

March 15, 2023

| For:        | City of Paso Robles<br>Nate Wyatt<br>Parks/Landscape  |
|-------------|---|
| Site        | 204 18 <sup>th</sup> St. (side of property along Locust)  |
| Plant ID    | Coast Live Oak (Quercus agrifolia)  |
| Task        | Check for structure and soundness   |
| Background: | This tree has a large pocket of decay in an old wound, some concern of possible failure.  |
| Observed:   | <ul> <li><u>Canopy</u> – Foliage is dark color. New growth is somewhat uneven through canopy. Top of canopy is especially thin with some thicker areas lower.</li> <li><u>Branches</u> – Primary scaffold is well attached and angles of branches are good. Spacing between branches is good. No cankers, galls or lesions noted. Canopy branches are somewhat off centered with weight toward the north.</li> <li><u>Trunk</u> – One large wound at about six feet from ground on south side of tree. Wound has large pocket of decay and no wound wood is closing the opening. This wound is below main branches. Area of bark beetle damage near ground level. Damage to cambium in this area. Trunk has definite lean toward north.</li> <li><u>Ground</u> below the tree is highly compacted from parking and activity.</li> </ul> |
| Conclusion: | For right now I do not think this tree is an immediate hazard. Areas of concern are extensive decay in the old wound, lack of new foliage, potential rot and bark beetle damage. There is extensive decay in the old wound, especially as there is no wound wood production. Expect this decay to deepen and further weaken the tree. The lack of new foliage and thinning at the top is concerning. It is possible this is drought related but it is also possible the drought, combined with the vascular system compromised in the area of decay, has led to this condition. It is also possible that root or crown rot has limited growth. Lastly the presence of bark beetle damage indicates that drought or a root/crown problem has left a weak point for bark beetle to infest.  |

Recommendations: Going forward this tree is likely to continue to decline. The decay will get worse and it leaves the tree vulnerable to structural failure. The thinning and bark beetle are related to each other in that the vascular system was compromised either from drought or disease or both. Soil is highly compacted and will contribute to decline. This tree has a somewhat likely to fail hazard value with a high likelihood of striking a target of value such as cars, home, fence or people. **Recommending removal**.

Please see pictures below for more details.



Overall view of the tree. Area of concern is the wound with a large pocket of decay – at arrow. Also note the top is thin especially compared to other Coast Live Oak trees.



This pocket of decay is at least 12 inches deep as the metal probe is 16 inches in length. Horizontally the depth of decay from bark to solid wood is a little over half the tree's diameter.

Two things can be noted in this picture: 1) There is a total consumption of

- 1) There is a total consumption of the wood by the decomposing fungi. This means that the tree is becoming structurally weak.
- There is little wound wood closing this old cut. Wound wood not only closes a wound but lends strength.





Note at the top of the tree the thin foliage. At this time of year foliage should be produced creating a thick mass of foliage. There are tufts where the foliage is quite thick but this should be uniform to the tree. I believe that the tree is in decline and likely to get worse in coming years and become hazardous.



Lean and weight are parallel to the street. As the tree decays further, the off centered weight becomes an issue as there is a lot of leverage put on a structural point that is becoming weaker and weaker.





At the base of the tree, I found bark beetle damage. This damage suggests that either drought or a diseased crown was present and this created the environment for beetle larvae entry. Note the pupae case at arrow. This area had loose bark due to beetle damage.

Sincerely Chris Stier, ISA Certified Arborist, #WE9262-A

\*Assessment was made with observation, history and sound arboricultural and horticultural knowledge. It is always possible that other, or different problems exist that may contribute to the destabilization, decline and death of trees. Sudden failure of a part or the entire tree is possible without being able to see defects or problems during ground inspections. Trees that are large should have periodic inspections and those with defects or problems should be monitored seasonally. Further evaluation may be warranted if the steps above do not work. Pathology tests and other lab analysis are available.