Arborist Report and Tree Protection Plan

222 South Fremont Street

San Mateo, California

Prepared for:

Ms. Regan Catanzaro Wall Street Properties 922 S. Claremont Street San Mateo, CA 94402

Prepared by:

Uriel Hernandez ISA Certified Arborist WE-11955A

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Wall Street Properties 222 South Fremont Street San Mateo, CA

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Arborist Report and Tree Protection Plan

222 South Fremont Street San Mateo, CA

Introduction and Overview

Ms. Regan Catanzaro of Wall Street Properties contracted me to prepare this Arborist Report and Tree Protection Plan in connection with the redevelopment of 200 South Fremont Street, San Mateo. The site is currently under construction; however, work is on hold due to concerns regarding proper tree protection procedures on the adjacent site of 222 South Fremont Street. 222 South Fremont Street is serving as a staging area for the construction at the adjacent site and is the subject of this report. This project is subject to Sections 13.40, 23.40, and 27.71 of the Municipal Code, therefore Protected Trees are as follows: any trees over 6 inches in diameter on the subject properties (as per SMMC 27.71), Heritage Trees only on neighboring properties (as per SMMC 13.40) and Street Trees of any size in the public right-of-way within 30 feet of the project (as per SMMC 13.40).

The report provides the following information:

- 1. An assessment of the health and structural condition of the trees within the construction staging area (222 South Fremont Street) based on a visual inspection from the ground.
- 2. An evaluation of the impacts to trees based on plans
- 3. Landscape Unit Values (LU) for all trees assessed
- 4. Guidelines for tree preservation during the construction and maintenance phases of development

Tree Assessment Methods

I visited the site on February 18, 2022 and March 19, 2022 to identify the trees on and adjacent to 222 S. Fremont Street which are or may be impacted by construction activities. This included all trees with a trunk diameter of six inches or greater measured 54" above grade on the subject parcel as well as two (2) adjacent street trees.

The assessment procedure consisted of the following steps:

- 1) Identifying each tree's species
- 2) Measuring the trunk diameter at a point 54" above grade (DBH)
- 3) Identifying each tree by a tag number and recording its location on a map
- 4) Evaluating the health of the tree based on a visual inspection from the ground. Tree health is rated Good, Fair or Poor, using the following criteria:

Good: Vigorous growth with foliage of normal size, shape and color. Canopy density 90-100%, little to no dead wood, minor or no pest infestation, little to no decay. Tree is expected to live its natural lifespan.

Fair: All or some of the new growth shoots are shorter than expected for the species. Canopy density 60-90%. Some small branch dieback. Noticeable

pest infestation and/or decay. Tree is not in decline right now, but further stress such as construction impacts, increased pest pressure, drought etc. may cause a decline in health.

Poor: Little to no new growth and significant dieback. Foliage may be undersized, distorted, yellowed or another color abnormal for the species. Canopy density 20-60% or less. Significant dead wood, pest infestation or decay. Tree is not expected to live its natural lifespan.

5) Evaluating the Structure of the tree based on a visual inspection from the ground. Tree Structure is rated Good, Fair or Poor, using the following criteria:

Good: Minor structural flaws may be corrected through pruning. Tree has an upright trunk and a single trunk tapering to a single leader at the top, or a single leader may be easily trained. Most scaffold branches are smaller than the leader, attached to the trunk at angles approaching 45 degrees and are spaced apart on the trunk both vertically and radially. Structure does not contain included bark (bark inside the juncture of multiple trunks). No sign of previous branch failures. Foliage is evenly distributed on the limbs. Symmetrical or mostly symmetrical canopy.

Fair: Some structural flaws not correctable through pruning. Tree may have more than one trunk or leader, trunk may have a slight lean. Scaffold branches may be attached at angles less than 30 degrees and/or may be crowded on the trunk. Structure may have included bark, previous branch failures or end-heavy limbs. Some asymmetry in the canopy.

Poor: Significant structural flaws not correctable through pruning. Significant dead wood or decay. More than one trunk or leader and/or branches crowded together on the trunk. Significantly end-heavy limbs may be present. Structure may contain significant included bark, previous branch failures and/or asymmetry. Precipitous lean may be present. Tree is likely to be hazardous.

6) Rating the Suitability for Preservation of the tree. Suitability for Preservation is based only on the tree itself and not related to potential construction impacts. Rated High, Moderate or Low, using the following criteria:

High: Tree is currently an asset to the landscape and may be expected to survive minor to moderate construction impacts if adequately protected.

Moderate: Tree contributes something to the landscape and may be improved by pruning or other maintenance activities. May be expected to survive minor construction impacts if adequately protected.

Protection measures are probably worth taking except where construction impacts are extensive.

Low: Tree does not contribute to the landscape. It is in poor health and may be hazardous. It is not expected to survive any construction impacts. Some trees with poor viability may be retained if they will not be impacted by construction.

Previous Arborist Reports

The process of developing a property can take multiple years and iterations. The trees associated with this project have been the subject of previous arborist reports. In preparing this report, I reviewed a Tree Survey Report for 727 E 3rd Avenue dated November 20, 2013 and another for 210 S. Fremont Street dated March 1, 2019. Both were created by Master Arborist David L. Babby. Currently, 17 of the 22 trees identified by Babby in 2013 and 2019 have been removed. The status of each tree is listed in **Table 1** and the location of each tree is labelled in **Exhibit B**, with trees that have been removed labeled in red.

The 5 remaining trees of the original 22 are the subject of this report, in addition to 3 other trees which have since achieved Protected status.

Table 1. Status of trees from 2015 Arborist Reports

Tree #	Common Name	Scientific Name	DBH 2015	Status 2022
1	English Walnut	Juglans regia	21	Removed
2	Mulberry	Morus alba	12,10,9	Removed
3	Coast live oak	Quercus agrifolia	26	Removed
4	Plum	Prunus domestica	6,6,4,4,4,3	Removed
5	Scots pine	Pinus sylvestris	11	Removed
6	Fig	Ficus carica	*removed	Removed
7	Coast redwood	Sequoia sempervirens	21	Removed
10	Almond	Prunus amygdalus	15	Removed
11	Catalina cherry	Prunus i. susp. lyonii	6,3	Removed
12	Catalina cherry	Prunus i. susp. lyonii	7,6	Removed
13	Catalina cherry	Prunus i. susp. lyonii	7,7	Removed
14	Olive	Olea europaea	17	Present
15	Chinese pistache	Pistacia chinensis	16	Present
16	Keith Davey Chinese pistache	Pistacia c. 'Keith Davey'	18	Removed
17	Myoporum	Myoporum laetum	7	Present
18	Coast live oak	Quercus agrifolia	16	Present
19	Coast live oak	Quercus agrifolia	15	Present
20	Catalina cherry	Prunus i. susp. lyonii	6	Removed
21	Coast live oak	Quercus agrifolia	7	Removed
22	Coast live oak	Quercus agrifolia	6	Removed

^{*}According to the 2015 Tree Inventory report, Tree #6 was removed some time between 2013 and 2015.

Description of Current Trees

Eight (8) trees representing six (6) species were assessed (**Table 2**). Their approximate locations and assigned numbers are shown in **Exhibit B**.

Two Coast live oaks were assessed and both were defined by City Code as **Heritage Trees**:

Tree #19 was a Coast live oak with a diameter of 21 inches (**Image 1**). It had Fair health and Good structure. Though it lacked a central leader, as is typical of the species, it had a seemingly stable structure and a dense canopy. There was minor dieback of the outer canopy, potentially due to current conditions. At the time of my first site visit, a small Tree Protection Zone was established by a chain link fence approximately 3-6 feet from the trunk. Additionally, netting and straw wattle was wrapped around the trunk. Soil had been piled on the surrounding area within the dripline and critical root zone (**Image 2**).

Tree #18 was also a Coast live oak located in the backyard of the adjacent 717 3rd Ave between the fence line and a backyard tool shed (**Image 3**). In the previous arborist report, tree #18 was incorrectly mapped and shown to be located where Blackwood acacia #23 is located.

Two street trees were assessed: Olive #14 and Chinese pistache #15:

Olive #14 had a diameter of 18 inches (**Image 4**, next page). It was in Poor health and had Poor structure. It had significant structural defects and the base of the tree had grown over the adjacent sidewalk. There was also mechanical damage along the trunk. It was located within the public right-of-way within a 3' planting strip along Fremont Street. During my site visit, a chain link fence delineated the Tree Protection Zone and was located approximately 3-7' from the trunk.

Chinese pistache #15 had a diameter of 17 inches and was also located in the public right-of-way within









a sidewalk cutout (Image 5). It was in fair health and fair structural condition, and had evidence of being previously topped. It was Protected both as a street tree and a Heritage Tree.

Myoporum #17 was also included in previous reports. It had a diameter of 7 inches and was in the backyard of 717 3rd Ave. While still present at the site, it was in overall poor condition.





Three new trees have been included in this report that were not in the previous reports:

Tree #23 was a Blackwood acacia located in the backyard of 717 3rd Ave. It was located near the fence line adjacent to a shed where a previous report incorrectly mapped Coast live oak #18. It had a trunk diameter of 12 inched and was in overall fair condition.

A row of over a dozen glossy privets were located on 717 3rd Ave along the eastern fence line near the driveway (**Image 7**). Two trees (#24 and 25) had six (6) inch trunk diameters and were included in this report.



Suitability for Preservation

Trees that are to be preserved on development sites must be assessed to ensure they can survive development impacts. Suitability for preservation is determined by the following factors:

Tree Health

Healthy trees can better tolerate the impacts of construction including root injury, demolition, changes in soil composition, and soil compaction than less healthy trees.

Structural Integrity

Trees with decay and defects that cannot be corrected are more likely to fail and should not be preserved in locations where damage to people or property can occur.

• Species response

Individual species vary in their tolerance to construction impacts and changes in the environment.

• Tree age and longevity

Older trees can have a limited capacity to adjust to an altered environment.

Each tree was rated for suitability for preservation based upon the criteria outlined in *Tree Assessment Methods* and given a rating of High, Moderate or Low. **Table 2** (following page) provides a summary of suitability, structure, and health ratings.

I consider trees with high suitability for preservation to be the best candidates for preservation. I do not recommend preserving trees with a low suitability for preservation in areas where people or property will be present.

Evaluation of Impacts and Recommendations for Action

Appropriate tree preservation balances the quality and health of trees with the intensity and location of construction activities. The Tree Assessment was the reference point for tree quality and health. Impacts from redevelopment were assessed using the "Site Plan" prepared by Johnson Lyman Architects dated November 20, 2018. Wall Street Properties also provided a "Staging Plan with trees" to identify site uses for the staging area at 222 South Fremont Street.

The Site Plan identifies the construction of a new, multi-story residential complex on the adjacent property, 200 South Fremont Street. This project is currently underway and impacts to trees could be associated with work that has already occurred, including demolition and excavation, as well as planned site use as a staging area.

Foundation excavation has occurred approximately 23' northeast of Coast Live Oak #19, or at a safe distance 13 times the trunk diameter. The distance between Olive #14 and the excavation is safely greater than 10 times the trunk diameter (15'). No additional construction activities will be taking place closer to either tree, other than staging material which will occur outside of my recommended Tree Protection Zones.

Planned site uses for 222 South Fremont Street throughout the remainder of the construction process include the installation of a pump, 2 portable toilets, a construction office, temporary power, and garbage cans. The site will also serve as a parking area.

During my site visit, I observed large (greater than 12' tall) piles of soil located on top of the critical root zone of Coast live oak #19. I also observed straw wattle wrapped around tree #19's trunk. Both elements had been put in place several months ago by a previous contractor. The pile of soil is currently compacting the soil around the tree's roots (as well as tree #18's roots) and should be removed.

All other trees are separated from construction activities by the fence line around the property. Trees #15, 17, and 23 are at a distance from construction activity well beyond 10 times their trunk diameters, and should not be impacted by construction activities. Trees #24 and 25 are roughly 3 feet from the fence line, but are smaller and more vigorous trees which should face minimal impacts from construction. Coast live oak #18 is located in the backyard of the adjacent 717 3rd Ave between the fence line and a backyard tool shed. It should not be directly impacted by construction activity, including staging, if proper Tree Protection Zone protocols are followed.

If the tree preservation recommendations in the following section are adhered to, all trees are likely to survive redevelopment. However, due to the poor condition of Olive #14, I would recommend it be removed and replaced (see Exhibit B.) A permit is required to remove or perform any pruning of a street tree.

Table 2. Tree Inventory Table

Tree No	Common Name	DBH	Heritage Tree?	Overall Condition	Suitability for Preservation	Recommended Action
14	Olive	18	Yes	Poor	Low	Remove & replace
15	Chinese pistache	17	Yes	Fair	Moderate	Preserve
17	Myoporum	7	No	Poor	Low	Preserve
18	Coast live oak	20	Yes	Fair	Moderate	Preserve
19	Coast live oak	21	Yes	Good	High	Preserve
23	Blackwood acacia	12	No	Fair	Moderate	Preserve
24	Glossy privet	6	No	Good	Moderate	Preserve
25	Glossy privet	6	No	Fair	Moderate	Preserve

Landscape Unit Values

Landscape Unit Values (LU) provide a framework to determine the amount and size of trees to replace any trees being removed, per section 27.71.150 of the municipal code. Existing trees to be removed shall be replaced with new trees to equal the total removed LU value. The LU for each tree assessed is listed below in **Table 3**.

The following rates shall be given to replacement trees to obtain the replacement LU value:

LU Value	Replacement Tree Size					
0	None					
1	15-gallon					
2	24-inch box					
3	36-inch box					
4	48-inch box					

LU is determined by the following equation:

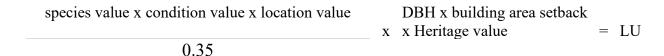


Table 3. Landscape Unit Values

Tree No.	Species	Species Value	Condition Value	Location Value	DBH	Building Area Setback	Heritage Tree Value	LU Value
14	Olive	0.7	0.1	0.7	18	1	1.25	3.15
15	Chinese pistache	0.7	0.5	0.7	17	0.7	1.25	10.41
17	Myoporum	0.3	0.3	0.7	7	1	1	1.26
18	Coast live oak	0.9	0.5	0.7	20	0.7	1.25	15.75
19	Coast live oak	0.9	0.7	0.7	21	0.7	1.25	23.15
23	Blackwood acacia	0.3	0.5	0.7	12	0.7	1	2.52
24	Glossy privet	0.3	0.7	0.7	6	0.7	1	1.76
25	Glossy privet	0.3	0.5	0.7	6	0.7	1	1.26

Alternates to On-Site Replacement: If the required LU value for replacement of existing trees to be removed is not made up with replacement trees on-site, the City shall require that trees be planted in another location on-site or off-site or a contribution of funds be made to the City to be used for plantings on public land or a combination of the above options. If a contribution of funds is required, it shall be the fee as established by resolution of the City Council in the annual Comprehensive Fee Schedule.

Tree Protection Plan

In the City of San Mateo, a tree protection plan is required whenever any Construction Activity is to be performed within a radius equal to ten times the diameter of the tree trunk measured at 54" above grade for any Protected Tree as defined by S.M.M.C. 13.40.030.

The tree protection plan is intended to preserve trees by preventing soil compaction, root loss or damage, bark injury or excessive pruning. The goal of tree preservation is not merely the survival of the trees during development, but the maintenance of tree health and beauty for many years.

During my site visit I was able to speak with the new project contractor. They replaced the former contractor who piled soil in the critical root zone of tree #19. I asked them to temporarily remove the netting and straw wattle from the trunk of tree #19 since work was currently on pause and the wattle had been present for months. I also verbally communicated to them my tree protection recommendations and the need to establish a Tree Protection Zone out to each tree's drip line. Impacts can be minimized by coordinating construction activities inside the Tree Protection Zone.

The recommendations that follow will help reduce impacts to trees from development and maintain and improve their health and vitality throughout the remainder of the construction phases.

The pile of soil in the critical root zone of tree #19 is of greatest concern and should be removed as soon as possible. Appropriate Tree Protection Zones must be established for all trees near construction activities (**Table 4**).

Table 4. Specific Tree Protection Zones

Tree No.	Species	DBH	10 x DBH	Tree Protection Zone
14	Olive	18"	15'	Dripline in all directions
15	Chinese pistache	17"	14' 2"	Fence line
17	Myoporum	7"	5' 10"	Fence line
18	Coast live oak	20"	16' 9"	Dripline on project-side of fence
19	Coast live oak	21"	17' 6"	Dripline in all directions
23	Blackwood acacia	12"	10'	Fence line
24	Glossy privet	6"	5'	Fence line
25	Glossy privet	6"	5'	Fence line

Tree Preservation Instructions

It is the responsibility of the property owner/applicant, General Contractor, and other contractors to know and follow the guidelines for the preservation of trees.

- 1. Remove the pile of soil that is located on the critical root zone of Coast live oak #19.
 - a. This should be done so that no construction vehicles encroach upon the Tree Protection Zone of either tree. The vacated ground should remain uncompacted and covered with root buffers.
 - b. Root buffers shall consist of secured geotextile material covering the area to be protected. Cover the geotextile material with 4 to 6 inches of clean wood chips. Securely install 3/4- inch plywood over the wood chips.
 - c. Type 3 trunk wrap, either vertical timbers or straw wattle, shall be wrapped around the tree trunk during soil removal as a protection measure. Once the pile of soil has been removed and a Tree Protection Zone established, the Type 3 trunk wrap must also be removed.
- 2. A Tree Protection Zone must be established for each tree that will be preserved.
 - a. The Tree Protection Zone will be out to the drip line of trees #14, 18, and #19
 - b. The TPZ of Coast live oaks #18 and 19 shall contain root buffers. Root buffers shall consist of secured geotextile material covering the area to be protected. Cover the geotextile material with 4 to 6 inches of clean wood chips. Securely install 3/4- inch plywood over the wood chips.
 - c. The Tree Protection Zone shall extend to the construction fence line for all other trees
 - d. Fence trees to completely enclose the Tree Protection Zone.
 - e. Fencing shall consist of six (6') foot high chain link fence, mounted on two-inch diameter galvanized iron posts, driven into the ground to a depth of at least two feet at no more than 10-foot spacing.
 - f. The fence shall enclose the entire TPZ of the tree(s) to be protected throughout the life of the construction project. Fencing may not be relocated or removed any sooner without permission of the Consulting Arborist.
 - g. No materials, equipment, spoil, waste, or wash-out water may be deposited, stored, or parked within the Tree Protection Zone
 - h. A sign shall be affixed to the Tree Protection Zone identifying it as a TPZ and prohibiting entry or use of the Tree Protection Zone for storage or parking.
- 3. Any work within the TPZ of a Protected tree it will be supervised by a Project Arborist, and changes to this Protection Plan will require approval from the City Arborist.
- 4. Ensure that all staging site activities occur outside of the Tree Protection Zone. This includes parking vehicles or installing any temporary site feature such as a pump, garbage can, or portable toilet.
- 5. Have the locations of all trees to be preserved and their drip lines indicated on all plans.
- 6. Any plan updates affecting trees should be reviewed by the Consulting Arborist regarding tree impacts.

- 7. Tree Preservation Notes, prepared by the Consulting Arborist, should be included in all plans.
- 8. Underground services including utilities, sub-drains, water, or sewer shall be routed around the Tree Protection Zone. When encroachment cannot be avoided, special construction techniques such as hand digging or tunneling under roots shall be employed where necessary to minimize root injury.
- 9. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.
- 10. If any additional root pruning is necessary, roots shall be cut by manually digging a trench and cutting exposed roots with a sharp saw or other approved root pruning equipment.
- 11. Any tree pruning required must be performed only by a qualified and certified arborist and not by construction personnel.
- 12. Development projects must assure the retention of the services of a certified Arborist (to serve as the Project Arborist) to monitor the site and to be present whenever activities occur which will pose a potential threat to the health of the Protected Trees or whenever any work needs to be done within the Dripline of such tree.

Maintenance of impacted trees

Trees preserved may experience a physical environment from that of pre-development. As a result, tree health and structural stability should be monitored. Occasional pruning, fertilization, mulch, pest management, and irrigation may be required. The monitoring of tree health and structural stability following construction should be made a priority. As trees age, the likelihood of branches or entire trees failing may increase. Therefore, annual inspection for hazards potential is recommended.

Uriel Hernandez

ISA-Certified Arborist WE-11955A

Exhibit A – Tree Assessment

Tree #	Common Name	Scientific Name	DBH (in.)	Tree Health	Tree Structure	Overall Tree Condition	Suitability for Preservation	Comments
14	Olive	Olea europaea	18	Poor	Poor	Poor	Low	Very poor structure. Roots pouring over 3' sidewalk cutout. One sided to NW. Minor mechanical damage to lower trunk. Decay and significant dieback.
15	Chinese pistache	Pistacia chinensis	17	Fair	Fair	Fair	Moderate	In sidewalk cutout, bucking sidewalk. Street tree. Previously topped. Severe epicormic sprouting and removal of sprouts. Small canopy.
17	Myoporum	Myoporum laetum	7	Poor	Fair	Poor	Poor	Off-site, not tagged. Low vitality and poor canopy. In decline. Multiple attachments.
18	Coast live oak	Quercus agrifolia	20	Fair	Fair	Fair	Moderate	Off-site, no tag visible. Trunk bows over shed. Between fence and shed on property line. Buckling fence. Covered in ivy. Off site no tag.rounded form. 15' overhang. Spreading form, leaning over shed
19	Coast live oak	Quercus agrifolia	21	Fair	Good	Good	High	Spreading structure with multiple attachments at 7'. Minor twig dieback in lower canopy. Minimal new growth. Dense canopy. Soil piled under Eastern half of canopy. Excavation approximately 23' NW. Straw wattle wrapped around trunk.
23	Blackwood acacia	Acacia melanoxylon	12	Fair	Fair	Fair	Moderate	Off-site not tagged. 2' from fence. Candelabra form. Upright codominant stems. Previously topped. Dense lower canopy thin upper canopy. Good branch attachment. Overhang 12'
24	Glossy privet	Ligustrum lucidum	6	Good	Fair	Good	Moderate	Off-site, no tag, on fence line, growing into fence, multi attachments at 12' rounded form, 8' overhang.
25	Glossy privet	Ligustrum lucidum	6	Fair	Fair	Fair	Moderate	Off-site, no tag. Located between fence and driveway. Multiple attachments at 7' with narrow attachments. Adjacent to fence. Rounded form

Exhibit B: Tree Protection Plan

