

THE TCHOURBANOV OAK TREE PRESERVATION REPORT  
SEPTEMBER 2, 2020

**THE TCHOURBANOV OAK TREE PRESERVATION**  
**REPORT**

SEPTEMBER 2, 2020

**PREPARED FOR**

Alexander Tchourbanov  
426 E. 30<sup>th</sup> St.,  
Tucson, AZ 85713

**PREPARED BY**

Peter C. Harnisch  
Consulting Arborist  
1022 Santa Ana St.,  
Laguna Beach, CA 92651



## Table of Contents

Summary.....	3
Introduction .....	3
Background and Assignment .....	3
Foothill Trabuco Specific Plan.....	3
Field Inspection.....	4
Purpose and Use of the Report.....	4
Limits of the Assignment .....	4
Observations.....	5
Site.....	5
Trees.....	5
Oak tree #1 .....	5
Oak Tree #2.....	6
Oak Tree #3.....	6
Oak Tree #4.....	7
Oak Tree #5.....	7
Oak Tree #6.....	7
Findings.....	8
Construction Activity .....	8
Impacts of construction .....	8
Conclusion .....	9

## **Summary**

Alexander Tchourbanov hired me to provide a tree preservation plan for oak trees located on his property where a proposed construction project is to occur. The report is necessary to satisfy requirements of the Foothill/Trabuco Specific Area. It was determined that there are five oak trees belonging to the subject property and one belonging to the neighbor overhanging the project area that would be subject to the report. Construction activities would occur within their protected zones. I determined that the proposed work could be done without harming them if tree care and protection recommendations are implemented.

## **Introduction**

### **Background and Assignment**

John Salat contacted me regarding trees at a vacant lot where Mr. Alexander Tchourbanov is proposing to build a single-family residence. Mr. Salat is the architect for the project. The proposed structure would be built near the front of the property. A small utility shed is also to be constructed. Grading, excavation, retaining wall construction, utility line trenching, and equipment mobilization will take place within the protection zone of some of the oaks. The building footprint would also occur in this area.

### **Foothill Trabuco Specific Plan**

Within the Foothill/Trabuco Specific Plan Area, oak trees greater than five inches in diameter where measured 54 inches above grade are protected. Since the subject property is within an oak woodlands area, a tree preservation plan is required. It must be written by an arborist. It defines the "protected zone" for these trees as the outer edge of the dripline.

Any protected oak tree that needs to be removed to allow for construction shall be transplanted. If it is not healthy enough to survive the transplant process it is to be replaced as per the following tree replacement scale;

<b>Trunk Diameter (inches) of Tree Removed at 4.5 Inches Above Ground Level</b>	<b>Minimum Number of Replacement Trees Required</b>
5-11	5
12-17	8
18-23	10
24-35	12
Above 35	15

In addition, if a transplanted tree dies within five years after it is moved, it shall be replaced according to the tree replacement scale.

## **Field Inspections**

I visited the site on April 30, 2019 and met with John Salat and Alexander Tchourbanov. Mr. Salat described the proposed construction project to me and the activity that would take place near the protected oaks. We discussed the requirements of the Foothill/Trabuco Specific Plan. There are six coast live oak trees (*Quercus agrifolia*) that would have construction activity occur within their protected zones. Mr. Salat subsequently provided me with a site plan for the proposed project.

I returned to the Tchourbanov property on June 6, 2019 and photographed, measured, and did a visual assessment of the oaks from the ground and recorded my observations. Height measurements were accomplished with the use of a laser range finder. I also applied metal tags to the trunk of the subject oak trees on the Tchourbanov property. These numbers will be used for identification purposes in the following report.

## **Purpose and Use of the Report**

The purpose of this report is as follows;

- Identify protected oak trees that are on the subject property.
- Provide an evaluation of the current condition of subject oak trees.
- Provide recommendations for the protection and treatment of the oaks before, during and after the proposed construction project
- It is intended to be used by the owner at his/her own discretion.

## **Limits of the Assignment**

- Observations made in the following report are based on limited visual inspection from the ground only at the time of inspection.
- More comprehensive inspections may be necessary to be more conclusive about what was observed during site visits and are not included as part of this report.
- Property line locations were described to me by others; accuracy of property boundaries is not guaranteed. Before any recommendations are followed or actions taken regarding any trees that are subject to this report, a determination of ownership should be made. Since property lines sometimes do not follow existing terrain or man-made barriers, the location of such boundaries should be accurately determined before making any assumptions of ownership.
- All trees represent some risk of failure. Even with an evaluation such as this, there is no guarantee that a tree will not fail unexpectedly. Trees are dynamic

**THE TCHOURBANOV OAK TREE PRESERVATION REPORT**  
**SEPTEMBER 2, 2020**

living organisms subject to many influencing factors. All trees are potentially hazardous regardless of their apparent health, vigor, or structural integrity. It is impossible to be 100% sure that a tree is absolutely safe. The tree owner/manager must decide how much risk he/she is willing to accept. This must be weighed against the value and benefit that we receive from trees.

- The diameters of some oaks could not be measured at standard height (54 inches above grade) due to tree physiology. Canopy spread and diameter of the neighbor's oak were estimated. The height of tree number five was estimated due to limited access.
- The location of proposed structures and tree canopy size are not accurately represented on the preliminary site plan provided in the report.

## **Observations**

### **Site**

The subject property is a vacant lot which slopes upwards away from the street. There are many trees and plants there that appear to be naturally occurring. I did not observe any formal irrigation present or operational. There are numerous large oaks in the neighborhood surrounding the property.

### **Trees**

There are five coast live oak trees (*Quercus agrifolia*) located on the Tchourbanov property and one located on the neighboring property which overhangs it (see Appendix A: Preliminary Site Plan Showing Tree Locations). All appear to be naturally occurring and poorly maintained.

#### **Oak tree #1**

- Oak number one is a large example of the species (see Appendix B: Photo 1)
- It is growing on a sloped area near the front of the property
- It has two trunks originating at its base
- Its diameter measurements at non-standard height are 8.8 and 16 inches
- Its height was measured at 24.5 feet
- Its canopy Radius is 20 feet
- The trunk flare area of the oak was buried in soil and mulch and could not be effectively inspected
- Both trunks of the oak grow upwards before giving rise to scaffold limbs
- Many branches of oak number one are horizontal in nature and appear to be carrying excessive loads
- Dead limbs were observed within the oak's canopy
- Tree structure is compact

THE TCHOUBANOV OAK TREE PRESERVATION REPORT  
SEPTEMBER 2, 2020

- Foliage density is poor, color and leaf size are good
- Damage possibly caused by California oakworm (*Phryganidia californica*) was observed within its leaf canopy
- Overall condition of oak number was observed to be poor

### **Oak Tree #2**

- Oak number two is located at the south side of the lot about 15 feet from the roadway in the front of the property (see Appendix B: Photo 2)
- It is growing underneath overhead utility lines
- Its diameter at breast height is 10 inches
- Height was measured at 31 feet
- Canopy spread is 12 feet (irregular)
- The oak's trunk flare is buried and could not be inspected
- Its trunk is singular and is approximately ten feet tall
- Trunk taper is poor
- Its first branch formation is co-dominant
- Remaining branch structure is vertical and top-heavy
- Growth space is limited by nearby trees
- Vines were observed growing in its canopy
- Foliage density and color are poor
- Overall condition was observed to be poor

### **Oak Tree #3**

- Oak tree number three is growing in the front of the lot on its south side approximately eight feet from the roadway (see Appendix B: Photo 3)
- Overhead utility lines are located above its canopy
- Its diameter at non-standard height is 16.3 inches
- Its height was measured at 23 feet
- Its canopy radius is eight feet
- The trunk flare of the oak is buried and could not be adequately inspected
- Its trunk is short and immediately give rise to two large scaffold limbs
- The attachment there is co-dominant
- Deadwood was observed within the canopy
- Pruning has been done to provide clearance for utility lines
- Foliage density is poor
- The overall condition of oak number three was observed to be poor

#### **Oak Tree #4**

- Oak tree number four is growing near the middle of the lot on its south side near the property line as it was described to me (see Appendix B: Photo 4)
- Its diameter at breast height is 16.8 inches
- The height of the oak was measured at 30.5 feet
- Its canopy spread is 19 feet
- The trunk flare of the oak was buried and could not be adequately inspected
- Its trunk is singular and has poor taper
- There is a large pruning wound on the trunk where a limb was removed several years ago
- The shape of the oak's canopy is irregular due to competition for growth space with trees nearby
- Deadwood was observed within its canopy
- Foliage density and color are poor
- I observed the overall condition of oak number four to be poor

#### **Oak Tree #5**

- Oak tree number five is located towards the rear of the lot where the grade steepens suddenly (see Appendix B: Photo 5)
- It has two trunks that originate at its base
- Its diameter measurements at breast height are 14.9 and 8.3 inches
- Tree height was estimated to be approximately 30 feet
- Its canopy spread is 30 feet
- The oak's trunk flare is buried in soil, leaf litter, and plant materials; it could not be adequately inspected
- It has one large trunk which has a corrected lean but is relatively vertical; it gives rise to two large scaffold limbs that share a co-dominant attachment
- The other smaller trunk grows sharply away from the larger trunk and has been suppressed by it
- Heavy horizontal limbs were observed carrying excessive loads
- Deadwood and vines growing in canopy were seen
- Foliage density is fair
- I observed its overall condition to be poor

#### **Oak Tree #6**

- Oak tree number six is located on the neighbor's property close to the property line shared with the Tchourbanov lot (see Appendix B: Photo 6)
- Its diameter was estimated to be approximately 28 inches at non-standard height
- Height was measured at 28 feet

**THE TCHOURBANOV OAK TREE PRESERVATION REPORT  
SEPTEMBER 2, 2020**

- Canopy radius was estimated to be approximately 30 feet
- The oak's trunk flare appeared to be mostly adequate from what could be observed from the subject property
- Its trunk is singular and gives rise to two very large scaffold limbs that grow away from one another in an angular direction; their union is co-dominant
- Branch structure is open and horizontal; large limbs appear to be carrying excessive loads
- Several large pruning wounds that appear to have been made several years ago were observed along branches of the oak
- Deadwood was observed within its canopy
- I observed the oak to be in poor condition

## **Findings**

### **Construction Activity**

As it was explained to me, the following construction activity will occur within the dripline of the protected oaks;

<b>Oak Tree #</b>	<b>Proposed Construction Activity that Will Occur Within the Dripline of the Oak</b>
1	Excavation and grading, retaining wall construction, equipment access, building footprint
2	Excavation and grading, retaining wall construction, equipment access, utility line placement
3	Excavation and grading, retaining wall construction, equipment access, utility line placement
4	Excavation and grading, retaining wall construction, equipment access,
5	Excavation for footings of storage shed
6	Excavation for footings of storage shed

### **Impacts of construction**

The proposed Construction project could potentially damage the protected site trees. The following table illustrates the possible negative consequences;

<b>Oak Tree #</b>	<b>Potential damage that could be done to protected oaks</b>
1	Major roots could be severed, soil could be compacted, tree limbs could be damaged
2	Major roots could be severed, soil could be compacted, tree limbs could be damaged
3	Major roots could be severed, soil could be compacted, tree limbs could be damaged



**THE TCHOURBANOV OAK TREE PRESERVATION REPORT**  
**SEPTEMBER 2, 2020**

<b>Oak Tree #</b>	<b>Potential damage that could be done to protected oaks</b>
4	Major roots could be severed, soil could be compacted, tree limbs could be damaged
5	Major roots could be damaged
6	Major roots could be damaged

Damage to tree roots can cause stress in trees as the uptake of nutrients and water that they provide is lost. It can also cause instability. Excavation and grading within the protected zone of oaks must be done carefully to prevent this from occurring. Major roots should be located before work begins. This can be done by;

- Probing with a metal spike
- Using an air spade to remove soil
- Using sonic tomography
- Using ground penetrating radar (TRU)
- Careful hand digging

Once significant roots are located, a determination can be made as to their treatment to insure tree health and/or stability.

Soil disturbance caused by the movement of construction equipment within the root zone of the oak can have long term health consequences. When soil is compacted, delicate feeder roots can be damaged and capillary space diminished. Gaseous exchanges necessary for root function can be impaired. This can be lessened, however, if protective measures are implemented to reduce its effect.

Installing utility lines usually involves excavation that could also damage tree roots. Sometimes it may be possible to tunnel beneath them and avoid them completely. Also, trenching can be done from the surface between tree roots if they can be located beforehand.

When tree parts are carrying excessive loads, they will often fail. Failure of large tree parts can cause stress as photosynthetic capacity is diminished and energy reserves must be utilized. Many of the subject trees are currently in need of effective pruning to reduce end weight to forestall possible limb failures. Tree limbs that would otherwise be damaged by construction activity should be pruned before work begins.

## **Conclusion**

The impacts of construction usually cause stress to nearby trees. The subject oak trees have been neglected and are in poor condition. I believe that if steps are taken to improve their health, they may be better able to handle the adversities of the proposed construction project.

In Addition, the existing structure of most of the oaks could be subject to failure if

**THE TCHOURBANOV OAK TREE PRESERVATION REPORT**  
**SEPTEMBER 2, 2020**

nothing is done. Many of them have heavy, over laden limbs that are carrying excessive loads. If they are not effectively pruned, large tree parts may break apart.

I believe, however, that the proposed construction can take place within the protected zone of the oak trees subject to this report without adversely affecting them if care is taken and recommendations are followed (see Appendix C: Recommendations for Tree Care and Protection). In the event that this is not possible, and the subject trees would have to be replaced, this would be done according to the tree replacement scale as follows;

<b>Tree #</b>	<b>Diameter @ 54"</b>	<b>Cumulative Diameter</b>	<b>Number of 15 Gal. Trees Required to Replace</b>
1	8,8", 16"	18.3"	10
2	10"	NA	5
3	16.3"	NA	8
4	16.8"	NA	8
5	14.9", 8.3"	17.1	10
6	28"	NA	12