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Ficus Inspection

Nick Araya, Owner, TreeCareLA
ISA Board Certified Master Arborist # WE-7751B
ISA Qualified Tree Risk Assessor
Member, American Society of Consulting Arborists
Office: 323-327-1611 - Cell: 323-384-7770
nick@treecarela.com - www.treecarela.com

On July 11, 2022 , I inspected a ficus tree owned by the City of Culver City at the request of Chris Dyson and Emily Womack of Dyson & Womack, a public art consulting firm.

Objective

The purpose of my visit was to assess the overall health of the tree and to provide preliminary input to an art installation design to protect the tree as much as possible, both during and after construction.

Limitations

This report is based on a visual, ground level inspection. The tree was not climbed. No soil excavation or specialized testing was conducted. All measurements are estimated - no measuring devices were used.

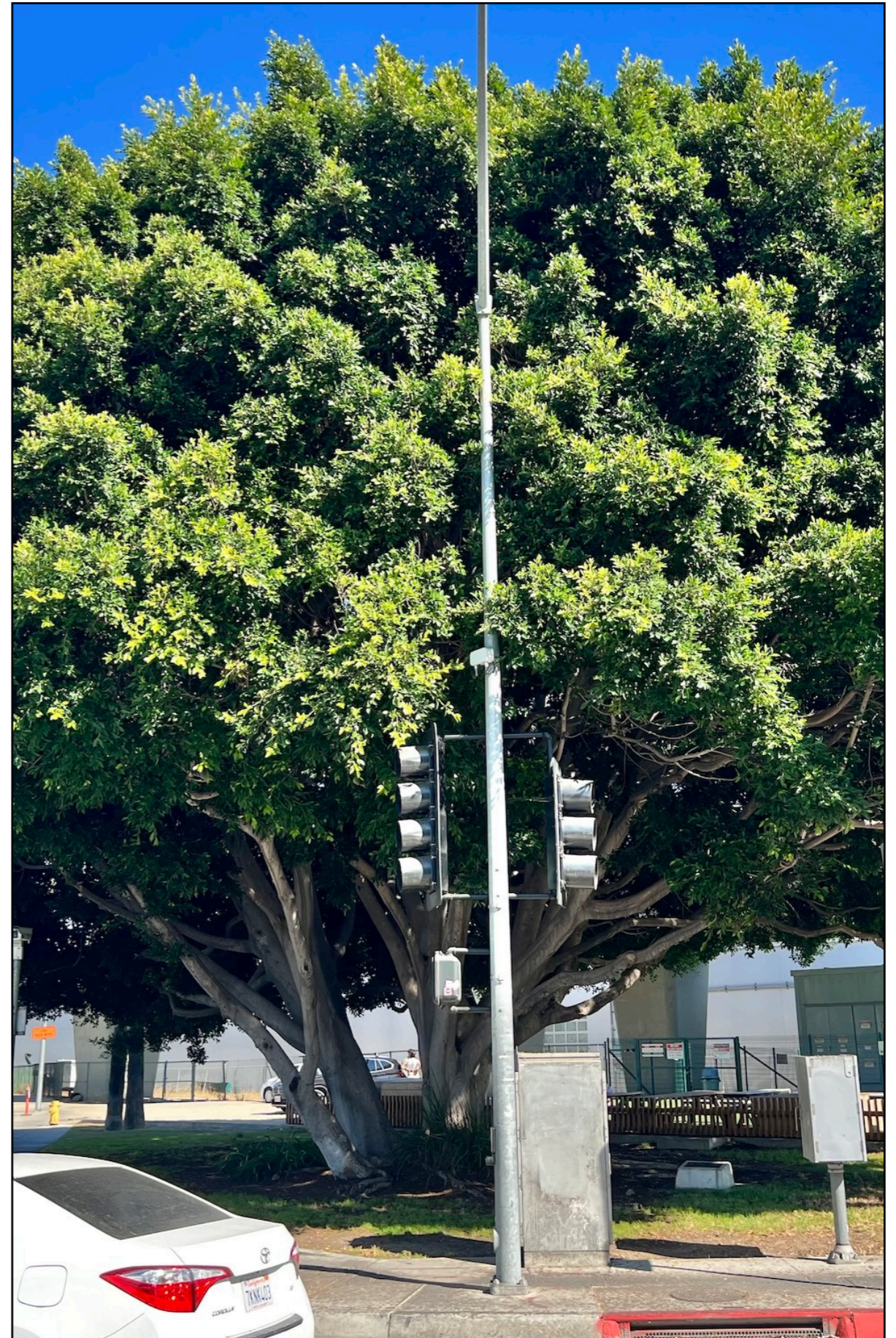


Photo 1: Subject ficus tree.



Photo 2: View of ficus' northeast face.

Observations

The ficus (*Ficus microcarpa*) is located at the south corner of the intersection of Washington and National Boulevards.

The ficus was approximately 35-40 feet tall. The tree consisted of three trunks measuring approximately 36, 30, and 16 inches in diameter at 4.5 feet from ground level (also known as 36, 30, and 16 inches DBH). The tree appeared to be in great condition. The crown was full, no major pests or signs of disease were observed. Overall canopy color was a deep green, indicating good health. There were only some small dead branches observed in the crown.

Roots were visible at the soil surface, extending as much as 15-20 feet and more from the trunks. Natural mulch extended approximately 10 feet around the trunk. The north edge of the drip line (the edge of the leafy canopy) consisted of concrete sidewalk. The south end of the drip line was made up of a wooden fence and artificial turf. A paved parking lot was located at the southeast edge of the drip line. The remainder of the area inside the drip line was grass cover.

Discussion

This is a prominently located tree at a busy intersection of Culver City. A plaque is located under the tree, commemorating the local studios history.

The goal should be to have the art installation happen without the tree even noticing.

Ficus trees commonly have visible surface roots. Tree roots typically extend beyond the drip line, especially in a species like ficus known for having extensive root systems. Given the location of the above-ground roots we can see, this tree likely has roots throughout the entire open soil and lawn area.

The root system is an often-overlooked component of a tree to protect and preserve. In advance of the art installation, if heavy equipment is to be used, a thick layer of mulch (4-6 inches deep, minimum) should be applied over the entire root zone of the tree. A layer of plywood, bolted together, can be laid down over the mulch to keep the mulch in place during construction.

If footings will be installed below-ground, exploratory digging should take place to determine if major roots would be damaged. Flexibility in where the footings are installed will be important. Exploratory digging should be done by hand or with a pneumatic tool like an Airspade that excavates soil without damaging tree roots.

It is my understanding that the art project will involve a grid-like structure getting built and installed within the canopy of the tree, parallel to the small wooden fence. Given the fine branching of the ficus crown, the structure will likely interact with hundreds of branches. For example, the canopy's branch structure about 8 feet north of the small wooden fencing involves branches of 6-8 inches in diameter and some over 12 inches in diameter. As significant limbs, they contribute to the overall health of the tree. The openness of the current project design appears to be able to accommodate many of these significant limbs. In the final design, TreeCareLA can assist the design team in identifying those significant limbs that should be protected.

Small dead branches are a natural cycle that occur in a tree's inner crown as the lower branches get shaded out and die. They are not a concern. These dead branches can be pruned out to make more space to maneuver within the crown without affecting tree health.

The plan is for a permanent installation. Consideration should be made for the expanding diameters of the tree trunks and branches. Trees can grow in diameter by inches each year. They also grow dynamically, sometimes branching off in directions not anticipated. Providing for extra space in the structure can keep it from girdling or choking the limbs over time. Or, the design can incorporate a method to alter the structure in the future as the limbs start to press against it. Regular canopy inspections will be important to assess the tree/structure over time and make adjustments as needed.

Trees are dynamic. The grid will need to be dynamic.

A fungal pathogen called *botryosphaeria* has been found in many *Ficus microcarpa* in Los Angeles. Some say as many as 25% of LA's ficus trees are infected. The disease can be

fatal. To reduce the possibility of infecting this ficus, pruning tools should be sterilized before use.

Understory plants like agapanthus were observed under the tree. These should be removed, as they are high-water need plants that are in opposition to the tree's water needs. Excess, improper watering can lead to tree disease and death.

Primary Recommendations

1. Continue to consult with an ISA Certified Arborist during the design process.
2. Install a thick 6-inch layer of mulch over the entire root zone of the tree and cover with plywood.
3. Ensure grid can be constructed in a way that is modular.
4. Begin exploratory digging for footings.
5. See general guidelines for safeguarding a tree during construction on Page 5 below.
6. Pruning should be done by an ISA Certified Arborist or under the supervision of one. Remove as few live branches as possible. Sterilize tools before pruning to minimize the spread of disease.



Photo 3: The tree consists of three main trunks.



Photo 4: Small wooden fence runs east-west below tree where structure is planned to be installed in the canopy.

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Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance their health and beauty, and attempt to reduce the risk of living near trees. Trees and other plant life are living, changing organisms affected by innumerable factors beyond our control. Trees fail because of conditions we do not fully understand.

Arborists cannot detect or anticipate every condition or event that could possibly lead to the failure of a tree. Conditions are often hidden within the trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, for any specific period or when a tree or its parts may fail. Trees can be managed but not controlled.

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Safeguarding Your Tree During Construction

Trees are a valuable part of your property and can be easily injured during construction. If a healthy tree is your priority, make it a priority for your contractors too. Construction can include building and renovation, retaining walls, pools, turf, decomposed granite (DG), or simply trenching for new irrigation.

It can take months and more often years for your tree to show signs of decline as a result of injury during construction. This makes it difficult to hold anyone financially accountable for damage done. The best thing for you and your tree is to prevent the damage before it occurs.

Most common types of tree injury during construction: These injuries can cause severe damage and result in the tree to decline or die. All should be avoided.

- Root damage - tree roots intentionally or accidentally cut, or damaged by debris or waste being dumped at the base of the tree (leftover paint, liquid concrete, etc.)
- Soil compaction - weight of vehicles, equipment, or supplies compressing the soil
- Physical injury to trunk or canopy - damage to the trunk or branches, often by getting hit by machinery, or branches being removed by folks who don't know they are doing it wrong
- Grade change - Either soil added around the trunk and root zone that restricts the tree's access to oxygen and can cause fungal growth on the trunk. Or, removal of soil that exposes and dries out roots.

Planning for Construction: The complexity of your tree protection plan depends on the complexity of your construction project.

- Meet with an ISA Certified Arborist. Review your construction plans to determine if they might hurt your tree and what modifications can be made to minimize damage. Subtle design differences can often make a tremendous impact. Create a tree protection plan.
- It's very common for contractors to say their work doesn't damage trees. What they mean is, "we don't see the damage we cause to trees because it starts to show long after we're gone." Don't rely on their word. In the long run, it is a small financial price to consult an arborist up front.
- Protect the root zone to keep it free of construction equipment, materials, and debris.
- Guard the area with protective fencing if large vehicles or equipment will be near the tree's canopy.
- Wrap the trunk with protective material such as a combination of foam, 2x4s, and outer straps. Bark wounds are incredibly common and open the tree up to disease.
- Put up signage on the fencing such as "Tree Preservation Area, Entry Prohibited."
- Let your contractors know the tree is your priority and they must work safely around it. Let them budget appropriately to work around your tree.

During Construction: These tasks can be done by you or a tree professional.

- Monitor the site daily to make sure the tree protection zone is being observed.
- Keep the area free of solid debris and liquid waste.
- Bring up concerns or damage immediately with contractors.
- Contact an ISA Certified Arborist if damage is done or if it is determined that the tree must be cut or affected in some way. An arborist can help troubleshoot best options or determine extent of damage and what steps can be taken.

After Construction

- Have an ISA Certified Arborist return to assess the health of the tree. S/he can look for signs of decline or red flags that might signify decline in the future. A plan for proper fertilizing, watering, and other essential tree care can be put together.