

DATE: July 13, 2024
TO: Dustin Schull, Parks Supervisor, City of Wilsonville
FROM: Morgan Holen, Consulting Arborist
RE: Wilsonville Oregon White Oak Tree Monitoring 2024

MHA24008

Morgan Holen & Associates, LLC was contracted by the City of Wilsonville to conduct a Level 2 Basic Visual Assessment of Oregon white oak (*Quercus garryana*) trees included in the City's inventory of trees located on public property in order to help the City monitor and manage Mediterranean oak borer (*Xyleborus monographus*) (MOB) infestation. This memorandum describes the methodology used and provides a summary of our findings. Individual tree data, map exhibits and photographs are enclosed.

Prior to my fieldwork, I coordinated with the City's Asset Management Coordinator, Andrew Sheehan, to borrow a City-owned iPad with Cartegraph, including a map of the oak trees included in the City's inventory, pre-existing data about these trees, and data collection fields for my assessment. My scope of work was limited to verifying or updating existing health ratings based on the City's classifications of healthy, stressed, in decline, and dead, as well as assigning an overall condition rating of excellent, good, fair, poor, or dead, and noting if signs or symptoms of MOB were observed. Photographs were limited to trees with notable defects or signs or symptoms of MOB. My scope of work did not include adding trees to the City's inventory or updating pre-existing tree size data, except that I did update diameter for tree #25740 to clean up a discrepancy in the City's inventory.

The City's inventory listed 119 Oregon white oaks subject to my assessment. The tree assessment fieldwork was conducted on June 26, 2024, except trees #57629 and #57630 were assessed on June 21, 2024 when I picked up the iPad from Andrew and trees #25740 and #60472 were assessed on July 10, 2024 because I had to coordinate with the City to determine the mapping discrepancy around tree #25740 and coordinate with the construction contractor on the Boeckman Road Corridor Project to arrange access to tree #60472. Data and recommendations are based on conditions existing at the time of the assessment.

Of all 119 inventoried Oregon white oak trees, five no longer exist and one was mis-identified as an Oregon white oak. Trees #187, #12575, #56818 and #60268 no longer exist and there were no signs of a stump in these locations. Tree #60531, listed as a 24-inch diameter oak that received MOB treatment, has since been removed, but the stump remains and there are clear signs of MOB including fine frass, tiny bore holes and galleries in the stump face. Tree #12573 was located, but identified as an English oak (*Quercus robur*) and not assessed.

The 113 standing trees confirmed to be Oregon white oaks were visually assessed in terms of overall health, general condition and signs or symptoms of MOB. The enclosed tree data provides a description of each individual tree. The data is summarized below and has been provided to staff via Cartegraph for internal use. The City's GIS inventory should be updated to reflect changes based on this assessment as well as on-going management activities that may include tree removal and replanting with different tree species. Future monitoring on a periodic basis will be most efficient with an up-to-date inventory.

Table 1 provides a summary of the count of trees by health rating, including 96 generally healthy trees, 13 stressed trees, four trees in decline and no completely dead trees. Table 2 provides a summary of the count of trees by general condition rating, including two trees in excellent condition, 64 trees in good condition, 40 trees in fair condition and seven trees in poor condition.

Table 1. Count of Trees by Health Rating.

Health	2024 Assessment	Percent
Healthy	96	85%
Stressed	13	12%
In Decline	4	3%
Dead	0	0%
Total	113	100%

Table 2. Count of Trees by Condition Rating.

Condition	2024 Assessment	Percent
Excellent	2	2%
Good	40	35%
Fair	64	57%
Poor	7	6%
Total	113	100%

Signs or symptoms of MOB infestation were observed in six standing trees, including:

- Tree #60655, which was previously confirmed to have MOB but has not been treated. Approximately 50% of the canopy is dead. Visual assessment of the tree trunk was inhibited by ivy, but fine frass and an adult MOB were observed in a cobweb in the ivy on the trunk. Due to poor condition and severe decline, this tree is recommended for removal, along with the stump.
- Tree #56833, which was previously confirmed to have MOB and was treated. Progressive decline has advanced since last summer and approximately 80% of the crown is now dead. Fine frass and tiny bore holes were observed, although no adult MOB were seen. This tree is not viable and removal is recommended, along with the stump. When this tree is removed, consider carefully dissecting the wood to look for live or dead MOB, which may help inform how effective the systemic insecticide treatment may be working.
- Three trees where MOB was previously not identified, but these trees were treated. Each is described below and arborist chip mulch is recommended to improve site conditions, along with monitoring on a more frequent basis.
 - Tree #60526, a generally healthy tree in fair condition. This tree has codominant stems with active separation and trunk decay and cables were previously installed for support. A bit of fine frass and a few tiny bore holes were observed, along with bore holes of multiple sizes and an abundance of ant activity indicative of trunk decay.
 - Tree #60529, a stressed tree in fair condition. Fine frass was observed on the lower trunk of east face of east stem, along with a variety of different insects and some oozing foam. No large branch dieback was observed, but the tree has a relatively thin top and numerous epicormic sprouts indicative of stress.
 - Tree #60534, a tree in poor condition with progressive decline including tip dieback, a thin crown, epicormic sprouts, and a history of large branch failure. Fine frass and tiny bore holes were also observed.
- Tree #25743, a generally health tree in fair condition where MOB was not previously identified and the tree has not been treated. No major crown dieback or fine frass was observed, but entrance and exit bore holes of three different sizes were observed at old wounds, with the tiniest holes resembling MOB. Consider systemic insecticide treatment this year, apply arborist chip mulch to improve site conditions, and monitor it on a more frequent basis.

No signs or symptoms of MOB were observed at the other 107 Oregon white oaks, including 19 trees previously treated for MOB and 88 trees that have not been treated. The 19 trees that were treated range in size from 15- to 53-inches in diameter and include 11 trees in good condition and eight trees in fair condition; 18 are classified as generally healthy and one tree, #56832 is classified as stressed with a history of large branch failure, crown decay, one dead scaffold branch with decay that appears to have been dead for a long time, numerous epicormic sprouts, and signs of carpenter worm but no obvious signs or symptoms of MOB. The other 88 trees range in size from 0.5- to 47.5-inches in diameter and include two trees in excellent condition, 53 trees in good condition, 29 trees in fair condition, and four trees in poor condition; 76 are classified as generally healthy, 11 are stressed, and one very small 0.9-inch diameter tree, #25818, is in decline with a dead top, lower trunk damage, wilted leaves, and a small live crown. The stressed trees include 10 small oaks (≤ 4 -inch diameter) with thin crowns, poor growing space, blackberry infestation or trunk damage, and one 18.7-inch diameter tree, #25738, with a high live crown, poor lateral branch distribution, and an abundance of epicormic sprouts.

General recommendations include periodic monitoring for all of the Oregon white oaks at least once every three years to adapt management strategies on an on-going basis, as well as continuing to coordinate with Bartlett Tree Experts to determine if and when to reapply systemic treatments. In addition, the enclosed inventory includes more specific management recommendations for 87 trees, some of which have multiple recommendations to support long-term care and maintenance and improve growing space. These recommendations are summarized below:

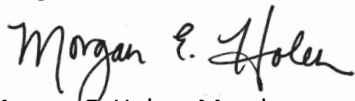
- More frequent monitoring, on an annual basis, for four of the six oaks where signs or symptoms of MOB were observed, including trees #60526, #60529, #60534 and #25743, as well as tree #56832, the stressed oak with no obvious symptoms of MOB but a high susceptibility for infestation.
- Systemic insecticide treatment this year for tree #25743, which was not previously treated.
- Removal of MOB infested trees #60655 and #56833 because they are no longer viable. Tree #56833 could be carefully dissected to look for live or dead MOB to help inform the efficacy of last year's treatment. The stumps of both trees should also be removed by grinding the stumps below ground level.
- Remove the MOB infested stump of tree #60531, remove this tree from the inventory and consider replanting with a different species nearby.
- Arborist Chip Mulch: A 3-inch-deep layer of arborist chip mulch is recommended at 62 trees—located in Piccadilly Park, Edelweiss Park, the WES Transit Station, Murase Plaza Park, and near the Boeckman Dip—to help moderate soil temperature, retain soil moisture, provide soil nutrients, and, in some cases, to keep lawn mowers away from tree trunks. Do not allow the mulch to directly touch the tree trunks and ensure that the mulch does not exceed 4-inch depth (3-inches is ideal).
 - Install arborist chip mulch beneath the driplines of 48 trees where the soil is mostly bare and appears compacted. This includes trees #25563, #25564, #25565, #25566, #25567, #25568, #25569, #25570, #25589, #25719, #25722, #25723, #25724, #25725, #25726, #25727, #25729, #25730, #25731, #25732, #25733, #25734, #25735, #25737, #25738, #25739, #25740, #25741, #25742, #25743, #25744, #25745, #25746, #25816, #25817, #25819, #25820, #25821, #25822, #25823, #56389, #56390, #56392, #56399, #56400, #56402, #57866 and #60472.
 - Remove grass from around the trunks of 14 trees in a minimum 5-foot radius and create a grass-free ring of arborist chip mulch including trees #224, #225, #226, #227, #228, #60526, #60527, #60528, #60529, #60530, #60532, #60533, #60534 and #60535.

- Pruning: at tree #599 to clean the crown of dead wood and broken branches; to remove the 12-inch diameter dead stem from tree #25719; to improve the structure of one codominant stem with a history of leader failure at tree #25563; and, consider pruning the bigleaf maple (*Acer macrophyllum*) tree located adjacent to tree #56389 to improve growing space for the oak.
- Structural Support: install a brace and cables at tree #57630 and consider cabling for tree #56830.
- Adjust sprinkler heads in the lawn around trees #270 and #56367 to avoid spraying the tree trunks and prevent trunk decay.
- Remove blackberries around trees #3988, #56938, #56389, #56390 and #56392.
- Provide supplemental watering during the summer for stressed trees #60400, #60401 and #60402.
- Remove trees #181, #25818, #56394, #56396 and #56508, which are all 3-inches or smaller in diameter, relatively recent plantings, but these trees are already very stressed or in decline. There is insufficient growing space to replant in the vicinity of trees #56394 and #56508 due to competition with other existing trees, but the other three trees could be replaced in the same general locations.
- Remove the support stake and ties at tree #56816.
- Remove trees #187, #12575, #56818 and #60268 from the inventory since they no longer exist and the stumps have been removed. Consider replanting with different species in these locations.
- Change the species of tree #12573 in the inventory to English oak.

The client may choose to accept or disregard the recommendations contained herein, or seek additional advice. Neither this author nor Morgan Holen & Associates, LLC, have assumed any responsibility for liability associated with the trees on or adjacent to these sites.

Thank you for choosing Morgan Holen & Associates, LLC to provide consulting arborist services for the City of Wilsonville. Please contact us if you have question or need any additional information or further assistance.

Thank you,
Morgan Holen & Associates, LLC



Morgan E. Holen, Member
ISA Board Certified Master Arborist, PN-6145B
ISA Tree Risk Assessment Qualified
Forest Biologist

Enclosures: Tree Data
Map Exhibits
Photographs

Assessment Date	Tree No.	Common Name	Scientific Name	DBH ¹	Health Rating ²	Tree Condition ³	PreAssessment MOB Status ⁴	2024 MOB Assessment ⁵	Tree Inspection Notes	Photo No.	Treatment Recommendation
6/26/2024	179	Oregon white oak	<i>Quercus garryana</i>	10.7	Healthy	Good	Unknown	No Signs			
6/26/2024	180	Oregon white oak	<i>Quercus garryana</i>	2.5	Healthy	Good	Unknown	No Signs			
6/26/2024	181	Oregon white oak	<i>Quercus garryana</i>	1.3	Stressed	Fair	Unknown	No Signs	Severe trunk damage, broken leader		Remove tree and stump; replant
6/26/2024	182	Oregon white oak	<i>Quercus garryana</i>	8	Healthy	Good	Unknown	No Signs			
6/26/2024	183	Oregon white oak	<i>Quercus garryana</i>	5.4	Healthy	Good	Unknown	No Signs			
6/26/2024	186	Oregon white oak	<i>Quercus garryana</i>	8.4	Healthy	Good	Unknown	No Signs			
6/26/2024	187	Oregon white oak	<i>Quercus garryana</i>	1.5	No Stump	N/A	Unknown	N/A	No oak tree, no stump		Remove from inventory
6/26/2024	188	Oregon white oak	<i>Quercus garryana</i>	10.8	Healthy	Fair	Unknown	No Signs	Visual assessment limited by blackberries		
6/26/2024	189	Oregon white oak	<i>Quercus garryana</i>	21.8	Healthy	Good	Received Treatment	No Signs			
6/26/2024	190	Oregon white oak	<i>Quercus garryana</i>	29.3	Healthy	Good	Received Treatment	No Signs			
6/26/2024	224	Oregon white oak	<i>Quercus garryana</i>	6.8	Healthy	Good	Unknown	No Signs			Create grass-free ring of arborist chip mulch
6/26/2024	225	Oregon white oak	<i>Quercus garryana</i>	5.9	Healthy	Good	Unknown	No Signs			Create grass-free ring of arborist chip mulch
6/26/2024	226	Oregon white oak	<i>Quercus garryana</i>	6.8	Healthy	Good	Unknown	No Signs			Create grass-free ring of arborist chip mulch
6/26/2024	227	Oregon white oak	<i>Quercus garryana</i>	5.6	Healthy	Good	Unknown	No Signs			Create grass-free ring of arborist chip mulch
6/26/2024	228	Oregon white oak	<i>Quercus garryana</i>	6.2	Healthy	Good	Unknown	No Signs			Create grass-free ring of arborist chip mulch
6/26/2024	270	Oregon white oak	<i>Quercus garryana</i>	7.2	Healthy	Fair	Unknown	No Signs	Tree trunk is getting sprayed from all sides by sprinklers		Adjust sprinklers
6/26/2024	271	Oregon white oak	<i>Quercus garryana</i>	8.1	Healthy	Good	Unknown	No Signs			
6/26/2024	272	Oregon white oak	<i>Quercus garryana</i>	10.7	Healthy	Good	Unknown	No Signs			
6/26/2024	273	Oregon white oak	<i>Quercus garryana</i>	9.6	Healthy	Good	Unknown	No Signs			
6/26/2024	376	Oregon white oak	<i>Quercus garryana</i>	20.9	Healthy	Good	Unknown	No Signs			
6/26/2024	552	Oregon white oak	<i>Quercus garryana</i>	2.5	Healthy	Good	Unknown	No Signs			
6/26/2024	558	Oregon white oak	<i>Quercus garryana</i>	16	Healthy	Good	Unknown	No Signs			
6/26/2024	559	Oregon white oak	<i>Quercus garryana</i>	15	Healthy	Fair	Unknown	No Signs	Dead and broken branches		Prune to clean crown
6/26/2024	560	Oregon white oak	<i>Quercus garryana</i>	19	Healthy	Good	Unknown	No Signs			
6/26/2024	561	Oregon white oak	<i>Quercus garryana</i>	14	Healthy	Good	Unknown	No Signs			
6/26/2024	562	Oregon white oak	<i>Quercus garryana</i>	11.5	Healthy	Good	Unknown	No Signs			
6/26/2024	1053	Oregon white oak	<i>Quercus garryana</i>	3.5	Healthy	Good	Unknown	No Signs			
6/26/2024	1054	Oregon white oak	<i>Quercus garryana</i>	3	Healthy	Fair	Unknown	No Signs			
6/26/2024	3988	Oregon white oak	<i>Quercus garryana</i>	2.5	Healthy	Good	Unknown	No Signs	Limited visual assessment, lower trunk completely surrounded by blackberries and dense vegetation		Remove blackberries
6/26/2024	12573	English oak	<i>Quercus robur</i>	3.5	N/A	N/A	Unknown	N/A	Changed species to English oak; not assessed		Change species in inventory

Assessment Date	Tree No.	Common Name	Scientific Name	DBH ¹	Health Rating ²	Tree Condition ³	PreAssessment MOB Status ⁴	2024 MOB Assessment ⁵	Tree Inspection Notes	Photo No.	Treatment Recommendation
6/26/2024	12575	Oregon white oak	<i>Quercus garryana</i>	2.7	No Stump	N/A	Unknown	N/A	No signs of an Oregon white oak stump, there is an English oak sprouting up here		Remove from inventory
6/26/2024	25563	Oregon white oak	<i>Quercus garryana</i>	53	Healthy	Good	Received Treatment	No Signs	History of leader failure in one codominant stem, prune to improve structure	1	Crown pruning; arborist chip mulch
6/26/2024	25564	Oregon white oak	<i>Quercus garryana</i>	26.8	Healthy	Good	Received Treatment	No Signs			Arborist chip mulch
6/26/2024	25565	Oregon white oak	<i>Quercus garryana</i>	21.5	Healthy	Good	Received Treatment	No Signs			Arborist chip mulch
6/26/2024	25566	Oregon white oak	<i>Quercus garryana</i>	15.3	Healthy	Fair	Received Treatment	No Signs	Small dead branches		Arborist chip mulch
6/26/2024	25567	Oregon white oak	<i>Quercus garryana</i>	25.9	Healthy	Good	Received Treatment	No Signs			Arborist chip mulch
6/26/2024	25568	Oregon white oak	<i>Quercus garryana</i>	20	Healthy	Good	Received Treatment	No Signs			Arborist chip mulch
6/26/2024	25569	Oregon white oak	<i>Quercus garryana</i>	12.8	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25570	Oregon white oak	<i>Quercus garryana</i>	23.1	Healthy	Good	Received Treatment	No Signs			Arborist chip mulch
6/26/2024	25589	Oregon white oak	<i>Quercus garryana</i>	34.3	Healthy	Good	Received Treatment	No Signs			Arborist chip mulch
6/26/2024	25719	Oregon white oak	<i>Quercus garryana</i>	20	Healthy	Good	Unknown	No Signs	12" codominant stem with dead top and decay	2	Prune to remove dead 12" stem; arborist chip mulch
6/26/2024	25722	Oregon white oak	<i>Quercus garryana</i>	13.8	Healthy	Fair	Unknown	No Signs	Lower trunk wound with hollows on NW face	3	Arborist chip mulch
6/26/2024	25723	Oregon white oak	<i>Quercus garryana</i>	28	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25724	Oregon white oak	<i>Quercus garryana</i>	19.3	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25725	Oregon white oak	<i>Quercus garryana</i>	36.5	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25726	Oregon white oak	<i>Quercus garryana</i>	21.9	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25727	Oregon white oak	<i>Quercus garryana</i>	47.5	Healthy	Excellent	Unknown	No Signs			Arborist chip mulch
6/26/2024	25729	Oregon white oak	<i>Quercus garryana</i>	29	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25730	Oregon white oak	<i>Quercus garryana</i>	30.9	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25731	Oregon white oak	<i>Quercus garryana</i>	16.7	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25732	Oregon white oak	<i>Quercus garryana</i>	25.6	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25733	Oregon white oak	<i>Quercus garryana</i>	21.7	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25734	Oregon white oak	<i>Quercus garryana</i>	38.4	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25735	Oregon white oak	<i>Quercus garryana</i>	28	Healthy	Fair	Unknown	No Signs	History of branch failure		Arborist chip mulch
6/26/2024	25737	Oregon white oak	<i>Quercus garryana</i>	23.3	Healthy	Fair	Unknown	No Signs			Arborist chip mulch
6/26/2024	25738	Oregon white oak	<i>Quercus garryana</i>	18.7	Stressed	Poor	Unknown	No Signs	Three codominant leaders with high live crown, few lateral limbs, almost entirely epicormic sprouts, dead ~6" branch on west face likely not from MOB	4	Arborist chip mulch
6/26/2024	25739	Oregon white oak	<i>Quercus garryana</i>	21.3	Healthy	Fair	Unknown	No Signs			Arborist chip mulch
7/10/2024	25740	Oregon white oak	<i>Quercus garryana</i>	30	Healthy	Good	Unknown	No Signs	Updated DBH to 30" due to inventory discrepancy		Arborist chip mulch
6/26/2024	25741	Oregon white oak	<i>Quercus garryana</i>	32.2	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25742	Oregon white oak	<i>Quercus garryana</i>	21.5	Healthy	Fair	Unknown	No Signs			Arborist chip mulch

Assessment Date	Tree No.	Common Name	Scientific Name	DBH ¹	Health Rating ²	Tree Condition ³	PreAssessment MOB Status ⁴	2024 MOB Assessment ⁵	Tree Inspection Notes	Photo No.	Treatment Recommendation
6/26/2024	25743	Oregon white oak	<i>Quercus garryana</i>	23.1	Healthy	Fair	Unknown	Possible Symptoms	No major dieback or frass, but tiny exit holes of three different sizes observed at old wounds; tiniest holes likely MOB	5,6	Monitor more frequently; arborist chip mulch; insecticide treatment
6/26/2024	25744	Oregon white oak	<i>Quercus garryana</i>	13.3	Healthy	Fair	Unknown	No Signs			Arborist chip mulch
6/26/2024	25745	Oregon white oak	<i>Quercus garryana</i>	28.4	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25746	Oregon white oak	<i>Quercus garryana</i>	17.7	Healthy	Fair	Unknown	No Signs			Arborist chip mulch
6/26/2024	25747	Oregon white oak	<i>Quercus garryana</i>	12.7	Healthy	Good	Unknown	No Signs			
6/26/2024	25751	Oregon white oak	<i>Quercus garryana</i>	14.5	Healthy	Good	Unknown	No Signs			
6/26/2024	25816	Oregon white oak	<i>Quercus garryana</i>	0.8	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25817	Oregon white oak	<i>Quercus garryana</i>	0.9	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25818	Oregon white oak	<i>Quercus garryana</i>	0.9	In Decline	Poor	Unknown	No Signs	Small oak with dead top, lower trunk damage, wilted leaves, small live crown	7	Remove tree and stump; replant
6/26/2024	25819	Oregon white oak	<i>Quercus garryana</i>	0.8	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25820	Oregon white oak	<i>Quercus garryana</i>	0.7	Healthy	Good	Unknown	No Signs	Codominant leaders		Arborist chip mulch
6/26/2024	25821	Oregon white oak	<i>Quercus garryana</i>	0.8	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	25822	Oregon white oak	<i>Quercus garryana</i>	0.8	Healthy	Fair	Unknown	No Signs	Dead branches		Arborist chip mulch
6/26/2024	25823	Oregon white oak	<i>Quercus garryana</i>	1	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	56367	Oregon white oak	<i>Quercus garryana</i>	9	Healthy	Fair	Unknown	No Signs	Tree trunk is getting sprayed from all sides by sprinklers		Adjust sprinklers
6/26/2024	56389	Oregon white oak	<i>Quercus garryana</i>	4	Stressed	Fair	Unknown	No Signs	Inaccessible, surrounded by dense blackberries and overcrowded by adjacent bigleaf maple		Remove blackberries; prune maple for better clearance; arborist chip mulch
6/26/2024	56390	Oregon white oak	<i>Quercus garryana</i>	3	Stressed	Fair	Unknown	No Signs	Inaccessible, surrounded by dense blackberries		Remove blackberries; arborist chip mulch
6/26/2024	56392	Oregon white oak	<i>Quercus garryana</i>	3.6	Healthy	Fair	Unknown	No Signs	Blackberries growing into crown		Remove blackberries; arborist chip mulch
6/26/2024	56394	Oregon white oak	<i>Quercus garryana</i>	3	Stressed	Poor	Unknown	No Signs	Was nearly overgrown with blackberries that have mostly been removed since, small live crown, adjacent madrone is growing with lean and the oak does not have sufficient growing space		Remove tree and stump
6/26/2024	56396	Oregon white oak	<i>Quercus garryana</i>	0.5	Stressed	Poor	Unknown	No Signs	Was nearly overgrown with blackberries that have mostly been removed since, very small live crown, codominant leaders		Remove tree and stump; replant
6/26/2024	56399	Oregon white oak	<i>Quercus garryana</i>	1.2	Healthy	Fair	Unknown	No Signs			Arborist chip mulch
6/26/2024	56400	Oregon white oak	<i>Quercus garryana</i>	3.5	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	56402	Oregon white oak	<i>Quercus garryana</i>	5	Healthy	Fair	Unknown	No Signs			Arborist chip mulch
6/26/2024	56403	Oregon white oak	<i>Quercus garryana</i>	4.5	Healthy	Fair	Unknown	No Signs			

Assessment Date	Tree No.	Common Name	Scientific Name	DBH ¹	Health Rating ²	Tree Condition ³	PreAssessment MOB Status ⁴	2024 MOB Assessment ⁵	Tree Inspection Notes	Photo No.	Treatment Recommendation
6/26/2024	56508	Oregon white oak	<i>Quercus garryana</i>	2.3	Stressed	Fair	Unknown	No Signs	Overcrowded by adjacent ponderosa pine, insufficient growing space		Remove tree and stump
6/26/2024	56520	Oregon white oak	<i>Quercus garryana</i>	1.7	Healthy	Good	Unknown	No Signs			
6/26/2024	56604	Oregon white oak	<i>Quercus garryana</i>	6.3	Healthy	Good	Unknown	No Signs			
6/26/2024	56815	Oregon white oak	<i>Quercus garryana</i>	1.3	Healthy	Good	Unknown	No Signs			
6/26/2024	56816	Oregon white oak	<i>Quercus garryana</i>	0.8	Stressed	Fair	Unknown	No Signs	Severe lower trunk damage, lean, stake support not removed but also not functioning		Remove stake
6/26/2024	56818	Oregon white oak	<i>Quercus garryana</i>	1.1	No Stump	N/A	Unknown	N/A	No oak tree, no stump		Remove from inventory
6/26/2024	56822	Oregon white oak	<i>Quercus garryana</i>	5.5	Healthy	Fair	Unknown	No Signs	Suppressed beneath dominant ash canopy		
6/26/2024	56824	Oregon white oak	<i>Quercus garryana</i>	14	Healthy	Fair	Unknown	No Signs			
6/26/2024	56830	Oregon white oak	<i>Quercus garryana</i>	38	Healthy	Fair	Received Treatment	No Signs	Codominant stems	8	Consider bracing
6/26/2024	56832	Oregon white oak	<i>Quercus garryana</i>	36.8	Stressed	Fair	Received Treatment	No Signs	History of large branch failure, crown decay, large old dead and decaying scaffold branch, numerous epicormic sprouts, signs of carpenter worm but no obvious signs or symptoms of MOB	9	More frequent monitoring
6/26/2024	56833	Oregon white oak	<i>Quercus garryana</i>	49.4	In Decline	Poor	Confirmed MOB; Received Treatment	Signs	Progressive decline is advancing, ~80% of crown is now dead, not viable, lots of fine frass and tiny bore holes, no insect sighting though so maybe treatment is working to kill them (cut it down and dissect)	10,11	Remove tree & dissect for MOB
6/26/2024	56834	Oregon white oak	<i>Quercus garryana</i>	3.1	Healthy	Good	Unknown	No Signs			
6/26/2024	56871	Oregon white oak	<i>Quercus garryana</i>	1.8	Healthy	Fair	Unknown	No Signs			
6/26/2024	56938	Oregon white oak	<i>Quercus garryana</i>	4.7	Healthy	Fair	Unknown	No Signs	Surrounded by blackberries		Remove blackberries
6/26/2024	57320	Oregon white oak	<i>Quercus garryana</i>	7.7	Healthy	Excellent	Unknown	No Signs			
6/21/2024	57629	Oregon white oak	<i>Quercus garryana</i>	20.7	Healthy	Good	Unknown	No Signs			
6/21/2024	57630	Oregon white oak	<i>Quercus garryana</i>	32.5	Healthy	Good	Unknown	No Signs	Codominant stems with included bark, MH has observed a squirrel crawling into this juncture; mistletoe; MH observes that this tree leafs out relatively late each year	12	Cable and Brace
6/26/2024	57866	Oregon white oak	<i>Quercus garryana</i>	1.5	Healthy	Good	Unknown	No Signs			Arborist chip mulch
6/26/2024	57876	Oregon white oak	<i>Quercus garryana</i>	1.5	Healthy	Good	Unknown	No Signs			
6/26/2024	60268	Oregon white oak	<i>Quercus garryana</i>		No Stump	N/A	Unknown	N/A	No oak tree, no stump		Remove from inventory
6/26/2024	60400	Oregon white oak	<i>Quercus garryana</i>		Stressed	Fair	Unknown	No Signs	Relatively thin crown		Provide supplemental watering
6/26/2024	60401	Oregon white oak	<i>Quercus garryana</i>		Stressed	Fair	Unknown	No Signs	Relatively thin crown		Provide supplemental watering
6/26/2024	60402	Oregon white oak	<i>Quercus garryana</i>		Stressed	Fair	Unknown	No Signs	Relatively thin crown		Provide supplemental watering

Assessment Date	Tree No.	Common Name	Scientific Name	DBH ¹	Health Rating ²	Tree Condition ³	PreAssessment MOB Status ⁴	2024 MOB Assessment ⁵	Tree Inspection Notes	Photo No.	Treatment Recommendation
7/10/2024	60472	Oregon white oak	<i>Quercus garryana</i>	45	Healthy	Good	Received Treatment	No Signs	Small dead branches		Arborist chip mulch
6/26/2024	60526	Oregon white oak	<i>Quercus garryana</i>	46	Healthy	Fair	Received Treatment	Signs	Crown is relatively healthy but codominant stems with active separation and trunk decay, three cables have been installed; a bit of fine frass and a few tiny bore holes observed, along with bore holes of multiple sizes and a lot of ant activity	13,14	Monitor more frequently; create grass-free ring of arborist chip mulch
6/26/2024	60527	Oregon white oak	<i>Quercus garryana</i>	31	Healthy	Fair	Received Treatment	No Signs			Create grass-free ring of arborist chip mulch
6/26/2024	60528	Oregon white oak	<i>Quercus garryana</i>	27	Healthy	Good	Received Treatment	No Signs			Create grass-free ring of arborist chip mulch
6/26/2024	60529	Oregon white oak	<i>Quercus garryana</i>	25	Stressed	Fair	Received Treatment	Signs	Fine frass on lower trunk of east face of east stem, along with lots of different insect activity and oozing foam, no large branch dieback but relatively thin top and numerous epicormics	15	Monitor more frequently; create grass-free ring of arborist chip mulch
6/26/2024	60530	Oregon white oak	<i>Quercus garryana</i>	35	Healthy	Fair	Received Treatment	No Signs			Create grass-free ring of arborist chip mulch
6/26/2024	60531	Oregon white oak	<i>Quercus garryana</i>	24	Stump	N/A	Received Treatment	Signs	This tree was removed but the stump remains and there are clear signs of MOB including fine frass, tiny bore holes and galleries in the stump face	16	Remove stump
6/26/2024	60532	Oregon white oak	<i>Quercus garryana</i>	18.5	Healthy	Fair	Received Treatment	No Signs			Create grass-free ring of arborist chip mulch
6/26/2024	60533	Oregon white oak	<i>Quercus garryana</i>	24	Healthy	Fair	Received Treatment	No Signs			Create grass-free ring of arborist chip mulch
6/26/2024	60534	Oregon white oak	<i>Quercus garryana</i>	48	In Decline	Poor	Received Treatment	Signs	Tip dieback, thin crown, epicormics, history of large branch failure, fine frass and tiny bore holes	17	Monitor more frequently; create grass-free ring of arborist chip mulch
6/26/2024	60535	Oregon white oak	<i>Quercus garryana</i>	44	Healthy	Fair	Received Treatment	No Signs	Codominant stems with active separation, tree has been cabled and braced		Create grass-free ring of arborist chip mulch
6/26/2024	60655	Oregon white oak	<i>Quercus garryana</i>		In Decline	Poor	Confirmed MOB	Signs	~50% of canopy is dead, assessment of trunk inhibited by ivy but fine frass and a MOB observed in a cobweb in the ivy on the trunk	18,19	Remove tree and stump

¹DBH is diameter at breast height measured 4.5-feet above ground level, as recorded in the City's GIS Inventory; no updates to DBH were made during this 2024 assessment, except DBH was corrected for tree #25740.

²Health Rating is based on City defined classifications of Healthy, Stressed, In Decline or Dead. Trees that have been removed are classified based on the presence of a stump, either Stump or No Stump.

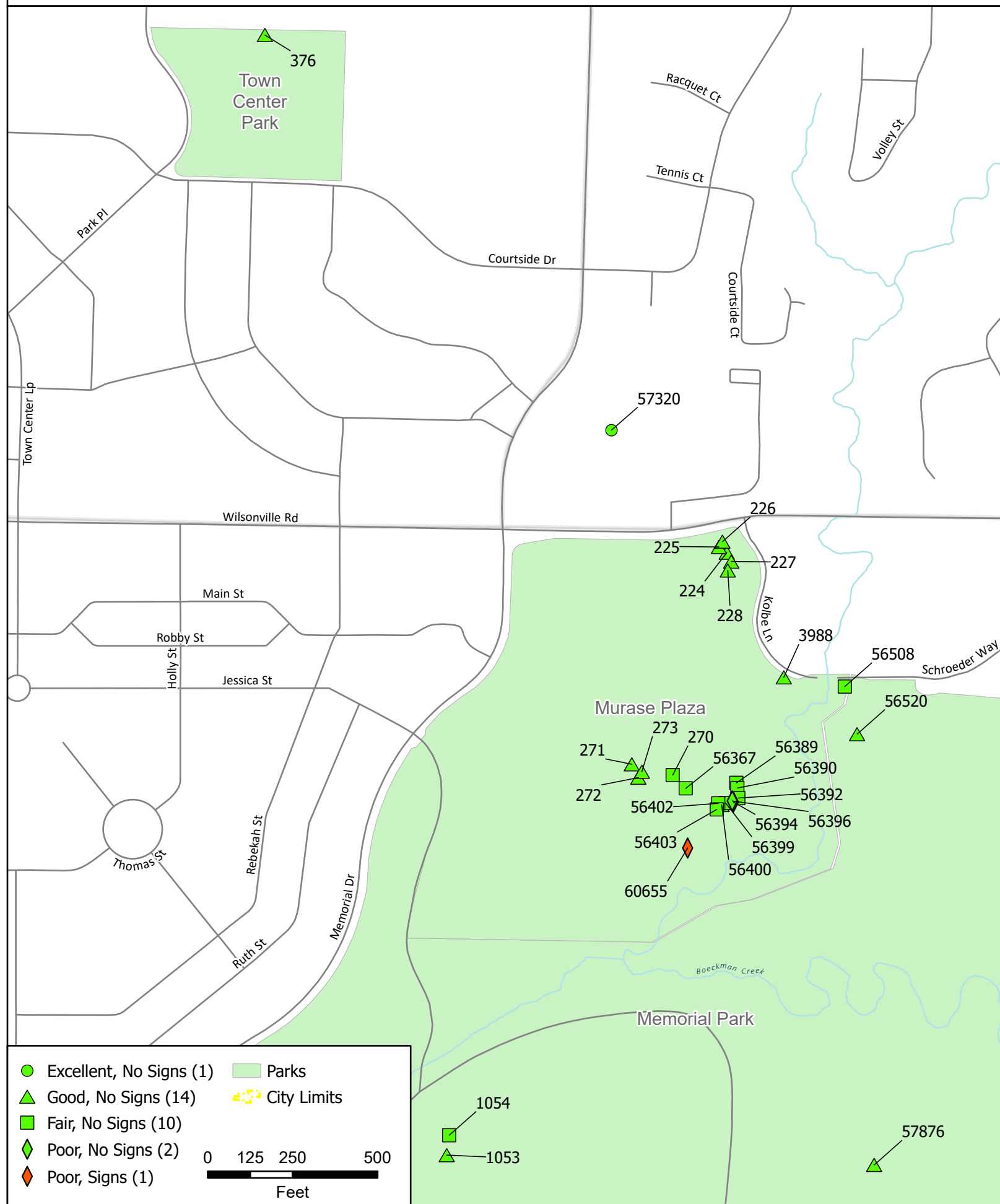
³Tree Condition is an overall rating of general tree condition categorized as Excellent, Good, Fair, Poor or Dead.

⁵Pre-Assessment MOB Status lists City collected data prior to this 2024 assessment noting whether trees were previously confirmed to have MOB (Mediterranean oak borer) or received MOB treatment in 2023.



Oregon White Oak MOB Assessment 2024

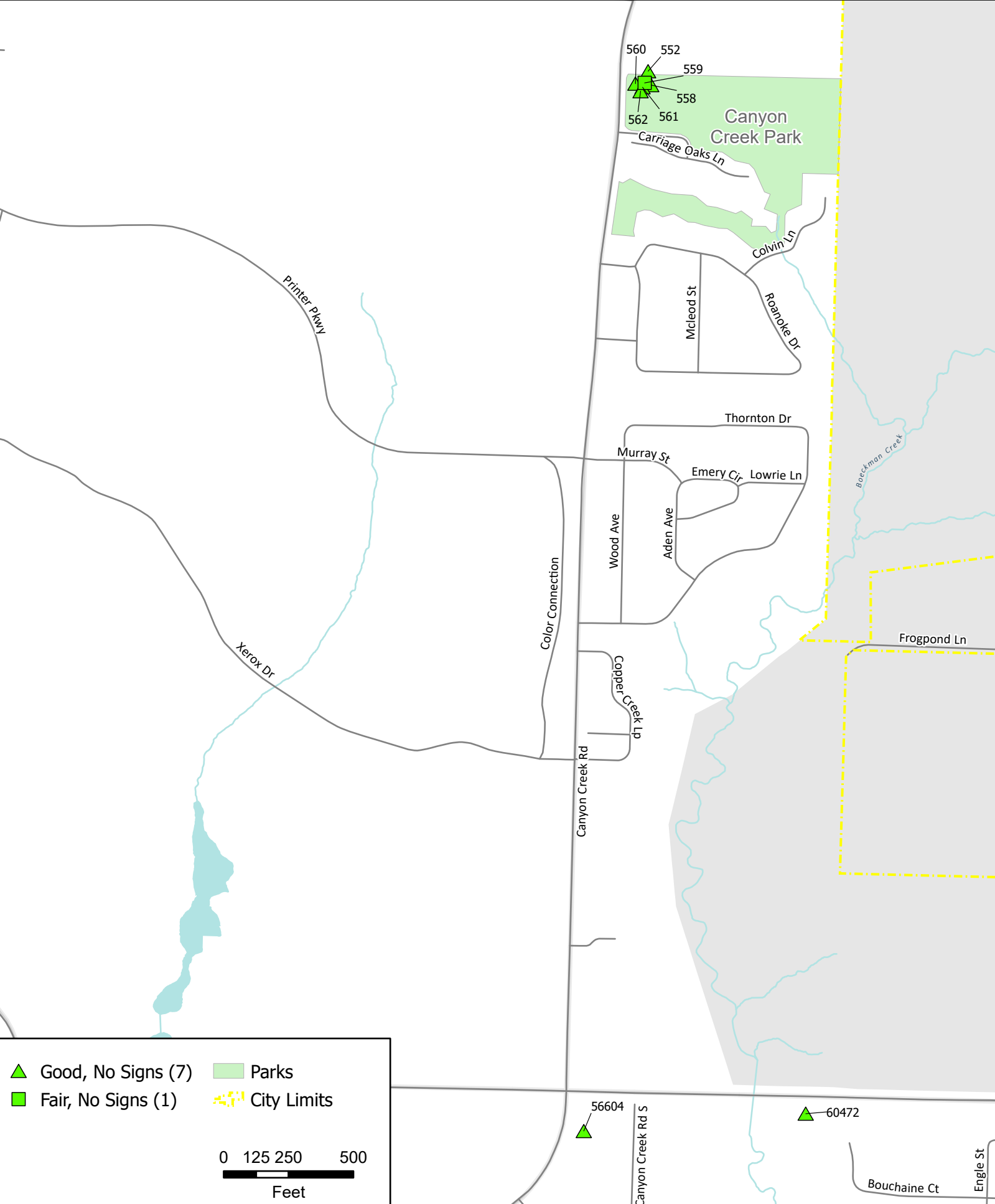
Murase Plaza/Memorial Park/Town Center Park





Oregon White Oak MOB Assessment 2024

Canyon Creek Park/Boeckman Rd

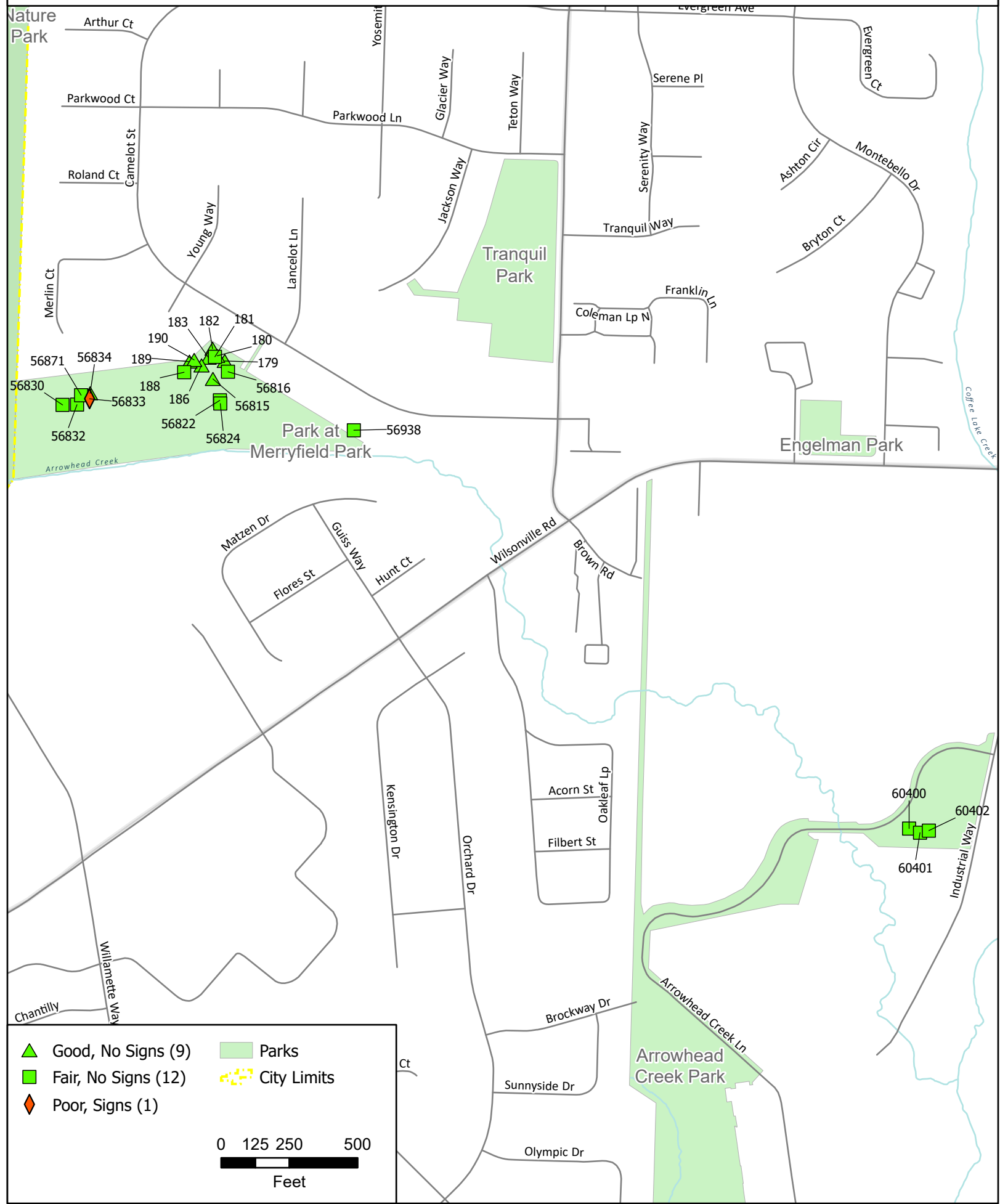


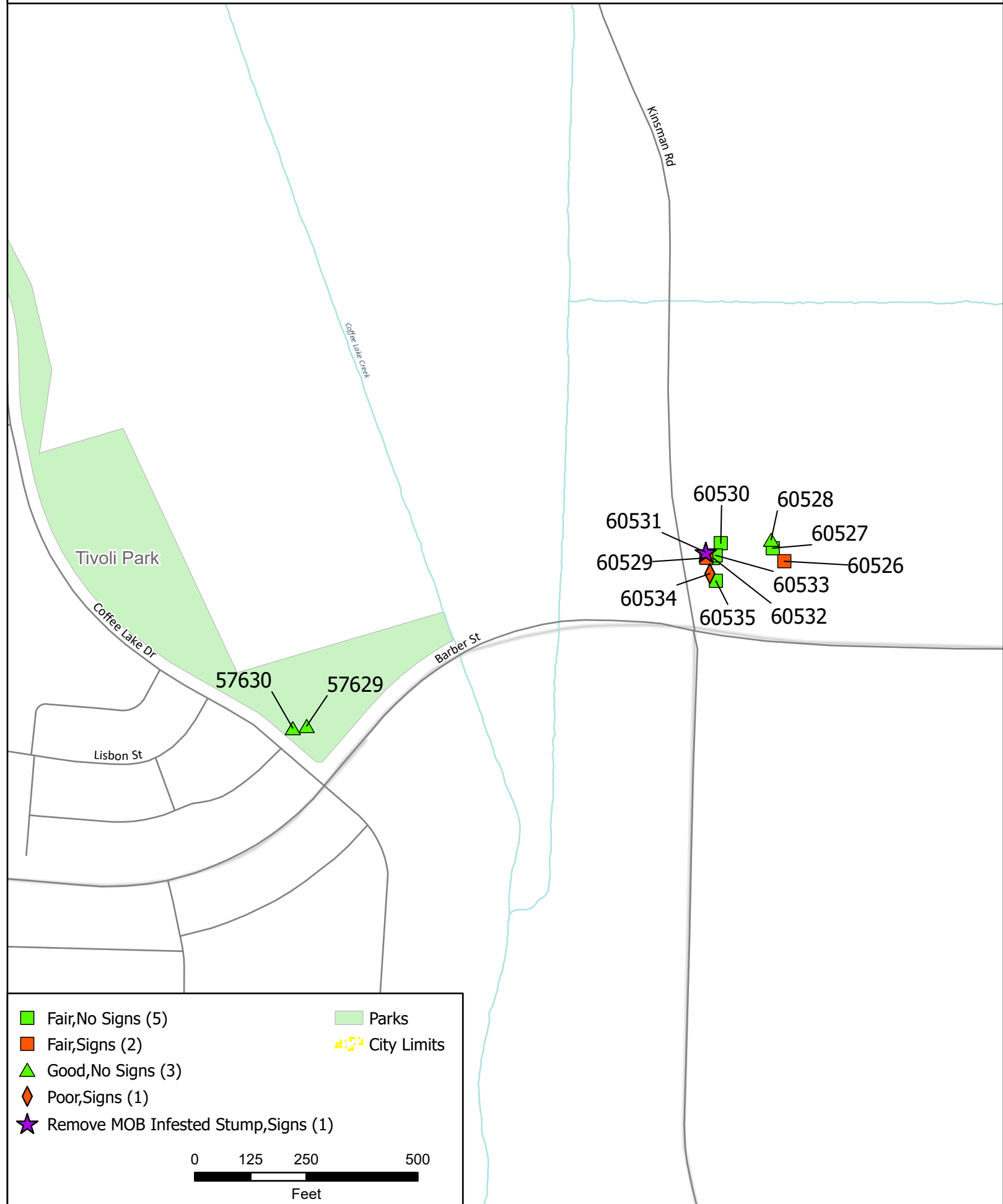
	Good, No Signs (7)		Parks
	Fair, No Signs (1)		City Limits

0 125 250 500
Feet



Oregon White Oak MOB Assessment Park at Merryfield/Arrowhead Creek Park





Oregon White Oak MOB Assessment 2024

West Villebois Parks

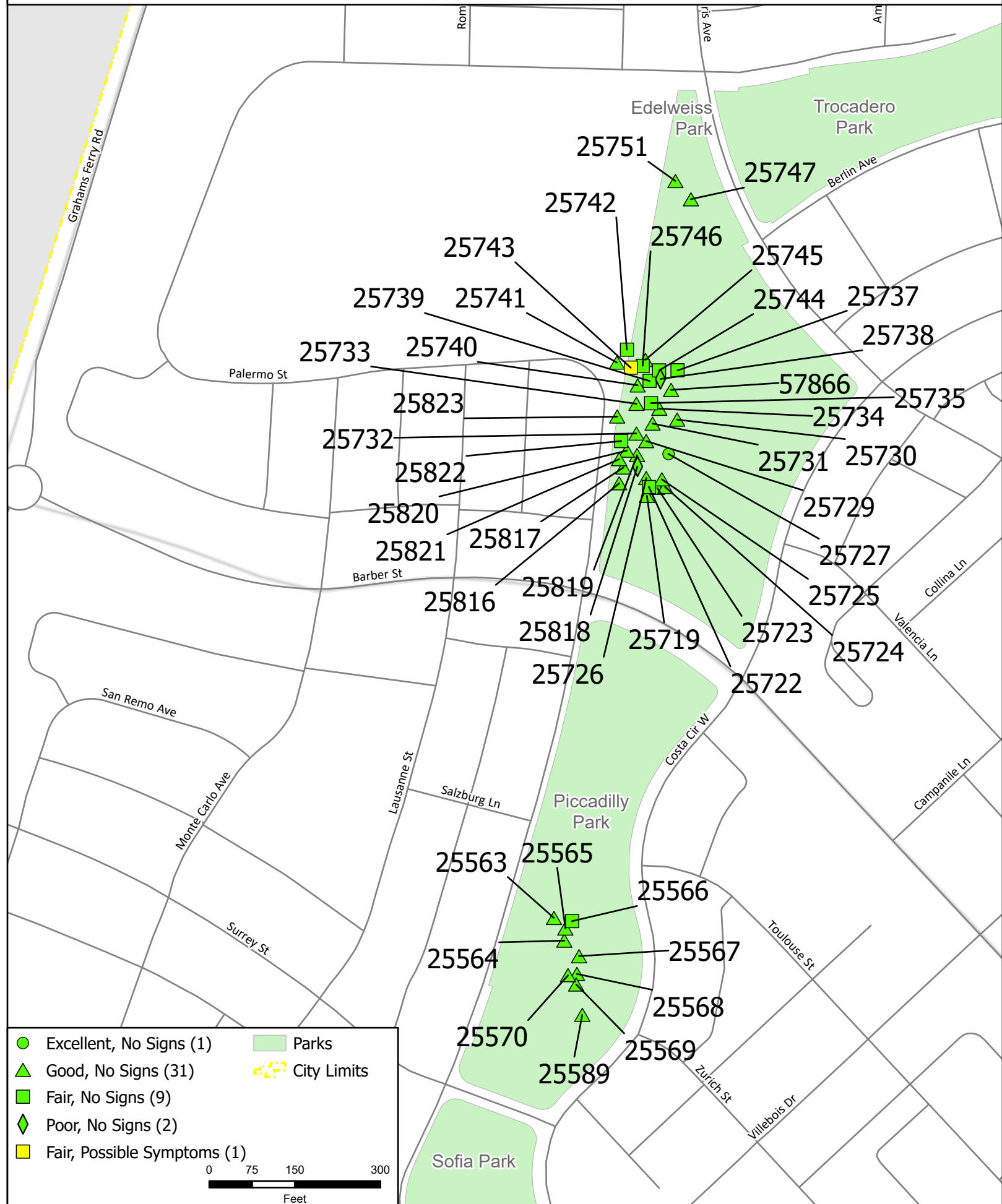




Photo 1. Tree #25563 - Arrow points to history of leader failure in one codominant stem where pruning could be conducted to clean up wounds and improve structure.



Photo 2. Tree #25719 - Arrow points to 12" diameter dead codominant stem that could be removed.



Photo 3. Tree #25722 - Lower trunk wound with hollows on northwest face.



Photo 4. Tree #25738 - Three codominant leaders with high live crown, few lateral limbs, almost entirely epicormic sprouts, dead ~6" branch on west face likely not from MOB.



Photo 5. Tree #25743 - No major dieback or frass, but tiny exit holes of three different sizes observed at old wounds; tiniest holes suspected to be from MOB. Arrow points to an example.



Photo 6. Tree #25743 - Large exit holes not from MOB.



Photo 7. Tree #25818 - Small oak with dead top, lower trunk damage, wilted leaves, small live crown could be replaced sooner than later.



Photo 8. Tree #56830 - Consider bracing codominant stem juncture.



Photo 9. Tree #56832 - History of large branch failure, crown decay, large old dead and decaying scaffold branch, numerous epicormic sprouts, signs of carpenter worm but no obvious signs or symptoms of MOB.



Photo 10. Tree #56833 - Progressive decline is advancing, ~80% of crown is now dead, this tree is no longer viable, lots of fine frass and tiny bore holes, no insect sighting though so maybe treatment is working to kill MOB. Recommend cutting it down and dissecting wood to investigate.



Photo 11. Tree #56833 - Fine frass did not appear to be fresh and may be from last year; regardless, this tree is no longer viable as the decline has progressed rapidly.



Photo 12. Tree #57630 - Codominant stems with included bark. Morgan believes she has observed a squirrel crawling into this juncture in the past, indicating that the cavity between the stems is much larger than it would seem from the outside. Recommend installing a brace and cables.



Photo 13. Tree #60526 - Showing fine frass along trunk. Crown is relatively healthy but codominant stems with active separation and trunk decay, three cables were previously installed; fine frass and a few tiny bore holes observed, along with bore holes of multiple sizes and a lot of ant activity.



Photo 14. Tree #60526 - Showing trunk damage and bore holes of multiple sizes.



Photo 15. Tree #60529 - Fine frass on lower trunk of east face of east stem, along with lots of different insect activity and oozing foam, no large branch dieback but relatively thin top and numerous epicormic sprouts.



Photo 16. Tree #60531 - This tree was removed but the stump remains and there are clear signs of MOB including fine frass, tiny bore holes and galleries in the stump face. Stump removal is recommended.



Photo 17. Tree #60534 - Fine frass and tiny bore holes; this tree also has tip dieback, a thin crown, epicormic sprouts and history of large branch failure.



Photo 18. Tree #60655 - Approximately 50% of canopy is dead, assessment of trunk inhibited by ivy but I observed fine frass and a MOB in a cobweb (see photo 19).



Photo 19. Tree #60655 - Arrow points to MOB observed in a cobweb in the ivy growing up the trunk of this declining tree.