

Arborist Report

Project Site:

411 Clyde Ave
Mountain View, CA
APN: 16057014

Prepared for:

The City of Mountain View
Community Services Department's Forestry and Roadway Division
231 N. Whisman
Mountain View, CA 94043

Prepared by:

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International Society of Arboriculture
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Project Overview

Edge Cloud Link (ECL) will be building a specialized data center in the parking lot behind their current building located at 411 Clyde Ave (see Figure 1, Project Area Map). Permanent fencing will be built around the site at the property edge. A hydrogen tank will be installed and intermittent refueling will be necessary. Space will be needed for the hydrogen tank refueling truck access, firetruck access for surrounding parcels, and garbage truck access to garbage bins. One Canary Island Date Palm (*Phoenix canariensis*) located on the South side of the project area is currently blocking access and safe turnaround for all these vehicles. The Canary Island Date Palm will be removed from and “replaced by” two (2) Western Redbud trees per Mountain View’s requirements for a 2:1 replacement ratio. See the project’s landscape drawings for the placement of the Western Redbud trees.

Assessment Objectives

Perform a Level 2 basic assessment on any tree that may be impacted by construction, including one Canary Island Date Palm (*Phoenix canariensis*) located on the South side of the project area and any other trees surrounding the project site, including but not limited to two Chinese Elm (*Ulmus parvifolia*) and one Liquidambar (*Liquidambar styraciflua*) located on the North side of the project area. This assessment will help determine the species, size (circumference - measured at 54” above the natural grade), and health of each tree, as well as confirm whether or not the Canary Island Date Palm (*Phoenix canariensis*) is a Heritage tree as outlined in Mountain View’s City Code Chapter 32, Article II (see Table 4). A confirmation will be made regarding which property the surrounding trees belong to. A tag will be installed on each tree per ISA standards for the duration of the project review phase and construction phase. Recommendations will be provided for any tree that may be impacted by construction (e.g., relocate, remove, replace, protect). For any trees that need protection, a tree protection plan will be created.

Methods

This tree assessment was conducted by Madeline Warnement, ISA Certified Arborist (WE-13572A), on February 24th, 2023. The scope of work and extent of the project area was provided by Nimesh Patel, Director of A&E of The CBR Group, during the site walk on February 24th, 2023. Starting with the Canary Island Date Palm (*Phoenix canariensis*), a 360 degree walk around was performed on every tree, visually assessing the overall health of the tree while looking for signs of defect or disease (see Table 2). Signs of defect/disease include injury, poor pruning, poor wound closure, girdling roots, limb failure, canopy dieback, fungus, discolored leaves, pest infestation, poor structure, and epicormic growth (secondary growth that originates from the trunk and major branches) (see Table 1). From there, a rating of A-F was given in order to classify the health of the tree. After the completion of the assessment, the diameter at breast height (DBH - 54” above the natural grade) was measured using a Spencer Logging Tape. Circumference was calculated from that measurement.

Results

Of the four trees initially thought to be present on or adjacent to the project site, only three trees remained (see Figure 2). One Chinese Elm (*Ulmus parvifolia*) had been previously removed, leaving only the stump and root ball. It was determined that the cuts were old and that this tree had not been removed recently. The remaining three trees in question were the only trees located within close enough proximity to the project site to possibly be affected by construction (see Figure 3, 4, & 5). Based on the needs of the project and health and safety of the trees, it is recommended that the Canary Island Date Palm (*Phoenix canariensis*) be relocated or removed while the Chinese Elm (*Ulmus parvifolia*) and Liquidambar (*Liquidambar styraciflua*) be protected (see Table 3).

Heritage Tree

There is one Heritage tree on site with a circumference of 135 inches (43 inches in diameter). It is in good health and appears to be thriving, making it a good candidate for relocation. The reason for removal is the need to access the work site during construction with equipment, as well as after construction to upkeep the site and refuel the hydrogen tank. Where the tree is located now would block trucks from being able to access the site. Therefore, it is recommended that the tree be removed/relocated.

Project Impacts on Trees

There are two trees that are within close enough proximity to be impacted by the proposed work. A fence is being constructed around the work site, which will require digging to install fence posts. The digging poses a threat to the roots and trunk of tree # 602 and 603. Mitigation measures will be imposed to prevent these impacts (see Tree Protection Plan below).

Detailed Analysis and Tree Protection Plan for Project Phases

1. **Arborist will be present during construction.** To ensure that no root damage occurs during construction or soil compaction occurs when backfilling, the arborist will be present to monitor the roots and approve work practices around each tree.
2. **Hand digging will be utilized within half of the TPZ.** If digging needs to occur within half of the Tree Protection Zone (TPZ*), hand digging or hydro excavation will be required.

	#602	#603
TPZ (ft)	16.5	21
Half TPZ (ft)	8.25	10.5

3. **Authorization needed if roots must be trimmed.** The arborist must give authorization if any roots must be trimmed. No roots larger than 1 inch in diameter may be cut and a maximum of 4 roots that measure 1 inch may be cut per tree. Proper root pruning practices must be observed and followed by the arborist.

4. **Fencing will be installed around the trunks of each tree.** As a result of the close proximity of the trunk to the proposed fencing, each tree will be wrapped with 2x4 planks of wood and construction fencing. This will be removed after construction.
5. **Damage will be documented.** Any damage to the trees caused by construction will be documented. This includes, but is not limited to, the trimming of any roots or injuries caused to the trunk or branches.
6. **Tree protection fencing will be installed.** Once the fencing for the project is installed and root monitoring has been completed, tree protection fencing will be installed 6 feet out from the trunk of each tree to ensure tree safety throughout the extent of the project. This will be removed after construction.

Post-Construction Mitigation

Once construction has been completed, all fencing around the trees will be removed. Trees will be reassessed for health and thoroughly examined for damage.

Conclusion

After conducting the tree assessments for this project, it can be concluded that the Canary Island Date Palm (*Phoenix canariensis*) can be relocated/removed and the other two trees, the Chinese Elm (*Ulmus parvifolia*) and Liquidambar (*Liquidambar styraciflua*), can be protected (Table 3). As defined in Mountain View's City Code Chapter 32, Article II, a Heritage tree is any tree with a circumference greater than or equal to 48 inches. Therefore, the Canary Island Date Palm (*Phoenix canariensis*) has been confirmed as a Heritage tree with a circumference of 135 inches. All three of these trees have been determined to be located within the project site property.

Contact Info

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*The TPZ was calculated by multiplying the diameter by 1.5ft. For each inch of diameter, you need 1.5ft of protection. This establishes the Critical Root Zone (CRZ). When within half of the CRZ, hand digging or hydro excavation will be required.

Figure 1: Project Area Map

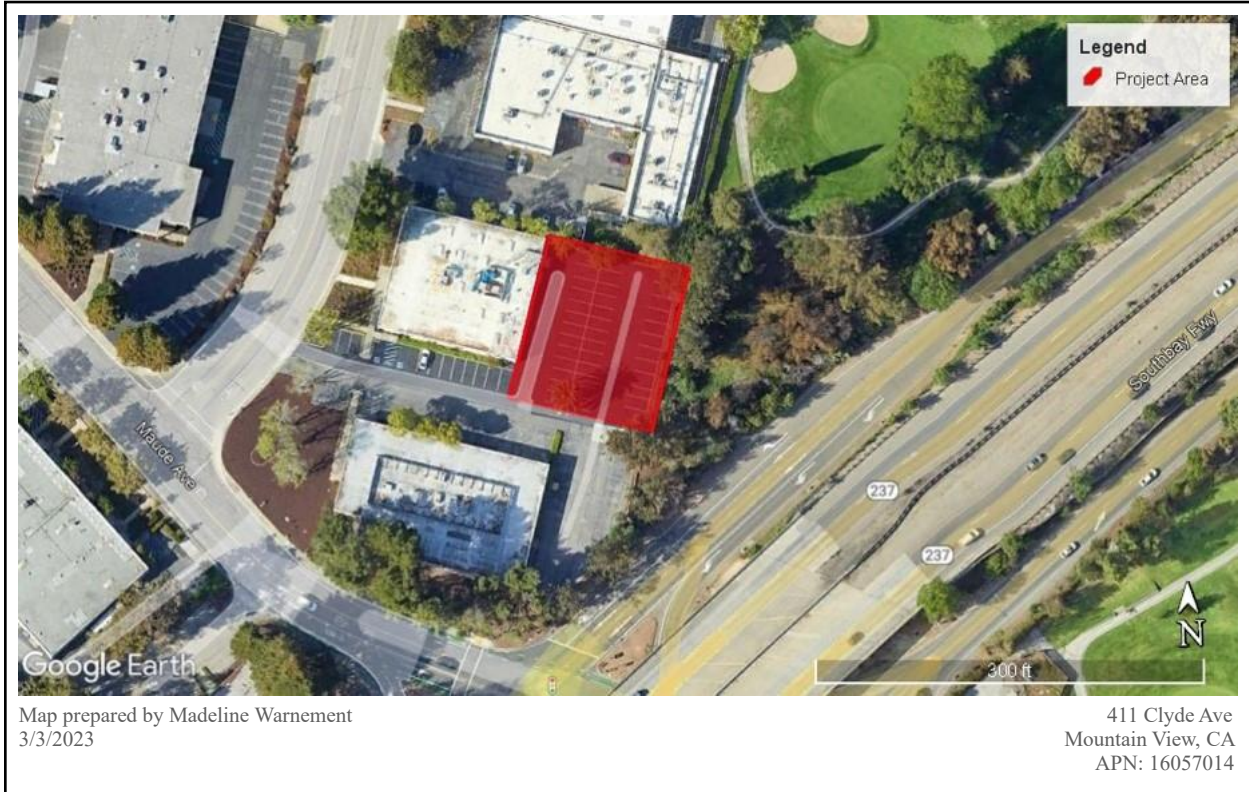
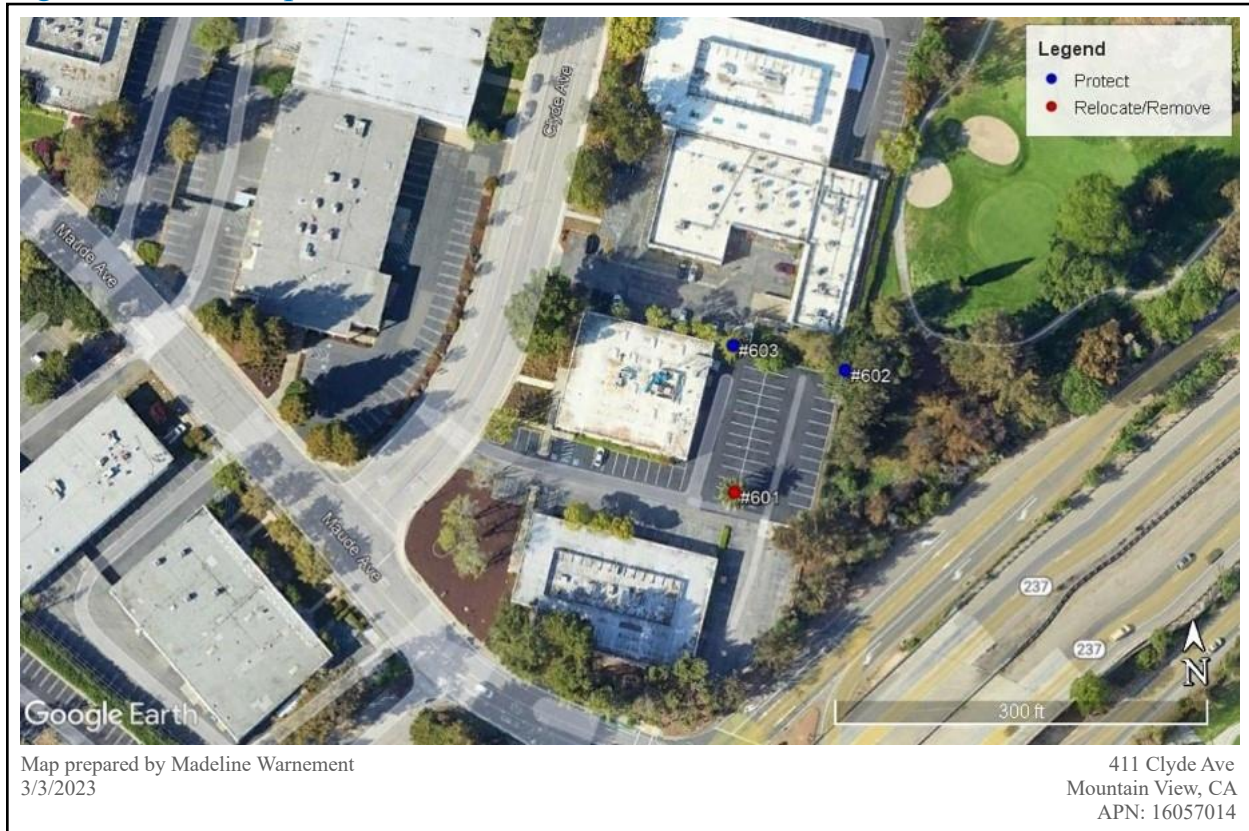


Figure 2: Tree Map



Map prepared by Madeline Warnement
3/3/2023

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Figure 3: #601 - Canary Island Date Palm (*Phoenix canariensis*)



Figure 4: #602 - Chinese Elm (*Ulmus parvifolia*)



Figure 5: #603 - Liquidambar (*Liquidambar styraciflua*)



Table 1: Health Classification

Grade	Description
A	A healthy, vigorous tree, with little to no signs of disease/decline. Good structural integrity and form typical of the species.
B	Overall healthy tree with some signs of disease/decline, structural defects, minor canopy dieback, or poor wound closure.
C	Moderately healthy tree showing clearer signs of disease/decline including poor pruning history, wound closure, leaf discoloration, moderate dieback, or structural defects. Tree can still be salvaged with consistent care.
D	Declining tree with extensive dieback, pest infestation, or epicormic growth; significantly stressed from galls, cankers, burls, or mistletoe. No interventions can save the tree.
E	Actively dying tree with systemic pest infestation, dieback leaving only 15% canopy, or widespread epicormic growth. Tree likely to die within 6 months.
F	Tree is completely dead.

Table 2: Tree Inventory and Canopy Cover (%)

Tree #	Species	Circumference (inches)	Diameter (DBH) (inches)	Health	Recommendation	Cover (%)
601	Canary Island Date Palm (<i>Phoenix canariensis</i>)	135	43	A	Relocate/Remove – blocks access to site	80%
602	Chinese Elm (<i>Ulmus parvifolia</i>)	35	11	C	Protect	20%
603	Liquidambar (<i>Liquidambar styraciflua</i>)	44	14	B	Protect	70%

After a canopy analysis of the proposed new trees, five (5) Silk Tassel Bush (*Garrya E. 'James Roof'*) and two (2) Western Redbud (*Cercis Occidentalis*), please see the following estimates

for five- and ten-year cover: Silk Tassel Bush (5-year) 50-60%, and (10-year) 80-85%. Western Redbud (5-year) 30-40%, and (10-year) 40-50%.

Table 3: Recommendations

Tree #	Recommendation
601	In addition to the high success rate of palm tree relocation, this particular tree is also in good health, making it a good candidate for removal and relocation. There would be no reasonable way to protect this tree in the location it is in.
602	Due to the close proximity of proposed digging for construction, root monitoring during construction is recommended.
603	Due to the close proximity of proposed digging for construction, root monitoring during construction is recommended.

Table 4: Heritage Tree Inventory

Tree #	Species	Circumference (inches)	Diameter (DBH) (inches)	Health
601	Canary Island Date Palm (<i>Phoenix canariensis</i>)	135	43	A