ARBORIST REPORT-

Tree Inventory & Preliminary Impact Assessment

1881, 1883, 1891, 1899 West San Carlos Street

APN: 274-16-049 to 053 & 274-16-069, 274-16-070

San Jose, CA

November 12, 2020

Prepared for:

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Tree Risk Assessment Qualification (TRAQ)

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SUMMARY

This report provides the following information:

1. A summary of the health and structural condition of 6 trees.
2. A preliminary evaluation of anticipated construction impacts to the trees.
3. Recommendations for retention or removal of assessed trees based on their condition and anticipated construction impacts.

- The *Tree Assessment Chart*, Appendix A is the condensed reference guide to inform all tree management decisions for the trees evaluated.
- A new senior care facility and a mixed-use commercial/ residential complex is proposed for an existing commercial property. The existing commercial buildings are to be demolished.
- Six trees within or near the parcel boundaries were inventoried.
- All six trees are in fair condition and, are suitable for incorporation in the proposed project.
- This is a preliminary evaluation, once final plans are completed, tree protection specifications based on the final plans will be required.

Background

Plans will be submitted to the City of San Jose, to develop existing commercial properties into two buildings, one a senior care facility, and the second a mixed-use commercial/residential complex. Salvatore Caruso Design Corporation has requested my services, to assess the condition of four trees on the applicant's property, and two trees on the adjacent public property, and the construction impacts that may affect them. Further, to provide a report with my findings and recommendations to meet City of San Jose planning requirements.

Assignment

Provide an arborist report that includes an assessment of the trees within the project area. The assessment is to include the species, size (trunk diameter, height and canopy spread), condition (health and structure), and suitability for preservation ratings. Further, to review the preliminary development plans and assess the potential construction impacts.

To complete this assignment, the following services were performed:

- **Tree Resource Evaluation:** Tag with metal tags, inventory, evaluate and assign suitability for preservation ratings for subject trees.

Assignment continued:

- **Plan Review: Reviewed provided plans including:** Preliminary Site Plan & Architectural Set by Salvatore Caruso Design Corporation, dated 6/4/2020, and Preliminary Civil Set, by BkF Engineering, dated, 5/29/2020.
- **Construction Impact Assessment:** Combine tree resource data with anticipated construction impacts, to provide recommendations for removal or retention of trees.
- **Mapping:** Tree locations were plotted onto: *Existing Site Plan*, by Salvatore Caruso Design Corporation, dated 6/4/2020, and a Tree Location Map was created.

Limits of the Assignment

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 on 11/10/2020.

The inspection is limited to visual examination of accessible items without climbing, 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.

Purpose and use of the report

The report is intended to identify all the trees within the plan area that could be affected by a project. The report is to be used by the developer, their agents, the City of San Jose, as a reference for existing tree conditions and to help satisfy the City of San Jose planning requirements.

Resources

All information within this report is based on site plans as of the date of this report. Resources are as follows:

- Preliminary Site Plan & Architectural Set by Salvatore Caruso Design Corporation, dated 6/4/2020, and Preliminary Civil Set, by BkF Engineering, dated, 5/29/2020.
- Site Visit, Tree Inventory & Condition Evaluation at 1881 W. San Carlos St., on 11/10/2020.
- City of San Jose Municipal Code, Chapter 13.32 Tree Removal Controls & Section 13.32.130 Safeguarding Trees During Construction (Applicable sections)
- City of San Jose – Tree Policy Manual & Recommended Best Practices

OBSERVATIONS

The project is located at 1881 to 1899, West San Carlos Street between Boston Avenue and Brooklyn Street. The project limits are bordered by three streets (W. San Carlos St., Boston Ave. and Brooklyn St.), and residential properties on the fourth side. The one and one-quarter acre project area, is mostly built out or paved. A narrow (two-foot-wide) planter exists at the north edge of a paved parking lot, between the lot and residential properties. Four Tree-of -heaven trees (*Alianthus altissimus*), are growing in the planter. Two camphor trees (*Cinnamomum camphora*), are growing in a city right-of-way parkstrip, adjacent to the project limits on Boston Avenue, (Image #1).

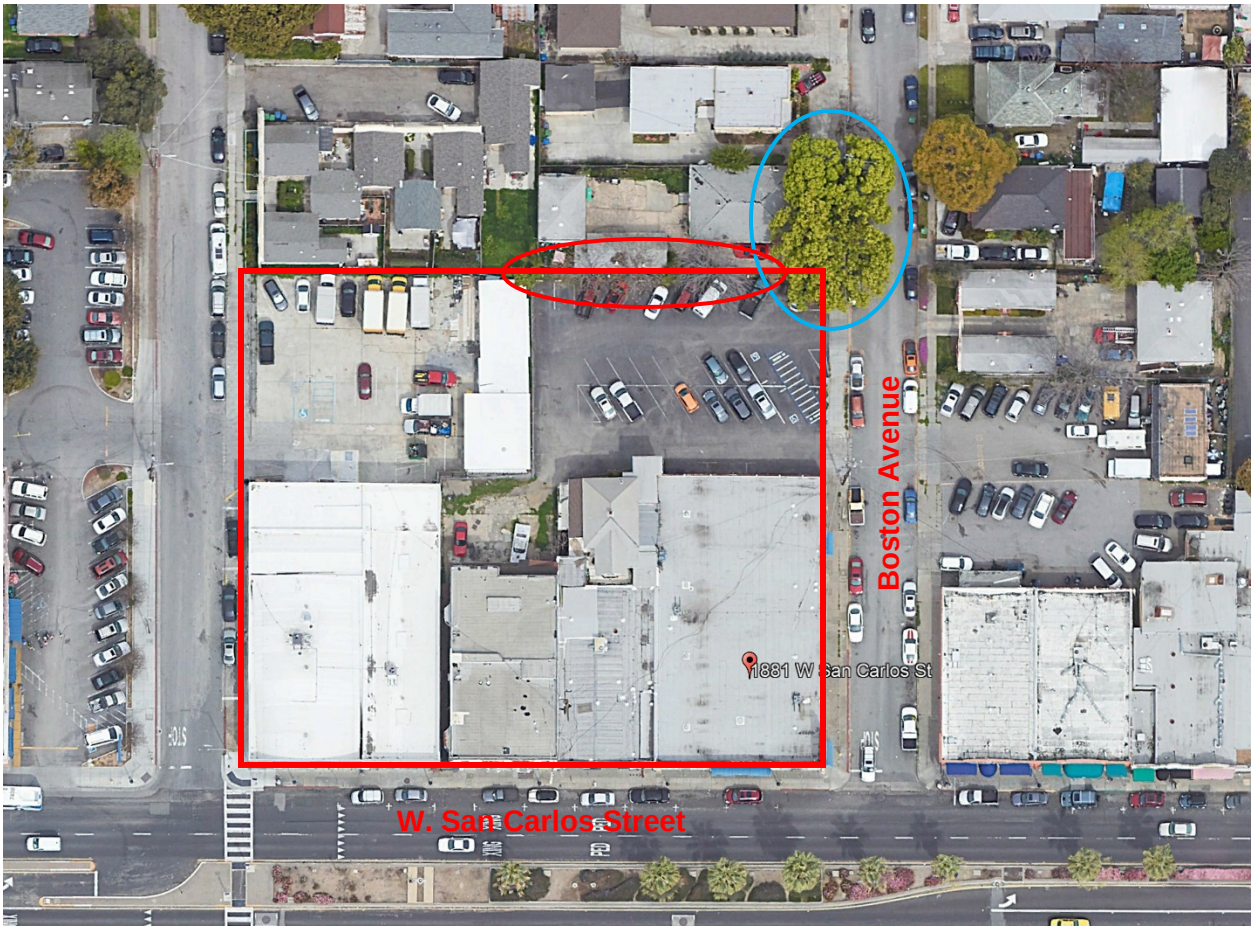

Image #1- Project limits along W. San Carlos St., Boston Ave., and Brooklyn St. Four Tree-of-heaven grow in planter at edge of parking lot, within project limits (circled red). Two camphor grow in a city right-of-way parkstrip, outside project limits, along Boston Ave., (circled blue).

I inventoried six trees. All six trees are regulated according to City of San Jose Municipal Code. Four Tree-of -heaven (T91-94), were in fair condition (Image #2).

Image #2- Trees T91 – T94, Tree- of- heaven, in planting strip at north perimeter of project area.

The trees were planted in a two-foot wide planting strip that was 6-12-inches below the grade of the asphalt parking lot.

The trunks of T93 and T94 were lifting the asphalt, as the diameter of the trunk has exceeded the width of the planter (Image #3)

Image #3– Tree T94, Tree-of -heaven. Asphalt lifting from trunk diameter expansion (circled). Note included bark, at trunk union (arrow).

Three of the four trees have co-dominant trunks with steep angles of attachment and included bark*. This combination of structural defects increases the risk of failure at the union of the two trunks (Images #3 & 4).

*** Included Bark- Bark embedded in a limb or trunk union, lacks axillary wood and causes a weak attachment.**

Image #4 – Tree T93, Tree – of – heaven. Tree has three trunks with steep angles of attachment and included bark (arrows). Note asphalt lifting around base of trunk.

There was a significant amount of small diameter deadwood branches in the canopy of the trees (Image #5).

There was sucker growth from some of the trees (Image #5).

Image #5 – Trees T91-T94, Tree-of heaven. The trees have a lot of small diameter deadwood in canopies as indicated by lack of foliar growth (circled). Note sucker growth at base of T92.

However, all four trees appear vigorous, despite the small dimeter limb dieback, and overall canopy density is good (Image #6).

Image #6– Trees T91-T94, Tree-of-heaven. Canopy density is good, some foliage is missing in the upper canopy of tree T94 due to seasonal drop. Breath-of-heaven is a deciduous tree.

Two mature camphor trees are growing in a parkstrip, which is the area of street lying between the face of the curb and the sidewalk. (Image #7). Trees T95 and T96 are in good or fair condition.

Image #7– Trees T95 & T96, camphor.

Both trees are in fair health but are over-mature and too large for the site conditions. The trees have outgrown the allotted space for their development. The size of the parkstrip and overhead utility lines do not allow for this large tree species to be sustained.

Management of the trees including topping has created structural defects in their branching arrangement (Image #8).The trees have been topped and repeatedly clearance pruned resulting in many overextended limbs with significant end weight (Image #9).

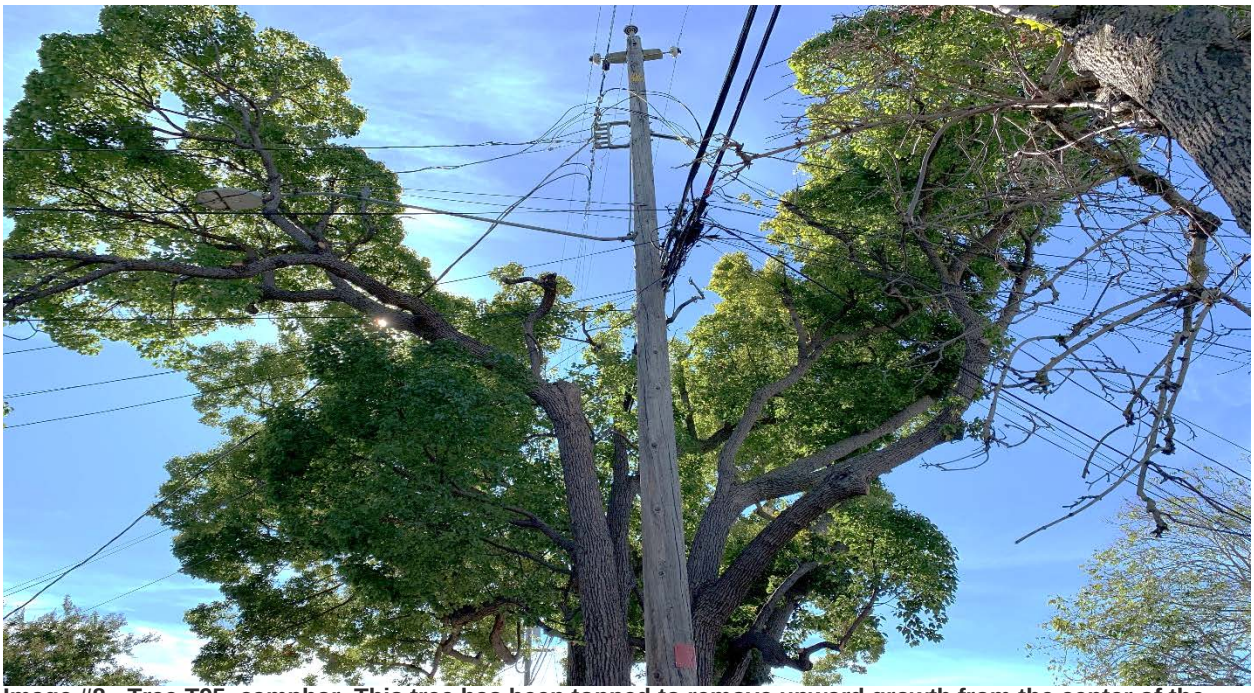

Image #8 - Tree T95, camphor. This tree has been topped to remove upward growth from the center of the tree.

Image #9 – Tree T95, camphor. Overextended limbs with excessive end weight (circled), are more likely to fail.

In addition to the branching structural defects, the trunk diameter and buttress roots are causing damage to the sidewalk, curb and gutter (Images #10 & 11). The lifting of the sidewalk has created a significant slope affecting accessibility and causing a trip hazard (Image #10).

Image #10 – Tree T95. Sidewalk has been lifted by diameter expansion of buttress roots. Repairs have been made, but a 2-inch grade difference at asphalt to concrete seam creates a trip hazard (arrow).

Image #10 – Tree T96, camphor. Note curb and gutter separation due to root diameter expansion.

In addition to the infrastructure damage, water line utilities could also be impacted by root diameter expansion as the tree continues to grow (Image #12).

Image # 11, Tree T95, camphor. The remaining space for the water meter box and utility line will decrease over time. Note lifted sidewalk.

DISCUSSION

Species List

TOTAL SUBJECT TREES: 6 Trees

Protected: 6

4	Tree-of-Heaven	(*Alianthus altissimus*)
2	Camphor	(*Cinnamomum camphora)*

Tree Evaluation and Recording Methods

Site evaluations were made on 11/10/2020. *The inventory included trees on two parcels within the project limits.* The health and structural **condition** of each tree was assessed and recorded. Based on the trees health and structural condition, each trees **suitability for preservation** was rated and recorded.

The recorded data is included in the *Tree Assessment Chart, Appendix A,* of this report. Tree numbers were plotted on the attached *Tree Location Map sheet, sheet T1*. **To correlate the data in the Tree Assessment Chart to the tree's location on the site, refer to the Tree Location Map sheet T1 - Appendix C.**

Condition Rating

A trees condition is determined by an assessing both the **health** and **structure**, then combining the two factors to reach a *condition rating*. If the health rating and the structure rating differ, the lower rating becomes the default *condition rating*. Tree condition is rated as poor, fair or good. The quantity of trees assigned for each category (good, fair or poor), is indicated below:

Tree Condition Rating

- Good - 0
- Fair - 6
- Poor - 0

Suitability for Preservation

A trees suitability for preservation is determined based on its health, structure, age, species characteristics and longevity using a scale of good, fair or poor. The quantity of trees assigned to each category (good, fair or poor), is listed below.

Suitability Rating

- Good - 0
- Fair – 6
- Poor - 0

Tree Protection Zone

The tree protection zone (TPZ), is a defined area within which certain activities are prohibited or restricted to minimize potential injury to designated trees during construction.

The size of the optimal TPZ can be determined by a formula based on 1) trunk diameter 2) species tolerance to construction impacts, and 3) tree age (Matheny, N. and Clark, J 1998). In some instances, tree drip line is used as the TPZ. Development constraints can also influence the final size of the tree protection zone.

Fencing is installed to delineate the (TPZ), and to protect tree roots, trunk, and scaffold branches from construction equipment. *The fenced protection area may be smaller than the optimal or designated TPZ area in some circumstances.* Tree protection may also involve the armoring of the tree trunk and/or scaffold limbs with barriers to prevent mechanical damage from construction equipment. *See Tree Protection Guidelines & Restrictions* – Appendix E.

Once the TPZ is delineated and fenced (prior to any site work, equipment and materials move in), construction activities are only to be permitted within the TPZ if allowed for and specified by the project arborist.

Where tree protection fencing cannot be used, or as an additional protection from heavy equipment, tree wrap may be used. Wooden slats at least one inch thick are to be bound securely, edge to edge, around the trunk. A single layer or more of orange plastic construction fencing is to be wrapped and secured around the outside of the wooden slats. Major scaffold limbs may require protection as determined by the City arborist or Project arborist. Straw wattle may also be used as a trunk wrap and secured with orange plastic fencing.

Data has been entered in the *Tree Assessment Chart – Appendix A,* which indicates the optimal Tree Protection Zone for each tree.

Critical Root Zone

Critical Root Zone (CRZ) is the area of soil around the trunk of a tree where roots are located that provide critical stability, uptake of water and nutrients required for a tree's survival. The CRZ is the minimum distance from the trunk that trenching that requires root cutting should occur and can be calculated as three to the five times the trunk Diameter at Breast Height (DBH). For example, if a tree is one foot in trunk diameter then the CRZ is three to five feet from the trunk location. We will often average this as four times the trunk diameter or 1ft. DBH = 4ft. CRZ (Smiley, E.T., Fraedrich, B. and Hendrickson, N. 2007).

Root Disturbance Distance

No one can estimate and predict with absolute certainty, what distance from a tree a soil disturbance such as excavation for construction should be, to ensure it will not significantly affect tree stability or health. Or to what degree, (low, moderate or high), a tree might be impacted. There are simply too many variables involved that we cannot see or anticipate. However, three times the D.B.H. (diameter at breast height), is a widely accepted minimum used in the industry for root disturbance, *on one side of the trunk*, and is supported by several research studies including (Smiley, Fraedich & Hendrickson 2002, Bartlett Tree Research Laboratories). This distance is often used during the design and planning phases of a project in order to estimate root loss due to construction activities. This distance is a guideline only and should be increased for trees with significant leans, decay or other structural problems.

The ISA, International Society of Arboriculture- Root Management (2017) publication recommends, “cutting roots at a distance greater than six times the trunk diameter (DBH) minimizes the likelihood of affecting both health and stability. This recommendation is given further direction by the companion publication, A.N.S.I. (*American National Standard*) A300 (Part 8)- 2013 Root Management, when roots are cut in a *non-selective* manner, i.e. in a straight line on one side of a tree. It says, if the cutting is “within six times the trunk diameter (DBH), mitigation shall be recommended”. Further, A.N.S.I. recommends the “minimum distance from the trunk for root cutting should be adjusted according to trunk diameter, species tolerance to root loss, tree age, health and site condition”.

In general, root cutting that occurs at a distance less than six times the diameter of a tree should be undertaken by hand digging and hand (or Sawzall), root pruning. These methods help mitigate root loss impacts.

Discussion of Findings: Tree Condition

The four Breath-of-heaven inventoried are in fair condition but need maintenance to reduce the risk of trunk and branch failure, and to improve their overall condition and appearance. The species is classified as invasive by the California Invasive Plant Council (Cal-IPC). Its invasiveness rating is moderate. The branch strength is rated weak, the tree suckers easily from the base and roots, and the longevity of this species is less than fifty years.

Despite these shortcomings the vigor of the trees inspected is good, and with maintenance pruning and cabling for two of the trees, the structure of the trees could be improved. Therefore, based on their condition, the trees are worth retaining.

The two mature camphor street trees are in fair condition, but the trees have outgrown their parkstrip planting area. The size of the parkstrip and overhead utility lines do not allow for this large tree species to be sustained. End weight reduction pruning should be performed on overextended limbs to reduce the risk of branch failure. Feasible options to mitigate infrastructure damage such as curving the sidewalk around the trunks and alternative walking surfaces should be considered. See Appendix D for City of San Jose regulations regarding street tree maintenance or removal.

Impacts to Subject Trees

Construction impact assessments are based on Preliminary Civil Set, by BkF Engineering, dated, 5/29/2020. Four trees (trees T91-T94, Tree-of -heaven), will have moderate to high construction impacts, and should be suitable for incorporation into the project.

The four trees will require pre-construction treatments, as described below and based on the roots observed could be retained.

The trees are within 2 feet of a proposed pervious paver driveway, this is within the *critical root zone* for the trees. Some root loss impacts at this distance from the driveway are expected and can be tolerated (Image #12).

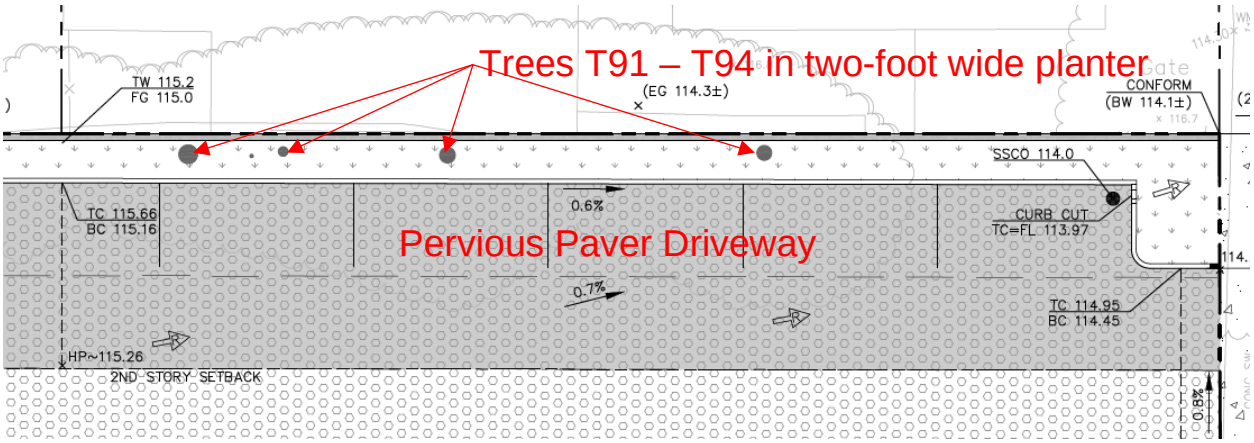

Image #12- Trees T91-T94, Tree -of -heaven in two-foot-wide planter strip adjacent to pervious paver driveway. Illustration from BkF preliminary grading plan, dated 5/2020.

The edge of the existing asphalt and subgrade, that is against the tree trunks, should be removed by hand methods for the entire length of the existing planting strip to expose the trees root structure. At this point an arborist should be used to inspect the anchoring root structure. Depending on the number, size and location of roots observed, the arborist can estimate the amount of anticipated root loss, due to construction, and whether this root loss could be tolerated without destabilizing the tree.

The tolerance to root loss for the tree-of heaven species is rated good*, "tolerant of root pruning, general good acclimation response following disturbance", (Matheny & Clark, Trees and Development, 1998).* However, if space constraints allow, any enlargement to the width of the proposed planting strip would be beneficial to the future condition of the four Tree-of heaven trees.

Impacts to Subject Trees, continued:

If retained, the tree-of-heaven would require crown reduction, crown thinning, crown cleaning and crown raising pruning to accommodate vehicle clearance, and to improve their structural condition.

The project impacts to the two mature camphor trees in the right-of-way parkstrip will be low. If the trees are retained, they will require crown reduction and end weight reduction pruning to allow clearance for vehicles entering the property and to reduce the risk of branch failure.

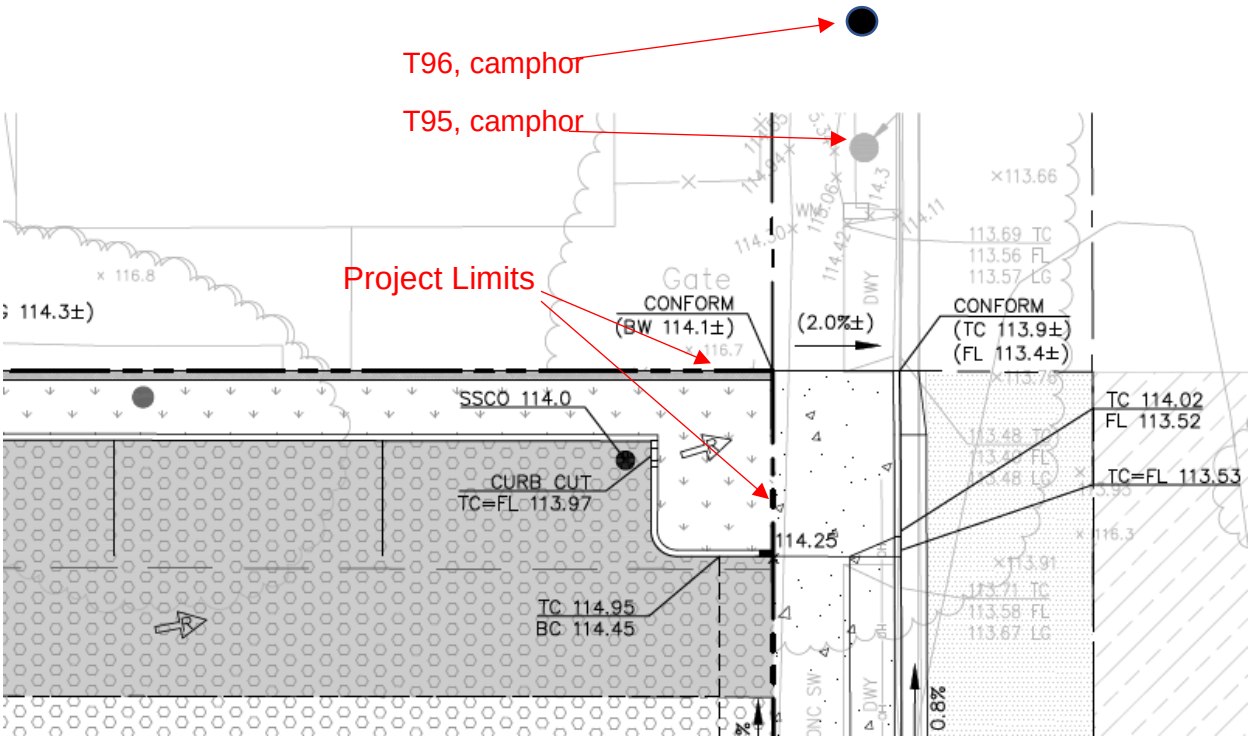

Image #13- Trees T95 and T96. The trees are in a right-of-way parkstrip outside the project limits. T95 has a canopy overhanging the project limits.

Impact Level

Impact level rates the degree a tree may be impacted by construction activity and is primarily determined by how close the construction procedures occur to the tree. Construction impacts are rated as low, moderate, high. The quantity of trees assigned for each category (low, moderate, high), is indicated below:

Impact Rating to Trees

- Low - 2
- Moderate – 4 (Need inspection of anchoring roots to verify impacts)
- High - 0

CONCLUSION

- The *Tree Assessment Chart*, Appendix A is the condensed reference guide to inform all tree management decisions for the trees evaluated.
- A new senior care facility and a mixed-use commercial/ residential complex is proposed for an existing commercial property. The existing commercial buildings are to be demolished.
- Six trees within or near the parcel boundaries were inventoried.
- Four trees, all Breath-of-heaven species, in fair condition, are suitable for incorporation in the proposed project, including trees T91, T92, T93, and T94.
- Two trees, T95 and T96, both camphor species, growing outside the project limits, are in fair condition, and are suitable for incorporation into the proposed project.
- This is a preliminary evaluation, once final plans are completed, tree protection specifications based on the final plans will be required.

RECOMMENDATIONS

1. Obtain all necessary permits prior to removing or significantly altering any trees on site.
2. If Tree-of-Heaven trees are retained, perform maintenance pruning methods as listed in the 'Comments' column of Tree Assessment Chart.
3. Install cables for Tree-of-Heaven trees T93 and T94 to reduce risk of trunk failure during wind events.
4. Perform end weight reduction pruning on camphor trees T95 and T96. Perform targeted clearance pruning on T95, to ensure overhead clearance for vehicles entering the new parking lot. **A permit must be obtained prior to pruning City of San Jose street trees.**

Respectfully submitted,

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1881, 1883, 1891,1899, West San Carlos, San Jose

Tree Assessment Chart - Appendix A

Suitability for Preservation Ratings:

Good: Trees in good health and structural condition with potential for longevity on the site

Fair: Trees in fair health and/or with structural defects that may be reduced with treatment procedures

Poor: Trees in poor health and/or with poor structure that cannot be effectively abated with treatment

Retention or Removal Code:

RT: Retain Tree
RI: Remove Due to Construction Impacts

I.M. Impacts Can Be Mitigated With Pre-Construction Treatments
R.C. Remove Due to Condition

Regulated Tree City of San Jose, Any tree 12 inches or greater in diameter measured at 4.5 feet above grade. Any tree regardless of size located on multifamily, commercial or industrial property.

Tree #	Species	Trunk Diameter @ 54 inches a.g.	Protected Tree	Crown Height & Spread (Diameter)	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet from trunk)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T91	Tree-of-heaven (*Alianthus altissimus*)	7",6"	Yes	45'X15'	Fair	Fair	Fair	10'	Moderate-High (Within grading limits, root loss)	RT	In 2 foot wide planting strip. Trunk base is 8-12" below grade of adjacent planting strip. Co-dominant trunks at grade. Thin canopy density with dead wood in interior of canopy in limbs up to 1" in diameter. Needs crown reduction , crown thinning , crown cleaning and crown raising, to accommodate vehicle clearance and improve structural condition.
T92	Tree-of-heaven	13"	Yes	50'X15'	Fair	Fair	Fair	10'	Moderate-High (Within grading limits, root loss)	RT	In 2 foot wide planting strip. Trunk base is 8-12" below grade of adjacent planting strip. Sucker growth from trunk base. Thin canopy density with dead wood in interior of canopy in limbs up to 1" in diameter. Needs crown reduction , crown thinning , crown cleaning and crown raising, to accommodate vehicle clearance and improve structural condition.

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11/12/2020

1881, 1883, 1891,1899, West San Carlos, San Jose

Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 54 inches a.g.	Protected Tree	Crown Height & Spread (Diameter)	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet from trunk)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T93	Tree-of-heaven	11",11", 10"	Yes	60'X20'	Fair	Fair	Fair	12'	Moderate-High (Within grading limits, root loss)	RT	In 2 foot wide planting strip. Trunk base is 8-12" below grade of adjacent planting strip. Co-dominant trunks at grade. Thin canopy density with dead wood in interior of canopy in limbs up to 1" in diameter. **Recommend cable installed between three trunks to reduce failure risk of trunks.** Needs crown reduction , crown thinning , crown cleaning and crown raising, to accommodate vehicle clearance and improve structural condition.
T94	Tree-of-heaven	13",12"	Yes	50'X25'	Fair	Fair	Fair	15'	Moderate-High (Within grading limits, root loss)	RT	In 2 foot wide planting strip. Trunk base is 8-12" below grade of adjacent planting strip. Co-dominant trunks at grade. Thin canopy density with dead wood in interior of canopy in limbs up to 1" in diameter. **Recommend cable installed between two trunks to reduce failure risk of trunks.** Needs crown reduction , crown thinning , crown cleaning and crown raising, to accommodate vehicle clearance and improve structural condition.
T95	camphor (*Cinnamomum camphora*)	38" (At 4' above grade)	Yes	50'X40'	Fair	Fair-Poor	Fair	Size of parkstrip	Low (Outside project limits)	RT	In 4' wide parkstrip. Trunk flare and buttress roots have outgrown planter, and are lifting sidewalk (2" high trip hazard), and cracking curb and gutter. Concrete should be shaved to reduce trip hazard. Topped at 25' above grade, trained to clear wire wires, and many overextended branches have formed.
T96	camphor	27" (At 3' above grade)	Yes	40'X35'	Fair	Fair-Poor	Fair	Size of parkstrip	Low (Outside project limits)	RT	In 4' wide parkstrip. Trunk flare and buttress roots have outgrown planter, and are lifting sidewalk (2" high trip hazard), and cracking curb and gutter. Concrete should be shaved to reduce trip hazard. Topped at 25' above grade, trained to clear wire wires, and many overextended branches have formed.

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11/12/2020

APPENDIX B – CRITERIA FOR TREE ASSESSMENT CHART

Following is an explanation of the data used in the tree evaluations. The data is incorporated in the *Tree Assessment Chart, Appendix A.*

Trunk Diameter and Number of Trunks:

Trunk diameter as measured at 4.5 feet above grade. The number of trunks refers to a single or multiple trunked tree. Multiple trunks are measured at 4.5 feet above grade.

Health Ratings:

Good: A healthy, vigorous tree, reasonably free of signs and symptoms of disease

Fair: Moderate vigor, moderate twig and small branch dieback, crown may be thinning and leaf color may be poor

Poor: Tree in severe decline, dieback of scaffold branches and/or trunk, most of foliage from epicormics

Structure Ratings:

Good: No significant structural defects. Growth habit and form typical of the species

Fair: Moderate structural defects that might be mitigated with regular care

Poor: Extensive structural defects that cannot be abated.

Suitability for Preservation Ratings:

Rating factors:

Tree Health: Healthy vigorous trees are more tolerant of construction impacts such as root loss, grading and soil compaction, then are less vigorous specimens.

Structural integrity: Preserved trees should be structurally sound and absent of defects or have defects that can be effectively reduced, especially near structures or high use areas.

Tree Age: Over mature trees have a reduced ability to tolerate construction impacts, generate new tissue and adjust to an altered environment. Young to maturing specimens are better able to respond to change.

Species response: There is a wide variation in the tolerance of individual tree species to construction impacts.

Rating Scale:

Good: Trees in good health and structural condition with potential for longevity on the site

Fair: Trees in fair health and/or with structural defects that may be reduced with treatment procedures.

Poor: Trees in poor health and/or with poor structure that cannot be effectively abated with treatment. Trees can be expected to decline or fail regardless of construction impacts or management . The species or individual may possess characteristics that are incompatible or undesirable in landscape settings or unsuited for the intended use of the site.

Construction Impacts:

Rating Scale:

High: Development elements proposed that are located within the Tree Protection Zone that would severely impact the health and /or stability of the tree. The tree impacts cannot be mitigated without design changes. The tree may be located within the building footprint.

Moderate: Development elements proposed that are located within the Tree Protection Zone that will impact the health and/or stability of the tree and can be mitigated with tree protection treatments.

Low: Development elements proposed that are located within or near the Tree Protection Zone that will have a minor impact on the health of the tree and can be mitigated with tree protection treatments.

None: Development elements will have no impact on the health and stability of the Tree.

Tree Protection Zone (TPZ):

Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, particularly during construction or development.

Tree Location Map

1881, 1883, 1891, 1899 West San Carlos Street, San Jose

Sheet T1 of 1 sheet

K.F. 11/13/2020 7 parcels

Legend

- Tree Location
- Tree Protection Fencing
- Tree Canopy Extents
- Hand Trenching & Root Pruning
- Remove Tree

T91 TREE-OF -HEAVEN
DBH 7",6"

T92 TREE-OF-HEAVEN
DBH 13"

T93 TREE-OF-HEAVEN
DBH 11",11",10"

T94 TREE-OF-HEAVEN
DBH 13",12"

T96 CAMPHOR
DBH 38"

T95 CAMPHOR
DBH 27"

Note: tree T95 is shown in actual location. T96 is 15' from T95. Actual distance not shown accurately on this plan.

APN 274-16-057
WOLFSON AND CHING
(E) MULTI-FAMILY

APN 274-16-048
MEHDIZADEH
(E) SINGLE-FAMILY

APN 274-16-049
DORSA FAMILY TRUST
DOC. 22334114

(E) PARKING LOT

APN 274-16-050
DORSA FAMILY TRUST
DOC. 22334113

APN 274-16-069
DORSA FAMILY TRUST
DOC. 21888200

(E) COMMERCIAL BUILDING TO BE DEMOED

APN 274-16-053
DORSA FAMILY TRUST
(NO DOC.)

APN 274-16-052
DORSA FAMILY TRUST
(NO DOC.)

(E) COMMERCIAL BUILDING TO BE DEMOED

APN 274-16-051
DORSA FAMILY TRUST
DOC. 22334117

BROOKLYN ST.

BOSTON ST.

W. SAN CARLOS ST.

1899 1891 1881

℄ 250'

℄ 215'

1 SITE PLAN/ GROUND FLOOR PLAN SCALE : 1/8"=1'-0"

Base map provided by: Salvatore Caruso Design Corporation, Santa Clara, CA

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CHAPTER 2
Responsibility and Protection of Trees

The City of San Jose provides for the protection of trees in the Municipal Code (Code) Sections 13.28, 13.32 and 13.44.220 that can be found in the Appendix. The Code outlines permit requirements for any tree-related work (removal, planting or pruning). Details of the procedure to obtain tree permits are covered in the Chapter 3, *Permits and the Law*.

Trees in the Public Right-Of-Way and on City Owned Property

Street trees

Per the Municipal Code Section 13.28.010:

"A "street" shall mean a public right-of-way owned by the City of San José whose primary function is to carry vehicular traffic and shall also include sidewalks, park strips and tree planting easements."

"A "street tree" is any tree planted along a public street."

<u>City of San Jose</u>

The City of San Jose responsibility for any tree related work is limited to street trees in the following locations:

1. Trees located between the sidewalk and the curb and gutter or behind sidewalk where the sidewalk abuts the curb and gutter <u>only</u> when the adjacent property is a City-owned facility and in designated areas within the Special Landscape Assessment Districts (see Appendix K, *Special Landscape Assessment Districts*).

2. Trees located in all median islands on public streets.

3. Trees located in back-up landscaping (see *Glossary Appendix L*).

4. Trees located along certain frontage landscaping (see *Glossary Appendix L*).

The City Arborist Office is responsible for administering the program to provide permits to property owners for any tree related work to street trees adjacent to private property.

County of Santa Clara,
County Roads & Airport Department

The County of Santa Clara, County Roads & Airport Department is responsible for any tree related work located along expressways and unincorporated county roads. The County Tree Preservation and Removal Ordinance requires permits for tree removal or other work around trees.

California Department of Transportation (Caltrans)

The Caltrans is responsible for any tree related work along freeways and highways. Caltrans Adopt-A-Highway program utilizes volunteers to plant and maintain trees. See the Caltrans Adopt-A-Highway website for additional information.

Property Owners

The property owner is responsible for tree related work on street trees located adjacent to private property located in parkstrips (see *Glossary*), behind sidewalk or in the sidewalk cut out where the sidewalk abuts the curb and gutter. (see appendix C Municipal Code Section 13.28.190 titled *Trees – Property owner maintenance responsibility and duty to public*).

CHAPTER 3

Permits and the Law

Over the past few decades it has become common for local governments to implement ordinances which are intended to protect the urban forest. These ordinances vary from one jurisdiction to the next and often depend on whether the tree is located on public or private property. This chapter is intended to clarify current tree ordinances which may affect the owners of property within San Jose.

City of San Jose – Street Trees

General Street Tree Permit Information

Street tree permits are issued by the Department of Transportation.

The permit is free of charge.

The permit or copy of the permit must be on site when the work is performed.

The permit or a copy of the permit must be presented upon request.

Emergency tree work can be performed prior to permit issuance.

Street Tree Pruning Permits

Section 13.28.130 of the Municipal Code states:

"Except as provided in this section, no person shall trim, prune, cut or remove any street tree except pursuant to a permit from the director of transportation."

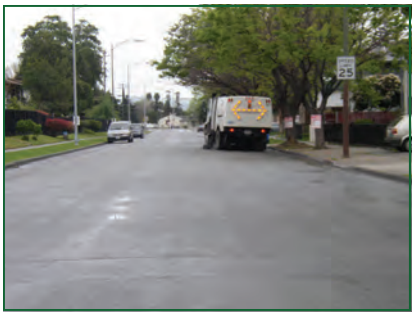
Street Tree Pruning Permits

Permits are required for all routine pruning of street trees. Permits are issued free of charge by the Department of Transportation (DOT). There are three ways for property owners to request a street tree pruning permit.

Call the Arborist Office.
Email the Arborist Office.
Fill out the request form on the City website.

Street Tree Pruning Permit Process

The process starts when the Arborist's Office receives the request. An inspector from the Arborist's Office reviews the tree and the surrounding hardscape to determine the condition of both. If the tree is determined to require routine pruning and no issues exist with the hardscape, a pruning permit is issued which is valid for sixty days. If the tree cannot be pruned within the sixty day window one sixty-day extension is available.



Pruning is required to maintain clearance of 14 feet over the roadway.

Street Tree Pruning Permit Packet

The permit packet includes important instructional materials that detail proper pruning techniques. Proper pruning requires technical skills and may present hazards to the inexperienced. (See Chapter 5, Why Hire a Certified Arborist)

Notes:

Street Tree Pruning Permit Completion

Property owners are required to sign and return the permit after the work is complete. An inspection of the completed work is performed after the signed permit is received. Failure to comply with all conditions of the permit or failure to return the signed permit results in the issuance of a Non-Completion Notice. (See section on Non-Completion Notice below.)

Illegal Street Tree Pruning Citations

Section 13.28.130 of the Municipal Code states:

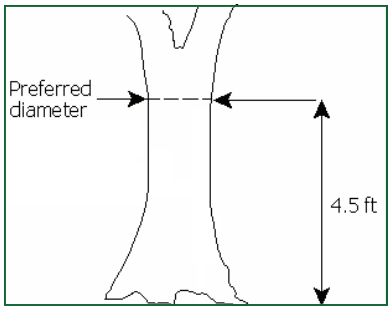
"Except as provided in this section, no person shall trim, prune, cut or remove any street tree except pursuant to a permit from the director of transportation."

The Arborist's Office issues illegal pruning citations for improper pruning (i.e., topping, excessive foliage removal, etc.) and pruning without a permit. See section *Pruning in Chapter#.* The fines are based on trunk diameter as measured at 4.5 feet above grade.

Trunk Diameter	Fine Amount
0 to 5.99 inch	$ 150.00
6.0 to 11.99 inch	$ 175.00
12.0 to 17.99 inch	$ 200.00
18.0 to 23.99 inch	$ 225.00
24.0 and greater	$ 250.00

Prior to issuing an official citation a notice of the violation of the Municipal Code is mailed to the property owner. The property owner must respond within fourteen (14) days providing justification for the illegal pruning if the property owner wishes to appeal the citation. The citation is issued if no adequate justification is provided or the response is not valid.

Measuring the DBH of a tree



Improper pruning practices damage trees permanently.

Street Tree Removal and Replacement Permits

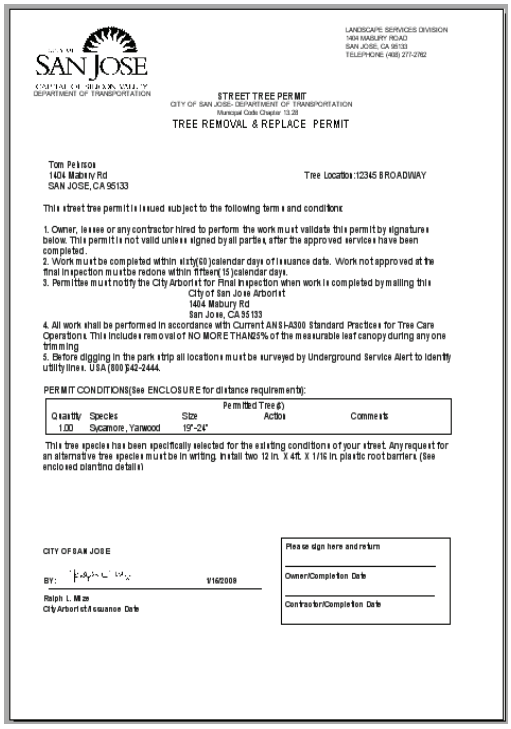
Section 13.28.130 of the Municipal Code states:

"Except as provided in this section, no person shall trim, prune, cut or remove any street tree except pursuant to a permit from the director of transportation."

"The director shall issue a permit to remove a street tree only if at least one of the following criteria is met:

1. *The tree is dead or dying.*
2. *The tree is seriously diseased.*
3. *The tree is in or creates a hazardous condition.*
4. *The tree is a detrimental species that is disapproved by the director for planting on the street in the city's street tree plan.*
5. *The tree interferes with high tension electrical lines and the problem cannot be corrected by topping the tree.*
6. *The tree has caused extensive concrete damage after the tree has been deep-watered, root-trimmed for several years and the concrete has been repaired several times in the preceding years.*
7. *The tree has done extensive sewer system damage and created a sewer problem that cannot be resolved by any other reasonable means.*

Each permit to remove a street tree shall contain the condition that the permittee purchase and plant, at the permittee's expense, a replacement tree designated by the director.



SAN JOSE
CAPITAL OF SILICON VALLEY
DEPARTMENT OF TRANSPORTATION

LANDSCAPE SERVICES DIVISION
1404 MABURY ROAD
SAN JOSE, CA 95133
TELEPHONE (408) 277-2762

STREET TREE PERMIT
CITY OF SAN JOSE- DEPARTMENT OF TRANSPORTATION
Municipal Code Chapter 13.28
TREE REMOVAL & REPLACE PERMIT

Tom Peirson
1404 Mabury Rd
SAN JOSE, CA 95133

Tree Location:12345 BROADWAY

This street tree permit is issued subject to the following terms and conditions:

1. Owner, lessee or any contractor hired to perform the work must validate this permit by signature s below. This permit is not valid unless signed by all parties, after the approved services have been completed.
2. Work must be completed within sixty(60)calendar days of issuance date. Work not approved at the final inspection must be redone within fifteen(15)calendar days.
3. Permittee must notify the City Arborist for Final Inspection when work is completed by mailing this
City of San Jose Arborist
1404 Mabury Rd
San Jose, CA 95133
4. All work shall be performed in accordance with Current ANSI-A300 Standard Practices for Tree Care Operations. This includes removal of NO MORE THAN25% of the measurable leaf canopy during any one trimming
5. Before digging in the park strip all locations must be surveyed by Underground Service Alert to identify utility lines. USA (800)642-2444.

PERMIT CONDITIONS(See ENCLOSURE for distance requirements):

Permitted Tree(s)				
Quantity	Species	Size	Action	Comments
1.00	Sycamore, Yarwood	19"-24"		

This tree species has been specifically selected for the existing conditions of your street. Any request for an alternative tree species must be in writing. Install two 12 in. X 4ft. X 1/16 in. plastic root barriers. (See enclosed planting details)

CITY OF SAN JOSE

BY: _____ 9/16/2009

Ralph L. Mize
City Arborist/Issuance Date

Please sign here and return

Owner/Completion Date

Contractor/Completion Date

Street Tree Removal and Replacement Permits

Permits are required for the removal of all street trees. The permit may require planting a replacement tree as stated in the Municipal Code above. Permits are issued free of charge by the Department of Transportation (DOT).

There are three ways for property owners to request a street tree removal application.

Telephone the Arborist Office.
Email the Arborist Office.
Fill out the request form on the City website.

A Tree Removal Request must be visibly posted on the tree for a minimum 14 calendar days before a permit may be issued

Posting Requirements for Street Tree Removal

Section 13.28.140 of the Municipal Code states:

"Any street tree for which a permit is required pursuant to Section 13.28.130, and the surrounding area, within one hundred and fifty (150) feet on both sides of the tree and on both sides of the street, shall be posted with a notice of proposed removal in accordance with this section, unless the director of transportation determines that such tree poses an immediate danger to persons or property."

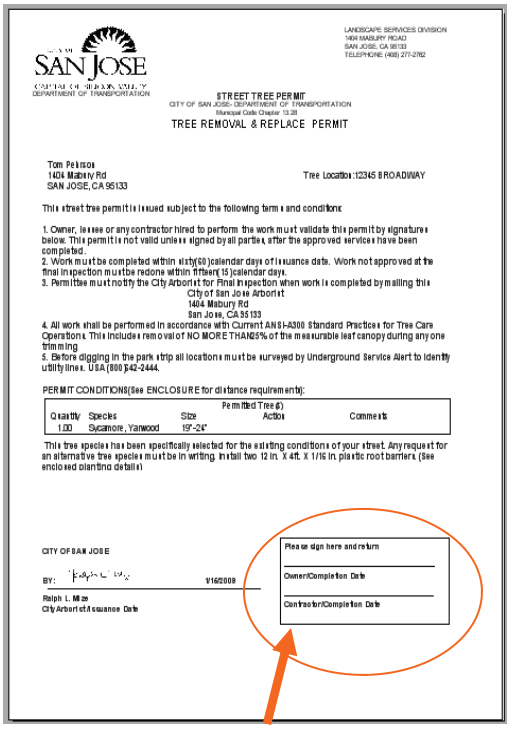
The notice of "Tree Removal Request" (see Appendix D) is posted for a minimum of fourteen (14) calendar days. The notice includes the reason for the proposed removal and information for concerned citizens regarding submittal of an objection to the tree removal. Any objection must be in writing and received by the Arborist's Office by mail or email within the posting period described below.

Street Tree Removal and Replacement Permit Approval

If no objections are received before seventeen (17) calendar days from the date of the initial posting (14 day protest period with 2 days for mail delivery) a tree removal and replacement permit is issued. The tree must be removed by the applicant at their own expense.

Tree replacement is required at all suitable street tree planting locations adjacent to the property where the tree was removed. Tree planting locations are marked with a green T.

The street tree removal and replacement permit identifies the replacement specie(s). Requests from the property owner for an alternative tree species must be submitted to the Arborist's Office in writing. A 15-gallon size or larger tree is required at each planting location. A removal and replacement permit is valid for sixty days. If the tree cannot be removed and replaced within the sixty day window one sixty-day extension is available.



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1404 MABURY ROAD
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TELEPHONE: (408) 277-2762

STREET TREE PERMIT
CITY OF SAN JOSE- DEPARTMENT OF TRANSPORTATION
Municipal Code Chapter 13.28
TREE REMOVAL & REPLACE PERMIT

Tom Peterson
1404 Mabury Rd
SAN JOSE, CA 95133

Tree Location:12345 BROADWAY

This street tree permit is issued subject to the following terms and conditions:

1. Owner, lessee or any contractor hired to perform the work must validate this permit by signatures below. This permit is not valid unless signed by all parties, after the approved services have been completed.
2. Work must be completed within sixty(60)calendar days of issuance date. Work not approved at the final inspection must be redone within fifteen(15)calendar days.
3. Permittee must notify the City Arborist for Final Inspection when work is completed by mailing this
City of San Jose Arborist
1404 Mabury Rd
San Jose, CA 95133
4. All work shall be performed in accordance with Current ANSI-A300 Standard Practices for Tree Care Operations. This includes removal of NO MORE THAN25% of the measurable leaf canopy during any one trimming.
5. Before digging in the park strip all locations must be surveyed by Underground Service Alert to identify utility lines. USA (800)642-2444.

PERMIT CONDITIONS(See ENCLOSURE for distance requirements):

Permitted Tree(s)				
Quantity	Species	Size	Action	Comments
1.00	Sycamore, Yarwood	15"-24"		

This tree species has been specifically selected for the existing conditions of your street. Any request for an alternative tree species must be in writing. Install two 12 in. X 4ft. X 1/16 in plastic root barriers.(See enclosed planting details)

CITY OF SAN JOSE

BY: _____ 9/16/2009

Ralph L. Mize
City Arborist Issuance Date

Please sign here and return

Owner/Completion Date

Contractor/Completion Date

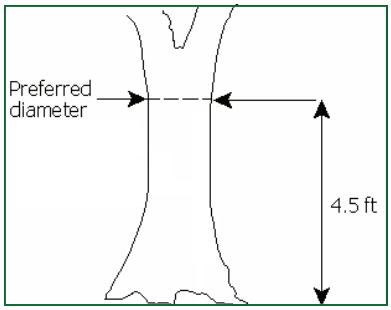
Permit must be signed and returned after work is complete.

Street Tree Protest Hearings

A protest hearing is scheduled when a written objection is filed with the Arborist's Office. Protest hearings are informal and provide a means of mediation for interested parties. An impartial representative of the Arborist's Office conducts the hearing. After the hearing, the representative views the site for the first time in order to provide an unbiased perspective of all of the concerns presented at the hearing. Based on the site review and validation of the concerns, the representative makes a final decision.

Street Tree Removal and Replacement Permit Completion

Property owners are required to sign and return the permit after the work is complete. An inspection of the completed work is performed after the signed permit is received. Failure to comply with all conditions of the permit or failure to return the signed permit results in the issuance of a Non-Completion Notice. (See section on Non-Completion Notice below.)



Illegal Street Tree Removal Citations

Section 13.28.130 of the Municipal Code states:

"Except as provided in this section, no person shall trim, prune, cut or remove any street tree except pursuant to a permit from the director of transportation."

The Arborist's Office issues illegal removal citations for removal without permit or improper pruning (i.e., topping, excessive foliage removal, etc.). See Chapter 5, *Pruning or Appendix C for contract language.* The fines are based on trunk diameter as measured at 4.5 feet above grade.

Trunk Diameter	Fine Amount
0 to 5.99 inch	$ 500.00
6.0 to 11.99 inch	$ 750.00
12.0 to 17.99 inch	$ 1,000.00
18.0 to 23.99 inch	$ 1,500.00
24.0 and greater	$ 2,000.00

Prior to issuing an official citation a notice of the violation of the Municipal Code is mailed to the property owner. The property owner must respond within fourteen (14) days providing justification for the illegal removal. The citation and a repair notice are issued if no justification is provided or the response is not valid. See section *Repair Notice below*

Severe topping of trees is considered illegal removal in instances where the tree will not be able to survive

Street Tree Root Pruning Permits

Section 13.28.130 of the Municipal Code states:

"Except as provided in this section, no person shall trim, prune, cut or remove any street tree except pursuant to a permit from the director of transportation."

This statement includes cutting or pruning the roots.

Street Tree Root Pruning Permits

Permits are required for root pruning of street trees. Permits are issued free of charge by the Department of Transportation (DOT). There are three ways for property owners to request a street tree pruning permit.

Call the Arborist Office.
Email the Arborist Office.
Fill out the request form on the City website.

Street Tree Root Pruning Process

The process starts when the Arborist's Office receives the request. The roots to be pruned must be exposed before an inspector from the Arborist's Office is dispatched. The inspector reviews the tree and the surrounding hardscape to determine the condition of both. When the inspector determines that the tree can tolerate pruning of the number and size of roots requested and no issues exist with the hardscape, a root pruning permit is issued. When the inspector determines that conditions exists requiring removal and replacement of the street tree a street tree removal and replacement application is issued.

Street tree root pruning permits are valid for sixty days. If the tree cannot be root pruned within the sixty day window one sixty-day extension is available.

Illegal and improper root pruning can kill a tree or cause it to fail.

Street Tree Root Pruning Permit Completion

Property owners are required to sign and return the permit after the work is complete. Failure to return the signed permit results in the issuance of a Non-Completion Notice.

See section on Non-Completion Notice below.

Street Tree Planting Permits

Notes:

Section 13.28.070 of Municipal Code states:

> *"No person shall plant or set out any tree on any part of any street within the city without first having obtained a written permit therefor from the director of streets and traffic, or pursuant to a contract for planting approved by the city council setting forth the conditions under which trees may be set out or planted and the kind thereof, and the person obtaining such permit shall comply with all terms and conditions thereof."*

It should be noted that the signature of the legal owner of the property is required for a street tree planting permit.

Street Tree Planting Permits

Permits are required for planting of street trees. Permits are issued free of charge by the Department of Transportation (DOT). There are three ways for property owners to request a street tree pruning permit.

Call the Arborist Office.
Email the Arborist Office.
Fill out the request form on the City website.

Street Tree Planting Permit Process

The process starts when the Arborist's Office receives the request. An inspector from the Arborist's Office reviews the site and surrounding conditions. See Chapter 4, Site Assessment for the details of what the inspector reviews. All suitable locations are marked with a green T. A notice is sent to the property owner if no suitable tree planting locations can be identified. If suitable locations are identified a street tree planting permit is issued and is valid for sixty (60) days. One sixty-day extension is available if the tree(s) cannot be planted within sixty days.

Notes:

Street Tree Planting Permit Packet

Proper planting techniques are essential to the success of the establishment and growth of a tree. The planting permit packet includes important instructional materials including all required planting details to comply with the planting permit. Planting instructions and best management practices for tree planting are found in Chapter 4. Tree planting details are in Appendix F.

Street Tree Planting Permit Completion

Property owners are required to sign and return the street tree planting permit after the work is complete. An inspection of the completed work is performed after the signed permit is received. Failure to comply with all conditions of the permit or failure to return the signed permit results in the issuance of a Non-Completion Notice. See section on Non-Completion Notice below.

Illegal Planting Repair Notice

The Arborist's Office issues a repair notice for trees planted without permit that are not in compliance with the best management practices for the City, including, but not limited to the following:

- Unsuitable location
- Improper species selection
- Unacceptable nursery stock
- Staking that will injure the tree
- Improper depth of planting
- Impervious material in parkstrip

Leaving the nursery stake on a tree hinders the development of root flare and may cause damage to the tree

TREE MANAGEMENT:

PRUNING METHODS & TERMINOLOGY

CC = Crown Clean - Selectively remove dead, diseased, broken, or weakly attached branches from the tree crown.

CR = Crown Reduction – Prune to reduce the canopy size. Prune limbs back to their point of origin or back to laterals capable of sustaining the remaining limb.

CCL= Crown Clearance – Removal of lower branches (or ends of limbs) to provide clearance for pedestrians, vehicles, buildings, signs and lines of site.

CT = Crown Thinning - Selectively remove branches to increase light penetration and air movement through the crown and to improve structure. This procedure includes crown cleaning.

END WT RED = End Weight Reduction - Selectively reduce the length of long lateral branches, to reduce mechanical stress. Mature tree risk reduction procedure.

Kurt Fouts
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kurtfouts1@outlook.com

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Glossary of Terms

Basal rot: decay of the lower trunk, trunk flare, or buttress roots.

Canker: Localized diseased area on stems, roots and branches. Often sunken and discolored.

Critical Root Zone (CRZ): Area of soil around a tree where a minimum number of roots considered critical to the structural stability or health of the tree are located. CRZ determination is sometimes based on the drip line or a multiple of the DBH, but because root growth can be asymmetric due to site conditions, on-site investigation may be required.

Codominant branches/stems: Forked branches (or trunks), nearly the same size in diameter, arising from a common junction and lacking a normal branch union, may have included bark.

Crown: Upper part of a tree, measured from the lowest branch, including all branches and foliage.

Defect: An imperfection, weakness, or lack of something necessary. In trees defects are injuries, growth patterns, decay, or other conditions that reduce the tree's structural strength.

Diameter at breast height (DBH): Measurement of trunk diameter at 4.5 feet above grade.

Frass: Fecal material and/or wood shavings produced by insects.

Included Bark Attachments (crotches): Bark that becomes imbedded in a crotch (union) between branch and trunk or between codominant stems. Lacks axillary wood and causes a weak attachment.

Live Crown Ratio (LCR): Ratio of the height of the crown containing live foliage to overall height of the tree.

Scaffold branches: Permanent or structural branches that form the scaffold architecture or structure of a tree.

Suppressed: Trees that have been overtopped and occupy an understory position within a group or grove of trees. Suppressed trees often have poor structure.

Tree Protection Zones (TPZ): Defined area within which certain activities are prohibited of restricted to prevent or minimize potential injury to designated trees, especially during construction or development.

Trunk flare: Transition zone from trunk to roots where the trunk expands into the buttress or structural roots.

This Glossary of Terms was adapted from the *Glossary of Arboricultural Terms* (ISA, 2015)

Appendix H- TREE PROTECTION GUIDELINES AND RESTRICTIONS

Protecting Trees During Construction:

1) Before the start of site work, equipment or materials move in, clearing, excavation, construction, or other work on the site, every tree to be retained shall be securely fenced- off as delineated in approved plans. Such fences shall remain continuously in place for the duration of the work undertaken in connection with the development.

2) If the proposed development, including any site work, will encroach upon the tree protection zone, special measures shall be utilized, as approved by the project arborist, to allow the roots to obtain necessary oxygen, water, and nutrients.

3) Underground trenching shall avoid the major support and absorbing tree roots of protected trees. If avoidance is impractical, hand excavation undertaken under the supervision of the project arborist may be required. Trenches shall be consolidated to service as many units as possible. Boring/tunneling under roots should be considered as an alternative to trenching.

4) Concrete or asphalt paving shall not be placed over the root zones of protected trees, unless otherwise permitted by the project arborist.

5) Artificial irrigation shall not occur within the root zone of native oaks, unless deemed appropriate on a temporary basis by the project arborist to improve tree vigor or mitigate root loss.

6) Compaction of the soil within the tree protection zone shall be avoided.

7) Any excavation, cutting, or filling of the existing ground surface within the tree protection zone shall be minimized and subject to such conditions as the project arborist may impose. Retaining walls shall likewise be designed, sited, and constructed to minimize their impact on protected trees.

8) Burning or use of equipment with an open flame near or within the tree protection zone shall be avoided. All brush, earth, and other debris shall be removed in a manner that prevents injury to the tree.

9) Oil, gas, chemicals, paints, cement, stucco or other substances that may be harmful to trees shall not be stored or dumped within the tree protection zone of any protected tree, or at any other location on the site from which such substances might enter the tree protection zone of a protected tree.

10) Construction materials shall not be stored within the tree protection zone of a protected tree.

Project Arborist Duties and Inspection Schedule:

The project arborist is the person(s) responsible for carrying out technical tree inspections, assessment of tree health, structure and risk, arborist report preparation, consultation with designers and municipal planners, specifying tree protection measures, monitoring, progress reports and final inspection.
A qualified project arborist (or firm) should be designated and assigned to facilitate and insure tree preservation practices. He/she/they should perform the following inspections:

Inspection of site: Prior to equipment and materials move in, site work, demolition, landscape construction and tree removal: The project arborist will meet with the general contractor, architect / engineer, and owner or their representative to review tree preservation measures, designate tree removals, delineate the location of tree protection fencing, specify equipment access routes and materials storage areas, review the existing condition of trees and provide any necessary recommendations.

Inspection of site: During excavation or any activities that could affect trees: Inspect site during any activity within the Tree Protection Zones of preserved trees and any recommendations implemented. Assess any changes in the health of trees since last inspection.

Final Inspection of Site: Inspection of site following completion of construction. Inspect for tree health and make any necessary recommendations.

Kurt Fouts shall be the Project Arborist for this project. All scheduled inspections shall include a brief Tree Monitoring report, documenting activities and provided to the City Arborist.

Tree Protection Fencing

Tree Protection fencing shall be installed prior to the arrival of construction equipment or materials. Fence shall be comprised of six -foot chain link fence mounted on eight - foot tall, 1 and 7/8-inch diameter galvanized posts, driven 24 inches into the ground and spaced on a minimum of 10-foot centers. Once established, the fence must remain undisturbed and be maintained throughout the construction process until final inspection.

A final inspection by the City Arborist at the end of the project will be required prior to removing any tree protection fencing.

Tree Protection Signs

All sections of fencing should be clearly marked with signs stating that all areas within the fencing are Tree Protection Zones and that disturbance is prohibited.

Monitoring

Any trenching, construction or demolition that is expected to damage or encounter tree roots should be monitored by the project arborist or a qualified ISA Certified Arborist and should be documented.

The site should be evaluated by the project arborist or a qualified ISA Certified Arborist after construction is complete, and any necessary remedial work that needs to be performed should be noted.

Root Pruning

Root pruning shall be supervised by the project arborist. When roots over two inches in diameter are encountered they should be pruned by hand with loppers, handsaw, reciprocating saw, or chain saw rather than left crushed or torn. Roots should be cut beyond sinker roots or outside root branch junctions and be supervised by the project arborist. When completed, exposed roots should be kept moist with burlap or backfilled within one hour.

Tree Work Standards and Qualifications

All tree work, removal, pruning, planting, shall be performed using industry standards of workmanship as established in the Best Management Practices of the International Society of Arboriculture (ISA) and the American National Standards Institute series, *Safety Requirements in Arboriculture Operations* ANSI Z133-2017,

Contractor licensing and insurance coverage shall be verified.

During tree removal and clearance, sections of the Tree Protection Fencing may need to be temporarily dismantled to complete removal and pruning specifications. After each section is completed, the fencing is to be re-installed.

Trees to be removed shall be cut into smaller manageable pieces consistent with safe arboricultural practices, and carefully removed so as not to damage any surrounding trees or structures. The trees shall be cut down as close to grade as possible. Tree removal is to be performed by a qualified contractor with valid City Business/ State Licenses and General Liability and Workman's Compensation insurance.

Development Site Tree Health Care Measures

RECOMMENDED TO PROVIDE OPTIMUM GROWING CONDITIONS, PHYSIOLOGICAL INVIGORATION AND STAMINA, FOR PROTECTION AND RECOVERY FROM CONSTRUCTION IMPACT.

Establish and maintain TPZ fencing, trunk and scaffold limb barriers for protection from mechanical damage, and other tree protection requirements as specified in the arborist report.

Project arborist to specify site-specific soil surface coverings (wood chip mulch or other) for prevention of soil compaction and loss of root aeration capacity.

Soil, water and drainage management is to follow the ISA BMP for "Managing Trees During Construction" and the ANSI Standard A300(Part 2)- 2011 Soil Management (a. Modification, b. 'Fertilization, c. Drainage.)

Fertilizer / soil amendment product(s) amounts and method of application to be specified by certified arborist.

City of San Jose – Protected Tree

Ordinance-Size Trees

An ordinance-size tree on private property is either:

Single Trunk – 38 inches or more in circumference at 4 ½ feet above ground, or

Multi-Trunk – The combined measurements of each trunk circumference, at 4 ½ feet above ground, add up to 38 inches or more in circumference.

ASSUMPTIONS AND LIMITING CONDITIONS

1. Any legal description provided by the appraiser/consultant is assumed to be correct. No responsibility is assumed for matters legal in character nor is any opinion rendered as the quality of any title.
2. The appraiser/consultant can neither guarantee nor be responsible for accuracy of information provided by others.
3. The appraiser/consultant shall not be required to give testimony or to attend court by reason of this appraisal unless subsequent written arrangements are made, including payment of an additional fee for services.
4. Loss or removal of any part of this report invalidates the entire appraisal/evaluation.
5. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person(s) to whom it is addressed without written consent of this appraiser/consultant.
6. This report and the values expressed herein represent the opinion of the appraiser/consultant, and the appraiser/consultant's fee is in no way contingent upon the reporting of a specified value nor upon any finding to be reported.
7. Sketches. Diagrams. Graphs. Photos. Etc., in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering reports or surveys.
8. This report has been made in conformity with acceptable appraisal/evaluation/diagnostic reporting techniques and procedures, as recommended by the International Society of Arboriculture.
9. When applying any pesticide, fungicide, or herbicide, always follow label instructions.
10. No tree described in this report was climbed, unless otherwise stated. We cannot take responsibility for any defects which could only have been discovered by climbing. A full root collar inspection, consisting of excavating around the tree to uncover the root collar and major buttress roots, was not performed, unless otherwise stated. We cannot take responsibility for any root defects which could only have been discovered by such an inspection.

CONSULTING ARBORIST DISCLOSURE STATEMENT

Arborists are tree specialists who use their education. Knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce risk of living near trees, Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like medicine, cannot be guaranteed.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

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