara*)

One semi-mature tree (tree #8) is located on the northwest side of the knoll. The tree is in moderate to good condition. The tree is located 10 feet from a future building. This tree is designated to be preserved and requires construction protection.

English walnut (*Juglans regia*)

A single walnut (tree #6) is located north of the existing parking lot for the main lodge. The tree is in moderately low vigor and structural condition due to old decay problems. The tree is likely a remnant tree from an earlier walnut orchard on the property. The tree is designated for preservation.

Incense cedar (*Calocedrus decurrens*)

One semi-mature incense cedar (tree #30) is located east of the knoll lodge. The tree is in good health and structural condition. The tree is located in a future building footprint and designated for removal.

Leyland cypress (*Cupressocyparis leylandii*)

Two trees (trees #7 and #11) are located on the northwest side of the knoll. These trees are in poor condition due to cypress canker infection and both are designated for removal.

Scotch pine (*Pinus sylvestris*)

One semi-mature tree (tree #12) is located north of the knoll lodge. The tree is in moderate health and structural condition. The tree is located in a future building footprint and designated for removal.

White elm (*Ulmus americana*)

One mature elm (tree #29) is located in front of the knoll lodge. The tree has a multiple trunk structure likely due to old topping cuts. The tree is in moderate vigor with various areas of limb decay observed. The tree is located in a future building footprint and designated for removal.

Miscellaneous

Various small diameter landscape trees are included in the evaluation. All are in moderate to good condition and include Colorado blue spruce (*Picea pungens* 'Glauca'), Japanese maple

(*Acer palmatum*), maidenhair tree (*Ginkgo biloba*), saucer magnolia (*Magnolia soulangiana*), and Southern magnolia (*Magnolia grandiflora*). All are designated for removal.

A portion of the young coast live oaks in the winery parking lot were individually evaluated, and are designated as possible candidates for transplanting onsite.

Trees Not Included

Tree species not included in the evaluation due to their small size or condition include flowering cherry (*Prunus serrulata*), purple leaf plum (*Prunus cerasifera*), sweetgum (*Liquidambar styraciflua*), Italian cypress (*Cupressus sempervirens* 'Stricta'), and young ornamental palms.

Inventory Methodology

The evaluated trees within proposed development areas were assessed for the following information:

- Assigned tree number
- Tree species (and common name)
- Number of trunks and trunk diameter (4.5' above grade)
- Height and crown diameter estimates
- Health and structural ratings
- Comments/Observations
- Suitability for preservation rating
- Assessment of construction impact
- Protected tree status

Health and Structural Ratings and Descriptions:

The following chart describes the health and structural rating system used in the evaluation. It is a rating of relative conditions such as vigor, extent of decay, structure, and insect or disease problems. Good and moderate ratings indicate limited structural problems, acceptable vigor, and an absence of significant pest or disease problems. Poor and marginal ratings indicate serious health or structural problems especially if the tree is situated near structures or public areas. Trees rated as poor or marginal are often hazardous.

Rating Chart:

3	Moderate condition to good condition	Normal and correctable problems of structure or pests and diseases.
2	Marginal condition	Indicates serious problems with structure, decay, or significant insect or disease problems.
1	Poor condition	Indicates very poor health, vigor, or hazardous structural condition

Trees may be rated between two conditions, such as 2.5 or 3.5. This indicates the tree does not precisely meet the criteria for either of the two categories and allows the rating system to be used as a continuum. The health defect descriptions describe the basis for the health and structural rating. The specific pests, disease, and structural defects observed are described and identified where possible.

This evaluation is of above ground structures only, and additional defects may exist at root collars or within the root systems. Many of the larger mature and over-mature trees in areas of proposed improvements may require root collar examinations to evaluate the primary structural roots and root collar for decay and disease.

Project Construction

The following table lists the tree species occurring within the project limits and the current assessment of construction impact. The trees qualifying as 'protected' trees are also shown.

The City of Calistoga Tree Ordinance (Municipal Code 19.01 Trees) defines 'Protected Trees' as:

- 1.) Any tree with a DBH greater than 12 inches.
- 2.) Any native oak with a DBH greater than six inches.
- 3.) Any valley oak, seedling, sapling, or older.
- 4.) Any tree bearing an active nest of a fully protected bird (see Fish and Game Code Section 3511).

Tree Mitigation

The City of Calistoga Public Works Director or other City agency will establish mitigation requirements for removal of protected trees through implementation of a landscape design and pursuant to conditions of approval as determined. Currently, 11 protected trees require mitigation through replacement plantings. The recommendations in this report are provided to assist the city agency in performing their mandate and are based on accepted industry and practice standards.

Table A

Tree Species	Total Number	Removed for Construction	Transplant Candidates	Recommended for Removal	Possible Impact (Tree Protection)	No Impact	'Protected' Trees Removed
black locust	2	2					2
coast live oak	14	2	8	1	3		2
Colorado blue spruce	1	1					
cork oak	4	4					
flowering plum	2	2					
Japanese maple	3	3					
maidenhair tree	3	3					
incense cedar	1	1					1
Deodara cedar	1				1		
Leyland cypress	2			2			1
Scotch pine	1	1					1
Douglas fir	1			1			1
valley oak	19	2			13	4	2
white elm	1	1					1
English walnut	1				1		
saucer magnolia	1	1					
Southern magnolia	2	2					
Totals:	59	25	8	4	18	4	11

Silver Rose Tree Preservation Plan

Tree Protection Checklist

Trees requiring protection are listed in the attached table entitled Appendix B-Silver Rose- Tree Protection Checklist. The table lists the specific measures used to preserve trees subject to construction impact. These measures include the following methods and procedures:

Design Measures:

- Plan Layout Modifications
- Site Grading and Trenching Modifications
- Retaining Wall Designs
- Foundation, Site Drainage, and Road Construction

Pre- and Intra-Construction Measures

- Certified Arborist Supervision
- Tree Protection Measures
- Demolition/Site Clearing Protection Measures
- Pruning/Cabling/ Bracing Standards

Post-Construction and Cultural Measures

- Tree Maintenance and Restoration Procedures

Additional recommendations may be prepared to address any requirements for pruning, cabling, pest or disease control, or other cultural requirements for enhancement and restoration of retained trees.

Tree Protection Guidelines and Specifications

Development of the project infrastructure, including roads, utilities, drainage facilities, etc. has altered the natural terrain and affect existing trees growing close to the construction areas. Impacts will primarily occur as a result of the site grading requirements. The following guidelines are intended to minimize grading impacts and maximize tree survivability.

1.0 Tree Protection Zone

- 1.1) All construction activity (grading, filling, paving, and landscaping) will respect a Tree Protection Zone (TPZ) around trees to be protected. The TPZ will be a distance of one-foot radial distance from the trunk for each one-inch of trunk diameter. Exceptions to this standard may occur depending upon the age and condition of individual trees.

2.0 Construction Inspection and Supervision

- 2.1. All arboricultural and related soil work should be performed under the supervision of an International Society of Arboriculture (ISA) Certified Arborist, qualified landscape architect, or Client designated representative.
- 2.2. All specified arboricultural work should be completed prior to any further site grading (root pruning, canopy pruning, fencing, etc.)

- 2.3. The contractor is required to meet with the Supervising Arborist or Client designated representative to review all the tree protection requirements.

3.0 Tree Protection Fencing

- 3.1 Fencing at a minimum of four feet in height and clearly marked to prevent inadvertent encroachment by heavy machinery should be installed either at the edge of the Tree Protection Zone (TPZ), or at the edge of the construction zone if the construction zone protrudes into the TPZ. Location of fencing shall be approved by the Supervising Arborist or Client designated representative. All fencing should be in place prior to any site grading.
- 3.2. Contractor should maintain the protection fencing and prohibit all access to fenced areas by construction personnel or equipment until all site work is completed.
- 3.3. All structures including construction trailers, equipment storage areas and any other construction traffic are prohibited within fenced areas. Burning or debris piles are prohibited within fenced areas. No materials, equipment, spoils, waste, or washout water should be deposited or stored within fenced areas. Fences may not be moved without written permission of the Supervising Arborist or Client designated representative.
- 3.4 If temporary construction personnel access within a fenced area is determined to be necessary, then a six-inch layer of redwood bark fiber should be placed in all areas requiring access. This requirement for mulching should apply to all areas within the fenced area. If equipment access is required, then an appropriate geotextile product and gravel shall be used to distribute bearing load and minimize soil compaction.

4.0 Demolition/Site Clearing

- 4.1 Any tree removal work within 50 feet of a TPZ should be reviewed by the supervising arborist. Trees requiring removal should be felled away from protected trees. Roots of trees designated for removal may require pruning using approved root-cutting equipment prior to felling if intermingled with roots of protected trees.
- 4.2 Excavation equipment should operate from outside the TPZ. Brush and wood chips generated from tree and brush removal should be placed in the TPZ To a uniform depth of six inches.
- 4.3 All required pruning should conform to the pruning section of these guidelines.
- 4.4 All brush removal should be performed with hand equipment when within the TPZ.

5.0 Site Grading, Trenching, and Root Pruning

- 5.1 Keep site grading within designated construction zones. Grading cuts or trenching within the TPZ of a retained tree trunk requires special trenching procedures. Trenches should be dug manually or with the use of an air spade, root-cutting machine, rock cutter, or other approved root-pruning equipment. This root-pruning trench should be placed one foot inside the edge of the grading cut. The depth of the trench should equal the depth of the grading cut to a maximum depth of 40 inches.

- 5.2 A trench may be mechanically dug toward a tree until the edge of the TPZ is reached. From the edge of the TPZ, the special trenching procedures should apply.
- 5.3 Underground utilities, drain, and irrigation lines should be routed outside the TPZ. When lines must cross the TPZ, the lines should be bored or tunneled through the area at a depth approved by the supervising arborist. In these instances, a single shared utility conduit should be used to reduce impacts to trees.
- 5.4. Any roots one inch in diameter or larger requiring removal should be cut cleanly in sound tissue. The roots and surrounding soil should be moistened and covered with a thick mulch (4") to prevent desiccation. No pruning seals or paints should be used on wounds. Cut and exposed roots should be protected from drying. A water absorbent material (i.e. burlap) should be secured at the top of the trench and should be draped over the exposed roots. This material should be kept moistened and soil should be replaced as soon as practicable.
- 5.5 Use of retaining walls will be encouraged to protect retained trees.
- 5.6. Fill placement areas covering 30% or more of the TPZ of trees larger than 24 inches dbh and over one foot in depth should be mitigated with a retaining wall or well. Installation of aeration systems may also be required depending upon the extent, depth, and type of the fill.

6.0 Foundation Construction

- 6.1. Foundation construction within the TPZ of retained trees is recommended to be either a pier and grade beam construction which bridges root areas, cantilevered structures, or raised foundations using pier footings.

7.0 Site Drainage

- 7.1 All grading shall be designed to provide positive drainage away from the base of the tree trunk, and not create ponding within the TPZ.
- 7.2 Drainage features such as v-ditches and French drains will be utilized upslope from existing trees to divert runoff away from roots and the TPZ. These v-ditches are best-utilized downslope of any irrigated landscape areas.

8.0 Pruning, Cabling, and Bracing Procedures

- 8.1 Any tree pruning or other similar activity, which may be proposed as part of site construction, will be included on site plans and be reviewed by a qualified arborist or City representative.
- 8.2 Pruning methods to conform to the ANSI A300 Pruning and Support System Standards.

9.0 Post- Construction and Tree Maintenance Procedures:

9.1 Pruning and Cabling:

Recommendations pertaining to pruning and cabling requirements will be prepared prior to construction. The goals of these procedures are to abate hazardous defects, improve structural stability, and facilitate optimum canopy development. Trees near construction

areas may also require clearance pruning.

9.2 Cultural Procedures:

The following cultural procedures are intended to improve the health and vigor of trees currently in marginal health due to pests, disease, or root loss.

Soil Scarification:

Compacted soil areas within 10 feet of TPZs require shallow scarification to improve soil porosity. Soils should be tilled to a depth of four inches by discing or rototiling.

Supplemental Irrigation and Drip Irrigation Systems:

An in-line emitter drip system, or other approved irrigation system, is recommended for placement at edge of canopy drip line. The emitters should have a 2-gallon per hour flow rate and be spaced at 24 inches on center. This system should be installed for all trees deemed important to preserve.

Irrigate one time per month from May through September for ten hours. If excessive run-off occurs reduce run time by 50% and repeat application in two days. The irrigation design and scheduling is subject to modification upon direction by the supervising arborist.

Fertilization:

A slow release nitrogen formulation may be required for application in non-graded areas in a 10-foot wide band at the canopy edge. Rate of application should be .5 pound actual nitrogen per 1000 square feet. Timing of application is in November after winter rains have begun.

Mulch Application:

Apply a four-inch depth of bark mulch below and 10 feet beyond canopy where appropriate.

Pest and Disease Control:

Pit scale, cynipid wasp, and other significant insect infestations, as well as mistletoe and other disease problems are to be controlled as part of intra- and post-construction maintenance procedures.

Appendix A

Tree Evaluation Database

Silver Rose Tree Evaluation Database

Silver Rose- Tree Evaluation Database (Appendix A)

Health and Structural Rating Key: 3.0 = moderate or better condition
 2.5 = marginal to moderate
 2.0 = marginal condition
 1.5 = poor to marginal condition
 1.0 = poor condition

Construction Impact Code: RC= Removal Due to Construction
 RR- Removal Recommended Due to Condition
 PI= Possible Impact- Tree Protection Required
 NI= No Impact
 TC= Transplant Candidate

Tree #	Species	Trunk Diameter @4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Current Condition (9-22-11)	Suitability for Preservation (Based on Condition)	Construction Impact (Distances From Face of Trunk)	Protected Tree Status	Impact Code
1	maidenhair tree (Ginkgo biloba)	4.5"	1	20'±	10'±	3.0	3.0	Young tree with upright structural form and no significant structural defects observed. One small wound observed on lower trunk. Vigor as measured by annual shoot growth is moderate to good. Transplant candidate.		Good	Located in future building footprint. Removal required.	No	RC
2	valley oak (Quercus lobata)	27"	1	65'±	45'±	2.5	2.5	Mature tree with high, asymmetrical crown form growing adjacent to tree #3. History of pruning wounds on south side. Significant areas of limb decay and branch dieback occurring. Probable history of root impact on north and west sides with damaged root stubs observed. Vigor and twig density are variable within crown with epicormic (sprouting from woody portions of trunk or limbs). Possible pit scale infestation.	No significant change.	Moderate	Located approximately 25' from future building foundation. Porches with pier type foundation extend approximately 7' towards tree. No significant crown pruning expected. No grading within 25' of tree.	Yes	PI
3	coast live oak (Quercus agrifolia)	41"	2 @ 8'	60'±	60'-80'±	3.0	2.5	Mature tree with co-dominant trunks forming at 8'. Trunks have wide angle of attachment with seams on south and west sides. Lower trunk appears sound with root flares intact and radially distributed. South trunk has a vertical form with large diameter scaffold limbs. Trunk and limbs have good taper. West trunk has a history of topping over roadway, Epicormic sprouting and decay observed on limbs below electrical lines.	No significant change.	Moderate	Located approximately 25' from future building foundation. Porches with pier type foundation extend approximately 7' towards tree. No significant crown pruning expected. No grading within 25' of tree.	Yes	PI

Silver Rose Tree Evaluation Database

Tree #	Species	Trunk Diameter @4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Current Condition (9-22-11)	Suitability for Preservation (Based on Condition)	Construction Impact (Distances From Face of Trunk)	Protected Tree Status	Impact Code
4	valley oak	33"	1	65'-70'±	50'-60'±	3.0	3.0	Mature tree with asymmetrical structure extending to the east and southeast. Wide, open limb structure with moderately contorted and descending limb forms. Areas of limb decay observed. History of trunk wounds that appear healed. Root flare on north side has history of old damage. Limited lower trunk decay at root collar. Vigor as measured as by annual shoot growth and twig density is moderate to good.	No significant change.	Good	Located approximately 25' from future building foundation. Porches with pier type foundation extend approximately 7' towards tree. No significant crown pruning expected. No grading within 25' of tree.	Yes	PI
5	valley oak	39"	1	70'±	50'-60'±	1.5	2.5	Mature tree with wide, open limb structure with extended limb forms and history of weight reduction pruning. One limb over electrical lines has been subject to clearance pruning. Possible root damage has occurred on northwest side. Limited area of bark degradation at root collar on southwest side. Vigor and twig density appear moderately low.	Significant branch and limb dieback occurring in upper crown. Two vertical trunks appear in decline. West lower scaffold limb is maintaining moderate vigor and foliage density.	Poor to Marginal	Located approximately 27' from future building foundation. Porches with pier type foundation extend approximately 7' towards tree. No significant crown pruning expected. No grading within 25' of tree.	Yes	PI
6	English walnut (Juglans regia)	30"	2 @ 5'	40'±	45'±	2.5	2.5	Grafted, English walnut with scion wood grafted at 6'-8' Co-dominant trunks form at 5' with secondary co-dominants in upper crown. Decayed trunk stub on west side with lower trunk decay observed on north side. Limbs have been topped for clearance from electrical lines. Vigor and branch density appear moderately low.	No significant change.	Moderate	Located approximately 30' from future building foundation. Limited grading cut indicated near building,	Yes	PI
7	Leyland cypress (Cupressocyparis leylandii)	14"	1	40'±	25'±	1.0	2.0	Tree is in decline from cypress canker (Seiridium cardinale). Top of tree is dead.	Tree is dead.	Poor	Tree is located northwest of future building. Tree is recommended for removal and replacement due to poor condition.	Yes	RR

Silver Rose Tree Evaluation Database

Tree #	Species	Trunk Diameter @4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Current Condition (9-22-11)	Suitability for Preservation (Based on Condition)	Construction Impact (Distances From Face of Trunk)	Protected Tree Status	Impact Code
8	Deodar cedar (Cedrus deodara)	16.5"	1	55'±	30'±	3.0	3.0	Semi-mature tree with multiple leaders formed in upper crown. No significant structural defects observed. Tree appears to have been pruned for height control. Vigor and foliage density are moderate.	No significant change.	Good	Located 10' from spa area and deck stairwell. Possible shallow grading cut in south side.	Yes	PI
9	coast live oak	30"	2 @ 10'	35'±	35'-40'±	1.0	1.0	Tree is in decline with most of crown dead. Extensive limb dieback has occurred. West trunk has previously failed. Extensive trunk decay likely.	Tree has been removed.	Poor	Located along Rosedale Road below overhead electrical lines. Removal recommended due to condition.	Yes	Removed
10	coast live oak	33"	3 @ 5'-8'	55'±	60'±	2.0	1.5	Mature tree with northeast trunk dead. South and southwest trunks have low vigor with significant branch dieback occurring. Old pruning wound in upper crown appears decayed on tension side of trunk. Probable stress fracture at base of south and southwest trunks attachment. Significant risk of future trunk failure, although probably not imminent.	Tree is in decline with decreasing loss of vigor and foliage density.	Poor	Located along Rosedale Road below overhead electrical lines. Removal recommended due to condition.	Yes	RR
11	Leyland cypress	8"	1	25'±	20'±	2.0	2.0	Young tree growing below crown of tree #10. Cypress canker infection observed. Tree is shaded, with low vigor and foliage density.	Very poor condition.	Poor	Located within either building foot print or grading limits.	No	RC
12	Scotch pine (Pinus sylvestris)	17"	1	60'±	40'±	2.5	3.0	Semi-mature tree with moderately asymmetrical form due to trees on north side. Two trunk leaders formed in upper crown. Substantial Sequoia pitch moth infestation occurring, other wise vigor and foliage density are moderate.		Moderate	Located within either building foot print or grading limits.	Yes	RC
13	Douglas fir (Pseudotsuga menziesii)	25.5"	1	65'-70'±	35'-40'±	3.0	2.5	Semi-mature tree with history of trunk damage at 20'-25' with small secondary trunk formed at damage. Tree may have been topped. Tree is located 10' from tree #14 (valley oak). Extensive root plate established with crossing roots on north side, possibly roots from the valley oak. Vigor and foliage density are moderate.		Moderate	Located approximately 10' from elevated and cantilevered spa area. Recommend removal for benefit of adjacent valley oak (tree #14).	Yes	RR

Silver Rose Tree Evaluation Database

Tree #	Species	Trunk Diameter @4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Current Condition (9-22-11)	Suitability for Preservation (Based on Condition)	Construction Impact (Distances From Face of Trunk)	Protected Tree Status	Impact Code
14	valley oak	20"	1	45'-50'±	40'±	2.5	3.0	Semi-mature tree with asymmetrical crown form extending to the west. Tree is shaded from Douglas fir. Limited limb decay observed. Vigor and twig density are variable with sporadic twig and branch dieback occurring. Limited clearance pruning has occurred over roadway.	No significant change.	Moderate	Located 11' from elevated and cantilevered spa area. No significant grading impact expected. Possible crown pruning required over spa deck.	Yes	PI
15	valley oak	22"	1	45'±	40'±	2.5	3.0	Semi-mature tree with open limb structure. Areas of limb decay observed with history of clearance pruning below electrical lines. Limited root impact observed on northeast side. Vigor and twig density are moderate low with history of significant epicormic sprouting. Pit scale infestation likely.	No significant change.	Moderate	Located 11' from building foundation. Possible crown impact.	Yes	PI
16	valley oak	19"	1	45'-50'±	40'±	2.5	2.5	Semi-mature tree with co-dominant trunks forming at 18'. Northwest trunk has been topped. Crown is moderately disfigured. Vigor and twig density are moderately low with significant epicormic sprouting and sporadic twig and branch dieback occurring. Pit scale infestation likely.	No significant change.	Moderate	Located in entrance driveway location. Removal required.	Yes	RC
17	valley oak	37"	1	60'±	50'-60'±	2.5	2.5	Mature tree with predominantly asymmetrical form extending to southeast. Wide spreading and open limb structure. Extended, large diameter limb structure with areas of decay. One recent 8" limb failure on ground. Tree has history of clearance pruning and lower limb removal. Lower trunk appears sound. Vigor and twig density are moderately low with significant epicormic sprouting and sporadic twig and branch dieback occurring. Pit scale infestation likely.	No significant change.	Moderate	Located 15' from building foundation. Possible crown impact.	Yes	PI

Silver Rose Tree Evaluation Database

Tree #	Species	Trunk Diameter @4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Current Condition (9-22-11)	Suitability for Preservation (Based on Condition)	Construction Impact (Distances From Face of Trunk)	Protected Tree Status	Impact Code
18	valley oak	36" (approx.)	1	70±	70'-80'±	3.0	2.5	Mature tree with large, open limb structure. Asymmetrical crown form extending to southeast with one large diameter limb curving from trunk over roadway. Limb has been pruned. Another large diameter limb has extended and descending form to southeast, other wise high-branched structure. Areas of limb decay observed. Lower trunk appears sound. Growing adjacent to tree #19. Vigor and twig density are moderate with areas of significant epicormic sprouting.	No significant change.	Moderate	Located 15' from building foundation. Large diameter limb on south side likely to require removal.	Yes	PI
19	valley oak	42"	1	60'-70'±	70'-80'±	2.5	2.5	Mature tree with closely spaced multiple limb attachments forming at 8'-15'. Wide, open limb structure with large wounds from electrical line pruning. Areas of decay from pruning wounds. Possible girdling root on south side. Vigor and twig density are moderate with significant epicormic sprouting. Pit scale infestation likely.	No significant change.	Moderate	Located 15' from building foundation. Possible crown impact.	Yes	PI
20	valley oak	50"	1	70'-80'±	60'-70'±	2.5	3.0	Mature tree with asymmetrical crown form extending to south and southeast. Large diameter limbs with areas of limb decay and a history of limb failure. Lower trunk appears sound. Vigor and twig density are moderate with epicormic sprouting. Pit scale infestation likely.	No significant change.	Moderate	Located outside proposed construction areas. No impact expected.	Yes	NI
21	valley oak	22"	1	70±	50±	2.5	3.0	Semi-mature tree with high-branched and asymmetrical crown form extending to the southeast. No significant structural defects observed. Vigor and twig density are moderate with epicormic sprouting occurring on one limb. Pit scale infestation likely.	No significant change.	Moderate	Located outside proposed construction areas. No impact expected.	Yes	NI

Silver Rose Tree Evaluation Database

Tree #	Species	Trunk Diameter @4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Current Condition (9-22-11)	Suitability for Preservation (Based on Condition)	Construction Impact (Distances From Face of Trunk)	Protected Tree Status	Impact Code
22	valley oak	34"	1	70'±	50'±	2.0	2.0	Mature tree with moderate lean and asymmetrical crown form to southeast. Significant area of limb decay observed as well as a vertical trunk canker on the southwest side 18"-24" wide by 8' high. Substantial limb failure has recently occurred. Two oaks in area have died or were windthrown. This area has poor drainage with root disease the likely problem. Update: Tree has died since initial evaluation.		Dead	Tree has died since first evaluation	No	Removed
23	valley oak	21"	1	45'±	40'±	2.5	2.0	Semi-mature tree located at edge of road right-of-way. The primary trunk has been topped below the electrical lines. The remaining limb structure is horizontal in form with the limb terminal ascending. Vigor and twig growth are moderately low. Limited fill on trunk from road construction.	No significant change.	Marginal	Located outside proposed construction areas. No impact expected.	Yes	NI
24	valley oak	30"	1	60'±	50'-55'±	2.5	2.0	Mature tree with leaning, asymmetrical crown form extending to the northwest. One 12" trunk has been topped below electrical lines. Co-dominant trunks form at 15' with wide, open limb structure. Areas of limb decay observed and trunk scarring present on lower trunk (probably from road construction). Vigor and twig density are moderate, although significant epicormic sprouting is occurring. Probable pit scale infestation present.	No significant change, although limited damage on trunk from vehicle impact on street side.	Marginal	Located outside proposed construction areas. No impact expected.	Yes	NI
25	coast live oak	31"	2 @ 8'	50'±	45'-55'±	3.0	3.0	Mature tree with co-dominant trunks forming at 8' with a shallow seam present at the trunk union. Crown form is symmetrical. Tree is growing adjacent to a retaining wall with surface roots exposed in the rocky soils. No significant structural defects were observed. Vigor and foliage density are moderate with limited trunk bleeding and sycamore borer damage evident on lower trunk.	No significant change.	Good	Located within raised spa terrace. Utility shed located within 10' of trunk.	Yes	PI

Silver Rose Tree Evaluation Database

Tree #	Species	Trunk Diameter @4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Current Condition (9-22-11)	Suitability for Preservation (Based on Condition)	Construction Impact (Distances From Face of Trunk)	Protected Tree Status	Impact Code
26	valley oak	62"	1	80'±	80'-90'±	3.0	3.0	Very large and mature valley oak with symmetrical crown form. The limb structure is wide and open with large diameter and horizontal limbs formed on the southeast side. The tree has a history of pruning and eight steel cable are installed to provide structural support. Areas of limb decay are evident and some level of trunk decay is probable. The lower trunk appears relatively sound. Vigor and twig density are moderate for a tree of this age. Limited deadwood is present in the crown.	Tree has been removed. Tree went into decline after 2007 evaluation.	Good	Located 30' from entrance driveway. Possible impact. Existing underground utilities are in the area.	Yes	Removed
27	black locust (Robinia pseudoacacia)	18"	1	45'±	40'±	2.5	2.0	Mature tree with co-dominant trunks forming at 7'. Upright, crown form. Significant trunk canker located on south side with probable internal fracture present. Trunk cankers present in upper crown on east trunk with woodpecker holes present. Vigor and twig density appear moderately low.		Marginal	Located within either building foot print or grading limits.	Yes	RC
28	black locust	16"	1	45'±	40'±	2.5	2.5	Mature tree with symmetrical crown form. Tree has history of topping cuts with limited deadwood present. Vigor and twig density appear moderately low. Fill soils and parking lot located around tree.		Marginal	Located within either building foot print or grading limits.	Yes	RC

Silver Rose Tree Evaluation Database

Tree #	Species	Trunk Diameter @4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Current Condition (9-22-11)	Suitability for Preservation (Based on Condition)	Construction Impact (Distances From Face of Trunk)	Protected Tree Status	Impact Code
29	white elm (<i>Ulmus americana</i>)	35"	1	60'±	50'±	3.0	2.5	Mature tree with symmetrical crown form. Five trunks form at 7'-15' and are probably the result of old topping cuts. There has been history of limb removal from the lower portion of the crown. Limited deadwood present in upper crown. Decay column present on middle trunk at 30'. Limited decay observed at old pruning wounds with decay fungi present on the east trunk at a lower pruning wound. Probable decay present in lower trunk. One circular root located on the east side of tree. Tree is located adjacent to asphalt driveway, wall, and entry stairs. Probable history of root impact. Vigor and twig density appear moderate.		Moderate	Located within either building foot print or grading limits.	Yes	RC
30	incense cedar (<i>Calocedrus decurrens</i>)	24"	1	65'±	35'-40'±	3.0	3.0	Semi-mature tree with single dominant trunk form. No significant structural defects observed. Limited root damage on south side of tree. Vigor and foliage density are moderate to good.		Good	Located in future building footprint. Removal required.	Yes	RC
31	Japanese maple (<i>Acer palmatum</i>)	9" (low)	6	15'±	20'±	3.0	3.0	Low, multiple trunk structure with wide, open limb structure. Vigor appears moderate. Transplant candidate.		Good	Located within either building foot print or grading limits.	No	RC
32	valley oak	25"	1	65'±	50'±	3.0	3.0	Semi-mature tree with moderately asymmetrical crown form extending to the northeast due to shading from the elm and incense cedar. Limb structure is high-branched with history of lower limb pruning. Lower trunk appears sound. Areas of limb decay observed. Vigor and twig dieback is moderate with limited epicormic sprouting occurring. Cynipid wasp and probable pit scale present.	No significant change.	Good	Located in future building footprint. Removal required.	Yes	RC
33	Southern magnolia (<i>Magnolia grandiflora</i> 'Samuel Sommer')	11" (low)	2 @ 3.5'	40'±	40'±	3.0	3.0	Young tree with generally upright crown form. No significant structural defects observed. Vigor and foliage density are moderately low, probably due to summer drought stress. Transplant candidate.		Good	Located in future building footprint. Removal required.	No	RC

Silver Rose Tree Evaluation Database

Tree #	Species	Trunk Diameter @4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Current Condition (9-22-11)	Suitability for Preservation (Based on Condition)	Construction Impact (Distances From Face of Trunk)	Protected Tree Status	Impact Code
34	saucer magnolia (Magnolia soulangiana)	4" (low)	3	15'±	18'±	2.5	2.5	Young tree with multiple trunks. One trunk is crossing over other trunks, otherwise acceptable structure. Old trunk stub at base of tree. Vigor and twig density are moderately low. Transplant candidate.		Moderate	Located in future building footprint. Removal required.	No	RC
35	Southern magnolia	6"	1	25'±	15'±	3.0	3.0	Young tree with no significant structural defects. Vigor and foliage density are moderately low, probably due to summer drought stress. Transplant candidate.		Good	Located in future building footprint. Removal required.	No	RC
36	coast live oak	20"; 24"	2	50'±	60'±	3.0	2.5	Mature tree with low, co-dominant trunk structure and symmetrical form. Moderate reaction ridge and fissure at trunk union. Bark beetle damage present. 24" trunk has three closely spaced limb attachments forming at 10'. Areas of limb decay observed. 8" x 10" decay area at old pruning wound on south trunk. 7" x 16" decay cavity with old concrete on north trunk. Vigor and foliage density are moderate to good.	No significant change.	Moderate	Building foundation located 20' to the west of the tree with basement excavation requirements. Existing retaining wall located between tree and building, which may limit impact. Crown pruning likely required.	Yes	PI
37	maidenhair tree	5"	1	20'±	10'±	3.0	3.0	Young tree in good structural condition. Vigor and twig density are moderate. Transplant candidate.		Good	Located within either building foot print or grading limits.	No	RC
38	maidenhair tree	6.25"	1	22'±	12'±	3.0	3.0	Young tree in good structural condition. Vigor and twig density are moderate. Transplant candidate.		Good	Located within either building foot print or grading limits.	No	RC
39	coral bark Japanese maple (Acer palmatum 'Sango Kaku')	1.25-1.5"	4	10'±	10'±	3.0	2.5	Young, multiple trunk tree. Limited lower trunk damage present. Vigor and twig density are moderate. Transplant candidate.		Moderate	Located within either building foot print or grading limits.	No	RC
40	Japanese maple	1"-3"	4	12'±	12'±	3.0	3.0	Multiple trunk structure forming at grade. Tree is moderately asymmetrical due to shading. Vigor and twig density are moderate. Transplant candidate.		Moderate	Located within either building foot print or grading limits.	No	RC
41	Colorado blue spruce (Picea pungens 'Glauca')	4"	1	18'±	15'±	3.0	3.0	Young tree in good structural condition. Vigor and foliage density are moderate to good. Transplant candidate.		Good	Located within either building foot print or grading limits.	No	RC

Silver Rose Tree Evaluation Database

Tree #	Species	Trunk Diameter @4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Current Condition (9-22-11)	Suitability for Preservation (Based on Condition)	Construction Impact (Distances From Face of Trunk)	Protected Tree Status	Impact Code
42	valley oak	23"	1	45±	45±	2.5	3.0	Semi-mature tree with symmetrical crown structure. Moderate limb contortion occurring with areas of limb decay. Tree has history of old root impact. Vigor and twig dieback are moderately low with limited epicormic sprouting. Cynipid wasp and probable pit scale activity occurring. Rock out croppings in area.	No significant change. Possible improvement in overall vigor.	Moderate	Located in raised terrace area with pier foundation.	Yes	PI
43	coast live oak	13.5"; 18"; 21"; 23"; 27"	5	50±	60'-70'±	2.5	3.0	Low, multiple trunk structure with wide, symmetrical crown form. Probable fissure occurring on east side of lower trunk at union of horizontal limb. Areas of limb decay with significant decay present on west side at old pruning wound. 13" trunk has significant decay at old pruning wound on south side. Decayed trunk is not cabled and extends over roof of adjacent building. Tree has five steel cables installed in a box configuration. Bark beetle damage on lower trunk with limited bleeding observed. Vigor and foliage density are moderately low. Rock mulch is used around base of tree. Existing building and parking lot are near tree.	No significant change.	Moderate	Located in raised terrace area with pier foundation. Low limb structure and terrace elevation conflicts may lead to tree removal.	Yes	RC
44	valley oak	32"	2 @ 8'	60±	60'-70'±	3.0	3.0	Mature tree with co-dominant trunks forming at 8'. The trunk attachment is wide with the 21" trunk having a horizontal and descending limb form extending to the south. 18" north trunk has a high-branched structure. Area of decay occurring at old pruning wound. Old electrical wire is embedded in trunk. Limited bacterial slime flux infection occurring on north trunk. Vigor and twig density are moderate. Limited cynipid wasp activity.	No significant change.	Moderate	Located in raised terrace area with pier foundation.	Yes	PI

Silver Rose Tree Evaluation Database

Tree #	Species	Trunk Diameter @4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Current Condition (9-22-11)	Suitability for Preservation (Based on Condition)	Construction Impact (Distances From Face of Trunk)	Protected Tree Status	Impact Code
45	valley oak	27"	1	60'±	50'±	2.0	2.5	Mature tree with generally symmetrical crown form. Vigor is low with upper crown in decline. Areas of limb decay and significant deadwood present. Very large root extends to the east. Retaining wall located near tree. Epicormic sprouting and pit scale infestation occurring. Rock mulch placed around tree.	Apparent increase in vigor.	Marginal	Terrace and new retaining walls located within tree protection zone. Existing retaining wall and winery walls located near tree. Further evaluation of root impacts required.	Yes	PI
46	valley oak	43"	1	65'-70'±	60'-80'±	2.5	3.0	Older, mature tree with large diameter scaffold limbs. Significant limb contortion occurring with areas of decay observed. Limited deadwood present with epicormic sprouting occurring at pruning wounds. Upper crown appears to be thinning. Probable areas of trunk decay with areas of bark detachment occurring. Large diameter surface roots present in rock mulch. Probable shallow fill in area. Vigor and twig density are generally moderately low with cynipid wasp activity noted.	No significant change.	Moderate	Raised terrace surrounds tree with pier foundation.	Yes	PI
47	valley oak	24"	1	40'-45'±	35'-45'±	3.0	3.0	Semi-mature tree with generally symmetrical structure. Subject to line clearance pruning with one limb stub on north side. Limbs are moderately contorted, but with no significant structural defects. Limited root damage observed. Vigor and foliage density are moderate.	No significant change.	Moderate	Located 20' from driveway entrance and 22' from building foundation.	Yes	PI
47A	cork oak (Quercus suber)	4.5"	1	18'±	10'±	3.0	3.0	Young tree in moderate vigor with normal foliage density. No significant structural defects observed. Limited lower trunk bleeding observed, possible bark beetle activity or disease infection.		Moderate	Located within either building foot print or grading limits.	No	RC
48	cork oak	6"	1	20'±	12'±	3.0	3.0	Young tree in moderate vigor with normal foliage density. No significant structural defects observed. Limited lower trunk bleeding observed, possible bark beetle activity or disease infection. One large, dominant, surface root is growing on southwest side of trunk.		Good	Located within either building foot print or grading limits.	No	RC

Silver Rose Tree Evaluation Database

Tree #	Species	Trunk Diameter @4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Current Condition (9-22-11)	Suitability for Preservation (Based on Condition)	Construction Impact (Distances From Face of Trunk)	Protected Tree Status	Impact Code
49	cork oak	9"	1	25'±	18'-20'±	3.0	3.0	Young tree in moderate vigor with normal foliage density. No significant structural defects observed. Limited lower trunk bleeding observed, possible bark beetle activity or disease infection. Old support strap is starting to girdle trunk.		Good	Located within either building foot print or grading limits.	No	RC
50	cork oak	3.75"	1	15'±	10'±	2.5	3.0	Young tree in moderately low vigor with normal foliage density. No significant structural defects observed. Limited lower trunk bleeding observed, possible bark beetle activity or disease infection.		Moderate	Located within either building foot print or grading limits.	No	RR
51	coast live oak	7"	1	25'±	20'±	3.0	3.0	Young tree in good condition with no significant structural defects observed. Vigor and foliage density are good.		Good	Located within either building foot print or grading limits.	Yes	RC/TC
52	coast live oak	7"	1	20'±	20'±	3.0	3.0	Young tree with wide crown form. Apparent lower trunk canker on east side. Vigor and foliage density are good.		Moderate	Located within either building foot print or grading limits.	Yes	RC/TC
53	coast live oak	8"	1	25'±	25'±	3.0	3.0	Young tree in good vigor with no significant structural defects observed.		Good	Located within either building foot print or grading limits.	Yes	RC/TC
54	coast live oak	8.5"	1	30'±	25'±	3.0	3.0	Young tree in good vigor with no significant structural defects observed.		Good	Located within either building foot print or grading limits.	Yes	RC/TC
55	coast live oak	6.25"	1	20'±	20'±	3.0	2.5	Young tree in good vigor. Closely spaced, multiple limb attachments form at 6'. Possible asymmetrical root system with large root flare occurring on north side of trunk.		Moderate	Located within either building foot print or grading limits.	Yes	RC/TC
56	flowering plum (Prunus cerasifera 'Krauter Vesuvius')	8" (low)	multiple trunk	25'±	20'±	3.0	2.5	Low, multiple trunk structure with included trunk attachments. Vigor and foliage density are good.		Moderate	Located within either building foot print or grading limits.	No	RC
57	flowering plum	7" (low)	multiple trunk	25'±	20'±	3.0	2.5	Low, multiple trunk structure with included trunk attachments. Vigor and foliage density are good.		Moderate	Located within either building foot print or grading limits.	No	RC
58	flowering plum	7.5" (low)	multiple trunk	25'±	20'±	3.0	2.5	Low, multiple trunk structure with included trunk attachments. Vigor and foliage density are good.		Moderate	Located within either building foot print or grading limits.	No	RC
59	coast live oak	6"	1	20'±	15'±	3.0	3.0	Young tree in good vigor with normal foliage density. No significant structural defects observed.		Good	Located within either building foot print or grading limits.	Yes	RC/TC

Silver Rose Tree Evaluation Database

Tree #	Species	Trunk Diameter @4.5'	# of Trunks	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Current Condition (9-22-11)	Suitability for Preservation (Based on Condition)	Construction Impact (Distances From Face of Trunk)	Protected Tree Status	Impact Code
60	coast live oak	4.75"	1	15'±	12'-15'±	2.5	2.5	Young tree with probable asymmetrical root structure. Tree is not as vigorous as others in parking lot.		Marginal	Located within either building foot print or grading limits.	No	RC
61	coast live oak	7.5"	1	25'±	25'±	3.0	3.0	Young tree with wide, open limb structure. Structural pruning and shaping is needed. Vigor and foliage density are good.		Good	Located within either building foot print or grading limits.	Yes	RC/TC
62	coast live oak	6.5"	1	20'±	20'±	3.0	3.0	Young tree in good vigor with normal foliage density. No significant structural defects observed.		Good	Located within either building foot print or grading limits.	Yes	RC/TC

Appendix B Tree Protection Checklist

Silver Rose- Tree Protection Checklist (Appendix B)

Tree Number	Species	Trunk dbh (inches)	Tree Protection Zone (radius in feet)	Construction Impacts	Distance From Grading or Excavation Limits	Tree Protection Requirements
2	valley oak (Quercus lobata)	27"	30'	Located approximately 25' from future building foundation. Porches with pier type foundation extend approximately 7' towards tree. No significant crown pruning expected. No grading within 25' of tree.	25'	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ.
			2.) Air spade (excavation) root pruning trench at location 2' from foundation limits.			
			3.) Special asphalt demolition procedures may be required.			
			4.) Apply 4 inches of organic mulch within tree protection fencing area.			
			5.) Install drip irrigation system at edge of canopy drip line at root pruning trench.			
			6.) Crown clean tree and inspect limb structure for decay and defects. Prune for building clearance.			
			7.) Evaluate/inspect for cabling requirements.			
			8.) Implement pest control measures for pit scale and bark beetle prevention.			
3	coast live oak (Quercus agrifolia)	41"	40'	Located approximately 25' from future building foundation. Porches with pier type foundation extend approximately 7' towards tree. No significant crown pruning expected. No grading within 25' of tree.	25'	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ.
			2.) Air spade (excavation) root pruning trench at location 2' from foundation limits.			
			3.) Special asphalt demolition procedures required.			
			4.) Apply 4 inches of organic mulch within tree protection fencing area.			
			5.) Install drip irrigation system at edge of canopy drip line at root pruning trench.			
			6.) Crown clean tree and inspect limb structure for decay and defects. Prune for building clearance.			
			7.) Evaluate/inspect for cabling requirements.			
			8.) Implement pest control measures for pit scale and bark beetle prevention.			
4	valley oak	33"	35'	Located approximately 25' from future building foundation. Porches with pier type foundation extend approximately 7' towards tree. No significant crown pruning expected. No grading within 25'	25'	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ.
			2.) Air spade (excavation) root pruning trench at location 2' from foundation limits.			
			3.) Special asphalt demolition procedures required.			

Silver Rose- Tree Protection Checklist (Appendix B)

Tree Number	Species	Trunk dbh (inches)	Tree Protection Zone (radius in feet)	Construction Impacts	Distance From Grading or Excavation Limits	Tree Protection Requirements
				of tree.		4.) Apply 4 inches of organic mulch within tree protection fencing area.
						5.) Install drip irrigation system at edge of canopy drip line at root pruning trench.
						6.) Crown clean tree and inspect limb structure for decay and defects. Prune for building clearance.
						7.) Evaluate for cabling requirements.
						8.) Implement pest control measures for pit scale and bark beetle prevention.
5	valley oak	39"	40'	Located approximately 27' from future building foundation. Porches with pier type foundation extend approximately 7' towards tree. No significant crown pruning expected. No grading within 25' of tree.	22'	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ.
						2.) Air spade (excavation) root pruning trench at location 2' from foundation limits.
						3.) Special asphalt demolition procedures required.
						4.) Apply 4 inches of organic mulch within tree protection fencing area.
						5.) Install drip irrigation system at edge of canopy drip line at root pruning trench.
						6.) Crown clean tree and inspect limb structure for decay and defects. Prune for building clearance.
						7.) Evaluate for cabling requirements.
						8.) Implement pest control measures for pit scale and bark beetle prevention.
6	English walnut (Juglans regia)	30"	30'	Located approximately 30' from future building foundation. Limited grading cut indicated near building,	30'	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ.
						2.) Implement cultural procedures to improve health.
15	Deodar cedar (Cedrus deodara)	16.5"	18'	Located 10' from spa area and deck stairwell. Possible shallow grading cut in south side.	10'	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ.
						2.) Air spade (excavation) root pruning trench at excavation limits.
						3.) Apply 4 inches of organic mulch within tree protection fencing area.
						4.) Install drip irrigation system at edge of canopy drip line at root pruning trench.

Silver Rose- Tree Protection Checklist (Appendix B)

Tree Number	Species	Trunk dbh (inches)	Tree Protection Zone (radius in feet)	Construction Impacts	Distance From Grading or Excavation Limits	Tree Protection Requirements
						5.) Evaluate pruning requirements for building clearance.
14	valley oak	20"	25'	Located 11' from elevated and cantilevered spa area. No significant grading impact expected. Possible crown pruning required over spa deck.	11'	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ.
						2.) Implement cultural procedures to improve health.
						3.) Install drip irrigation system at edge of canopy drip line at root pruning trench.
						4.) Crown clean tree and inspect limb structure for decay and defects. Prune for building clearance.
						5.) Evaluate for cabling requirements.
						6.) Implement pest control measures for pit scale and bark beetle prevention.
						7.) Removal of Douglas fir requires close supervision and possible root pruning procedures.
15	valley oak	22"	25'	Located 11' from building foundation. Possible crown impact.	11'	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ.
						2.) Implement cultural procedures to improve health.
						3.) Air spade (excavation) root pruning trench at location 2' from foundation limits.
						4.) Install drip irrigation system at edge of canopy drip line at root pruning trench.
						5.) Crown clean tree and inspect limb structure for decay and defects. Prune for building clearance.
						6.) Evaluate for cabling requirements.
						7.) Implement pest control measures for pit scale and bark beetle prevention.
17	valley oak	37"	40'	Located 15' from building foundation. Possible crown impact.	15'	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ.
						2.) Implement cultural procedures to improve health.
						3.) Air spade (excavation) root pruning trench at location 2' from foundation limits.
						4.) Install drip irrigation system at edge of canopy drip line at root pruning trench.
						5.) Crown clean tree and inspect limb structure for decay and defects. Prune for building clearance.

Silver Rose- Tree Protection Checklist (Appendix B)

Tree Number	Species	Trunk dbh (inches)	Tree Protection Zone (radius in feet)	Construction Impacts	Distance From Grading or Excavation Limits	Tree Protection Requirements
						6.) Evaluate for cabling requirements.
						7.) Implement pest control measures for pit scale and bark beetle prevention.
18	valley oak	36" (approx.)	40'	Located 15' from building foundation. Large diameter limb on south side likely to require removal.	50'+	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ. 2.) Implement cultural procedures to improve health. 3.) Air spade (excavation) root pruning trench at location 2' from foundation limits. 4.) Install drip irrigation system at edge of canopy drip line at root pruning trench. 5.) Crown clean tree and inspect limb structure for decay and defects. Prune for building clearance. 6.) Evaluate for cabling requirements. 7.) Implement pest control measures for pit scale and bark beetle prevention.
19	valley oak	42"	40'	Located 15' from building foundation. Possible crown impact.	50'+	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ. 2.) Implement cultural procedures to improve health. 3.) Air spade (excavation) root pruning trench at location 2' from foundation limits. 4.) Install drip irrigation system at edge of canopy drip line at root pruning trench. 5.) Crown clean tree and inspect limb structure for decay and defects. Prune for building clearance. 6.) Evaluate for cabling requirements. 7.) Implement pest control measures for pit scale and bark beetle prevention.
20	valley oak	50"	50'	Located outside proposed construction areas. No impact expected.	50'+	1.) Implement cultural procedures to improve health.
21	valley oak	22"	25'	Located outside proposed construction areas. No impact expected.	50'+	1.) Implement cultural procedures to improve health.
23	valley oak	21"	25'	Located outside proposed construction areas. No impact expected.	50'+	1.) Implement cultural procedures to improve health.

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24	valley oak	30"	30'	Located outside proposed construction areas. No impact expected.	50'+	1.) Implement cultural procedures to improve health.
25	coast live oak	31"	30'	Located within raised spa terrace. Utility shed located within 10' of trunk.	10'	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ. 2.) Air spade (excavation) root pruning trench at any excavation limits within the TPZ. (To be determined). 3.) Apply 4 inches of organic mulch within tree protection fencing area. 4.) Install drip irrigation system at edge of canopy drip line. 5.) Crown clean tree and inspect limb structure for decay and defects. Prune for building clearance. 6.) Evaluate for cabling requirements. 7.) Implement pest control measures for pit scale and bark beetle prevention.
36	coast live oak	20"; 24"	35'	Building foundation located 20' to the west of the tree with basement excavation requirements. Existing retaining wall located between tree and building, which may limit impact. Crown pruning likely required.	20'	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ. 2.) Air spade (excavation) root pruning trench at any excavation limits within the TPZ. (To be determined). 3.) Apply 4 inches of organic mulch within tree protection fencing area. 4.) Install drip irrigation system at edge of canopy drip line. 5.) Crown clean tree and inspect limb structure for decay and defects. Prune for building clearance. 6.) Evaluate for cabling requirements. 7.) Implement pest control measures for pit scale and bark beetle prevention.
42	valley oak	23"	25'	Located in raised terrace area with pier foundation.	20'	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ. 2.) Air spade (excavation) root pruning trench at any excavation limits within the TPZ. (To be determined). 3.) Apply 4 inches of organic mulch within tree protection fencing area. 4.) Install drip irrigation system at edge of canopy drip line.

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Tree Number	Species	Trunk dbh (inches)	Tree Protection Zone (radius in feet)	Construction Impacts	Distance From Grading or Excavation Limits	Tree Protection Requirements
						5.) Crown clean tree and inspect limb structure for decay and defects. Prune for building clearance.
						6.) Evaluate for cabling requirements.
						7.) Implement pest control measures for pit scale and bark beetle prevention.
44	valley oak	32"	35'	Located in raised terrace area with pier foundation.	20'	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ.
						2.) Air spade (excavation) root pruning trench at any excavation limits within the TPZ. (To be determined).
						3.) Apply 4 inches of organic mulch within tree protection fencing area.
						4.) Install drip irrigation system at edge of canopy drip line.
						5.) Crown clean tree and inspect limb structure for decay and defects. Prune for building clearance.
						6.) Evaluate for cabling requirements.
						7.) Implement pest control measures for pit scale and bark beetle prevention.
45	valley oak	27"	30'	Terrace and new retaining walls located within tree protection zone. Existing retaining wall and winery walls located near tree. Further evaluation of root impacts required.	20'	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ.
						2.) Air spade (excavation) root pruning trench at any excavation limits within the TPZ. (To be determined).
						3.) Apply 4 inches of organic mulch within tree protection fencing area.
						4.) Install drip irrigation system at edge of canopy drip line.
						5.) Crown clean tree and inspect limb structure for decay and defects. Prune for building clearance.
						6.) Evaluate for cabling requirements.
						7.) Implement pest control measures for pit scale and bark beetle prevention.
						8.) Special demolition requirements may be necessary.
46	valley oak	43"	45'	Raised terrace surrounds tree with pier foundation.	20'	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ.
						2.) Air spade (excavation) root pruning trench at any excavation limits within the TPZ. (To be determined).

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Tree Number	Species	Trunk dbh (inches)	Tree Protection Zone (radius in feet)	Construction Impacts	Distance From Grading or Excavation Limits	Tree Protection Requirements
						3.) Apply 4 inches of organic mulch within tree protection fencing area.
						4.) Install drip irrigation system at edge of canopy drip line.
						5.) Crown clean tree and inspect limb structure for decay and defects. Prune for building clearance.
						6.) Evaluate for cabling requirements.
						7.) Implement pest control measures for pit scale and bark beetle prevention.
47	valley oak	24"	25'	Located 20' from driveway entrance and 22' from building foundation.	20'	1.) Maintain tree protection fencing at edge of construction zone. No underground utilities in TPZ.
						2.) Driveway shall be constructed to avoid or minimize grading cuts. Existing underground utility line may be used to establish zone where grading cuts could occur.
						4.) Apply 4 inches of organic mulch within tree protection fencing area.
						5.) Install drip irrigation system at edge of canopy drip line at root pruning trench.
						5.) Crown clean tree and inspect limb structure for decay and defects. Prune for building clearance.
						6.) Evaluate for cabling requirements.
						7.) Implement pest control measures for pit scale and bark beetle prevention.

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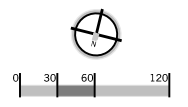
Tree Location and Numbering Plan

12/15/11

MACNAIR ASSOCIATES
CONSULTING ARBORISTS AND HORTICULTURISTS



 = Preserved Tree



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SILVER ROSE VENTURE, LLC - CALISTOGA, CA LAND USE APPLICATION SET - DECEMBER 15, 2011