APPENDIX C: TREE REPORTS
TREE SERVICE INCORPORATED,
MARCH 28, 2000
March 28, 2000

City of Lafayette-Community Center
500 St., Marys Road
Lafayette, CA 94549

Attn: Jennifer

Re: Large Valley Oak at the new park at 4th & Moraga Blvd.

Dear Jennifer:

On Monday, March 20th, Michael Baeksky who is a consulting arborist and myself inspected the root crown of the large Valley Oak. Because I found some fungal decay on my first inspection, I felt it was necessary to excavate the root crown deeper and do a more thorough inspection of this area with Mr. Baeksky.

Fortunately, we found that this decay was nearly all superficial and that there were only a couple of pockets of slightly deeper decay. It is our opinion based on what we were able to observe that the root system of the tree is relatively sound and healthy. No inspection of the canopy was done.

I have re-placed the excavated soil to a lower level which will be healthier for the tree. When landscaping for the park is done a trough should be dug from base of the tree to the creek or to the street to allow this lower area to drain.

As you know, no human activities should be encouraged under the tree's canopy and this area kept as natural as possible.

This inspection was done from ground level and hidden defects in the trees structure may exist that are not visible and thus not noted in this letter.

Respectfully submitted,

Lew Edwards
Certified Arborist #WC-3528
INSIDEOUT DESIGN,
NOVEMBER 4, 2015
November 4, 2015

Jennifer Russell, Director
City of Lafayette Parks
Trails & Recreation
500 Saint Mary’s Road
Lafayette, CA 94549

RE: Tree Inventory & Assessment at Leigh Creekside Park Improvement Plan

Dear Jennifer,

Per the City’s request, I have reviewed site conditions and prepared the following Tree Inventory Report and Assessment for the existing trees on site as they relate to the proposed Preliminary Site Improvement Plan prepared by architect, James Dixon.

An initial site visit was made on October 28, 2015 to review proposed site improvements. Attendees at this meeting:

- Jennifer Russell, Director of City of Lafayette Parks, Trails & Recreation
- Niroop Srivatsa, Senior Planner at the City of Lafayette
- James Dixon, project architect
- Penn Phillips, City landscape consultant and arborist

Surveyed trees fall within 20 feet of the proposed site disturbances and retain a diameter of 4 inches or greater. Trees were measured with a diameter tape, numerically tagged and numbered from #9 to 48. The findings in this report are dependent on the condition of the trees evaluated at the time of the site inspections. This assessment was limited to the visual examination of the trees listed within the report with no dissection, excavation, probing or coring.

Site Summary

The park is located at the intersection of Moraga Boulevard and 4th Street and bordered by Las Trampas Creek and a single family residence to the north at 959 4th Street. Areas of the park, particularly along Moraga Boulevard and 4th Street, are densely wooded with trees, both native and non-native, in close proximity to one
another. Tree species on site include: coast live oak (*Quercus agrifolia*), valley oak (*Q. lobata*), California bay (*Umbellularia californica*), California buckeye (*Aesculus californica*), Incense cedar (*Calocedrus decurrens*), cork oak (*Q. suber*), pine (*Pinus sp.*), Douglas fir (*Pseudotsuga menziesii*), & spruce (*Picea pungens*). Noteworthy, is a heritage valley oak located in the northern area of the park.

The existing park reflects a ‘passive-use’ role for the neighborhood where as the users come to walk their dogs, utilize the few picnic tables or simply to connect with nature. Its presence is an asset to the neighborhood and city in general. Beyond the existing picnic table, benches and trash receptacles, the park lacks any structures.

**Proposed Site Improvements**

The Proposed Site Improvement Plan shows a number of proposed amenities to augment the existing site features: additional picnic tables, assessable concrete walks, benches, trash receptacles and bike racks. To address some expressed neighborhood wishes for playground equipment, the Improvement Plan also proposes new play structures (i.e. a climbing, artificial boulder rock structure, spring rockers, cargo nets, elevated platforms, etc.) most of which are ADA compliant and meant for children ranging from 9 months to 12 years of age. The proposed play apparatus are historically themed (ice age, hunter-gatherer, pioneer, etc.). The designer has intentionally located the active play structures directly adjacent to many of the existing trees so that the young users will have direct access to the trees. While this objective is laudable, it presents a conflict due to proposing site disturbances in the immediate vicinity of the existing trees, all of which are considered ‘protected’ per the city’s Tree Protection Ordinance. In general, I would recommend minimizing any proposed site disturbances that are within the dripline of the existing trees on site. Additional recommendations and guidelines are listed under *Trees that Merit Special Consideration* below.
## Tree Inventory

### Key

- **DIA**: Diameter of trunk measured 54" above grade
- **S**: Structure
- **H**: Health

### Rating Key

1. Dead, dying or in severe decline.
2. Poor condition. Severe defects. Corrective options may or may not be available.
3. Fair condition for species’ age. Minor defects that may be corrected.
4. Good condition with no apparent defects or problems.
5. Exemplary specimen for species.

<table>
<thead>
<tr>
<th>#</th>
<th>SPECIES</th>
<th>DIA</th>
<th>H</th>
<th>S</th>
<th>OBSERVATIONS / RECOMMENDATIONS</th>
<th>IMPACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Redwood, <em>Sequoia sempervirens</em></td>
<td>40&quot;</td>
<td>3</td>
<td>4</td>
<td>Located 6 feet south of the proposed concrete curb the borders the Time Zones 4, 5, 6 play area. Pioneer Time Town Square located adjacent to tree. To minimize root disturbance, keep any grade disturbances a minimum of 10 feet from root crown. See Trees that Merit Special Consideration below.</td>
<td>Moderate</td>
</tr>
<tr>
<td>10</td>
<td>Incense cedar, <em>Calocedrus decurrens</em></td>
<td>18&quot;</td>
<td>1.5</td>
<td>3</td>
<td>Significant dieback throughout lower canopy. Likely suffering from drought. Consideration for tree removal may be warranted. Proposed curb edging for play area shown at root crown. Supplemental watering may benefit tree. See Trees that Merit Special Consideration below.</td>
<td>Significant</td>
</tr>
<tr>
<td>11</td>
<td>Coast live oak, <em>Quercus agrifolia</em></td>
<td>19.5&quot;</td>
<td>3</td>
<td>2.5</td>
<td>Leaf production limited to upper canopy due to crowding of adjacent trees. Tree encompassed within proposed rubberized flooring and log seating. See Trees that Merit Special Consideration below.</td>
<td>Significant</td>
</tr>
<tr>
<td>#</td>
<td>SPECIES</td>
<td>DIA</td>
<td>H</td>
<td>S</td>
<td>OBSERVATIONS / RECOMMENDATIONS</td>
<td>IMPACT</td>
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<tr>
<td>12</td>
<td>Incense cedar, <em>Calocedrus decurrens</em></td>
<td>27&quot;</td>
<td>3</td>
<td>2.5</td>
<td>Leans to east. Moderate dieback throughout lower canopy. Proposed elevated deck surrounds central leader. Given the elevated feature of deck, it appears the grade below may remain undisturbed (10 foot radius). Adjacent grading for rubber flooring may adversely impact tree. Given poor condition of tree, reconsider designing play feature around tree. Supplemental watering may benefit tree.</td>
<td>Minor-Moderate</td>
</tr>
<tr>
<td>13</td>
<td>Coast live oak, <em>Quercus agrifolia</em></td>
<td>31&quot;</td>
<td>3.5</td>
<td>3</td>
<td>Bifurcates at 14 feet above grade. Mechanical damage noted along lower trunk (gun shots, knife wounds?). Leans eastward. Proposed concrete curb that edges rubber flooring runs into base. Remove California bay sapling at root crown. See Trees that Merit Special Consideration below.</td>
<td>Significant</td>
</tr>
<tr>
<td>14</td>
<td>Valley oak, <em>Quercus lobata</em></td>
<td>25.5&quot;, 7&quot;, 11&quot;</td>
<td>3.5</td>
<td>3</td>
<td>Crowded by adjacent tree #15, 3 feet to north. Epicormic shoots(^1) beginning to emerge. Located 18&quot; from log seat and rubberized flooring. See Trees that Merit Special Consideration below.</td>
<td>Moderate to significant</td>
</tr>
<tr>
<td>15</td>
<td>Valley oak, <em>Quercus lobata</em></td>
<td>8&quot;</td>
<td>2.5</td>
<td>2.5</td>
<td>Broken leader 6 feet above grade with potential decay. Northern 4&quot; dia. leader in decline. Located within proposed rubberized flooring. Removal would likely benefit tree #14. See Trees that Merit Special Consideration below.</td>
<td>Moderate to significant</td>
</tr>
<tr>
<td>16</td>
<td>Coast live oak, <em>Quercus agrifolia</em></td>
<td>4&quot;</td>
<td>2.5</td>
<td>2.5</td>
<td>Crowded. Located within proposed rubberized flooring. Removal would likely benefit tree #14. See Trees that Merit Special Consideration below.</td>
<td>Moderate to significant</td>
</tr>
<tr>
<td>17</td>
<td>Incense cedar, <em>Calocedrus decurrens</em></td>
<td>18&quot;</td>
<td>3</td>
<td>2.5</td>
<td>Moderate dieback throughout lower canopy. Crowded. Proposed rubberized flooring encompasses root crown. See Trees that Merit Special Consideration below.</td>
<td>Significant</td>
</tr>
<tr>
<td>#</td>
<td>SPECIES</td>
<td>DIA</td>
<td>H</td>
<td>S</td>
<td>OBSERVATIONS / RECOMMENDATIONS</td>
<td>IMPACT</td>
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</tbody>
</table>
| 18 | Coast live oak, *Quercus agrifolia* | 8”   | 2.5 | 2.5 | Crowded. Subdominant tree. Sparse foliage. Proposed rubberized flooring encompasses root crown.  
See Trees that Merit Special Consideration below. | Significant       |
| 19 | Coast live oak, *Quercus agrifolia* | 11”  | 3.5 | 3   | Poor branch union at 7 feet above grade where central leader splits to three. Epicormic shoots  
beginning to emerge. Proposed rubberized flooring encompasses root crown.  
See Trees that Merit Special Consideration below. | Significant       |
| 20 | Coast live oak, *Quercus agrifolia* | 5”   | 3   | 3   | Subdominant tree. Proposed log seat and rubberized flooring located 18” away.  
See Trees that Merit Special Consideration below. | Moderate to significant |
| 21 | Valley oak, *Quercus lobata*       | 33.5”| 4   | 3   | Majority of canopy grows over Moraga Boulevard due to crowding. Proposed log seat and rubber flooring  
located less than a foot away from root crown.  
See Trees that Merit Special Consideration below. | Significant       |
| 22 | Valley oak, *Quercus lobata*       | 19”  | 4   | 3   | Canopy grows northward due tree #21 to south. Proposed log seat and flooring located 2 feet from tree.  
Remove bay at root crown.  
See Trees that Merit Special Consideration below. | Moderate to significant |
| 23 | Incense cedar, *Calocedrus decurrens* | 19.5”| 2.5 | 3.5 | Limited canopy to east due to presence of tree #24. Proposed concrete edging and flooring.  
See Trees that Merit Special Consideration below. | Moderate to significant |
<table>
<thead>
<tr>
<th>No.</th>
<th>Tree Species</th>
<th>trunk diam.</th>
<th>C.</th>
<th>B.</th>
<th>Description</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>Coast live oak, <em>Quercus agrifolia</em></td>
<td>17&quot;</td>
<td>3</td>
<td>3</td>
<td>Minor mechanical damage along lower trunk. Proposed concrete sidewalk located 7 feet from root crown. In an effort to minimize root damage provide a min. clearance or 15 feet from base of tree. <em>Remove existing bay at root crown. See Trees that Merit Special Consideration below.</em></td>
<td>Moderate</td>
</tr>
<tr>
<td>25</td>
<td>Cork oak, <em>Quercus suber</em></td>
<td>18.5&quot;, 17&quot;, 22.5&quot;</td>
<td>4.5</td>
<td>2.5</td>
<td>Located near the intersection of Moraga Blvd &amp; 4th Street. Western 18.5&quot; leader grows 45 degrees to the grade &amp; over sidewalk. Majority of canopy grows to west due to adjacent cork oak. <em>City may wish to have tree periodically inspected by an arborist due to sidewalk location.</em></td>
<td>None</td>
</tr>
<tr>
<td>26</td>
<td>Cork oak, <em>Quercus suber</em></td>
<td>25&quot;, 29&quot;</td>
<td>4.5</td>
<td>3</td>
<td>Codominant branch union 4 feet above grade with included bark². Proposed concrete walk located 7 feet from root crown. <em>Retain an arborist to be on-site for any excavations required for proposed walkway. Consider a porous concrete, decomposed granite or walk with minimum excavation specification (i.e. geotextile application) to minimize root disturbances.</em></td>
<td>Minor to moderate</td>
</tr>
<tr>
<td>27</td>
<td>Valley oak, <em>Quercus lobata</em></td>
<td>6&quot;, 8&quot;</td>
<td>3</td>
<td>2.5</td>
<td>See Trees that Merit Special Consideration below.</td>
<td>Insignificant</td>
</tr>
<tr>
<td>28</td>
<td>Valley oak, <em>Quercus lobata</em></td>
<td>6&quot;</td>
<td>3</td>
<td>2.5</td>
<td></td>
<td>Insignificant</td>
</tr>
<tr>
<td>29</td>
<td>Coast live oak, <em>Quercus agrifolia</em></td>
<td>5&quot;</td>
<td>3</td>
<td>2.5</td>
<td></td>
<td>Insignificant</td>
</tr>
<tr>
<td>30</td>
<td>Coast live oak, <em>Quercus agrifolia</em></td>
<td>10&quot;</td>
<td>3</td>
<td>2.5</td>
<td></td>
<td>Minor</td>
</tr>
<tr>
<td>31</td>
<td>Coast live oak, <em>Quercus agrifolia</em></td>
<td>12&quot;</td>
<td>3</td>
<td>3</td>
<td></td>
<td>Minor to moderate</td>
</tr>
<tr>
<td>32</td>
<td>Coast live oak, <em>Quercus agrifolia</em></td>
<td>10&quot;</td>
<td>3</td>
<td>2.5</td>
<td></td>
<td>Minor</td>
</tr>
<tr>
<td>33</td>
<td>Valley oak, <em>Quercus lobata</em></td>
<td>8.5&quot;</td>
<td>3</td>
<td>2.5</td>
<td></td>
<td>Minor</td>
</tr>
<tr>
<td>34</td>
<td>Coast live oak, <em>Quercus agrifolia</em></td>
<td>7&quot;</td>
<td>3</td>
<td>2.5</td>
<td></td>
<td>Minor</td>
</tr>
<tr>
<td>35</td>
<td>Coast live oak, <em>Quercus agrifolia</em></td>
<td>9&quot;</td>
<td>4</td>
<td>3</td>
<td>Proposed walk 8 feet away</td>
<td>Minor</td>
</tr>
<tr>
<td>No.</td>
<td>Tree Species</td>
<td>DBH (in.)</td>
<td>Height (ft)</td>
<td>Canopy Characteristics</td>
<td>Comments</td>
<td>Impact</td>
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<tr>
<td>36</td>
<td>Coast live oak, <em>Quercus agrifolia</em></td>
<td>15.5&quot;</td>
<td>3</td>
<td>2.5 Grows 45 degrees over 4th Street. Canopy conflict with overhead wires.</td>
<td>Minor</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>California bay, <em>Umbellularia californica</em></td>
<td>5&quot;, 5&quot;</td>
<td>3</td>
<td>2.5 Cavity at root crown with minor decay. Proposed walk 2 feet from base of tree.</td>
<td>Minor to moderate</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>Redwood, <em>Sequoia sempervirens</em></td>
<td>13&quot;, 15&quot;</td>
<td>3</td>
<td>3 Proposed walk 7 feet from base of tree.</td>
<td>Minor</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>Coast live oak, <em>Quercus agrifolia</em></td>
<td>7&quot;</td>
<td>3</td>
<td>3 Grows 45 degrees over 4th Street. Canopy conflict with overhead wires.</td>
<td>Minor</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>Valley oak, <em>Quercus lobata</em></td>
<td>51&quot;</td>
<td>4.5</td>
<td>5 Dominant tree in vicinity. Proposed concrete walk comes within 23 feet of oak. <em>See Trees that Merit Special Consideration below.</em></td>
<td>Minor to moderate</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>Cork oak, <em>Quercus suber</em></td>
<td>16.5&quot;</td>
<td>5</td>
<td>4 Proposed bench and walk located 8 feet from oak. <em>Consider relocating bench to provide a min. clearance of 15 feet from root crown.</em></td>
<td>Minor to moderate</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>Blue spruce, <em>Picea pungens</em></td>
<td>8.5&quot;</td>
<td>3.5</td>
<td>4 Proposed walk located 8 feet from tree.</td>
<td>Minor</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>Pine, <em>Pinus spp.</em></td>
<td>26.5&quot;</td>
<td>2.5</td>
<td>2.5 Significant dieback in lower canopy likely due to drought. Proposed log seat located at root crown. <em>Given poor health of tree, we suggest proposed site improvements be removed from this vicinity.</em></td>
<td>Minor to moderate</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>Valley oak, <em>Quercus lobata</em></td>
<td>23&quot;</td>
<td>3</td>
<td>3 Epicormic shoots noted at lower canopy. Proposed log seats and boulders located near root crown. Walk located 9 feet from tree. <em>In an effort to reduce impacts that may be placed on tree, consider relocating features.</em></td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>Valley oak, <em>Quercus lobata</em></td>
<td>19&quot;</td>
<td>3</td>
<td>3 Located on Creekside of split rail fence</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>Valley oak, <em>Quercus lobata</em></td>
<td>16&quot;</td>
<td>4</td>
<td>3.5 Located on Creekside of split rail fence. Proposed concrete curb edging and rubber flooring 8 feet from root crown.</td>
<td>Moderate</td>
<td></td>
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<tr>
<td>48</td>
<td>California buckeye, <em>Aesculus californica</em></td>
<td>varies</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Located on Creekside of split rail fence. Proposed concrete curb edging and rubber flooring located 4½ feet from root crown. Documented as retaining a ‘good’ rating for construction impact tolerance.</td>
<td>3</td>
<td>Minor to moderate</td>
<td></td>
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</tr>
</tbody>
</table>

1 Epicomic shoots: arise from dormant buds that lie under the bark. They become active shoots when growth is triggered – at times due to stress.

2 Included bark: bark that becomes embedded in crotch between branch and trunk or between codominant stems or leaders, which causes a weak structure. Such conditions may increase the likelihood of failure.


**Trees that Merit Special Consideration**

Eastern oak grove (trees #27 through 34)

Grove consisting of a young stand of oaks that are growing in close proximity to one another (18 inches to 4 feet) which is adversely affecting their health and structure. Selective removal of individual species may benefit grove. Erect Tree Protection Fencing prior to the commencement of any grade disturbances to protect trees.

Retain arborist to identify potential conflicts with footing for proposed bench that comes in close proximity to tree #30 through 34. Remove boulder feature at tree #31 to minimize root disturbance.

Trees located in close proximity to, or within concrete curb edging, rubberized flooring at proposed play structures (Trees #9 through 23)

Excavation for the proposed concrete curb and base preparation for the rubberized ‘fall zone’ flooring material at the play structures will place an adverse impact on the existing trees. In particular, the existing valley oaks and coast live oaks are noted as being sensitive to addition of fill around base of trunk (Clark, J., and N. Matheny. 1997. *Trees and Development*). Per conversations with the project architect, it appears the concrete curbing may be substituted with the horizontal log seat. Concerns still exist, however, if excavation is required to prevent the logs from rolling and whether they will allow for positive drainage away from the oaks and rubber flooring. Beyond the detrimental effects that excavation may place on the trees’ root systems, additional concerns exist regarding whether adequate oxygen exchange can take place if the top layer of soil is covered with the rubberized flooring material.

In an effort to reduce impacts on the existing trees, additional studies are warranted to relocate the proposed structures away from existing trees to remain.
Tree #41, a 51” valley oak

In an effort to protect and minimize disturbance to the existing heritage oak, consider revising the layout of concrete path so that it does not encircle the oak. It appears the northern extension of the path can be relocated to the southern dripline of the tree. While this would significantly alter the proposed layout and extension of the path, it would minimize activity under the oak’s canopy, help maintain the privacy for the adjacent homeowner at 959 4th Street (whom expressed this concern during the site visit), remove any potential root disturbances, and minimize potential vandalism (a number of the trees located closer to the existing active areas have had their bark carved or have been mechanically damaged).

An alternate design study may be to provide an ‘out and back’ path to the west side of the tree where a greater clearance from the root crown can be achieved.

Please contact us with any questions or if additional information is needed.

Sincerely,

INSIDEOUT DESIGN, INC

Pennell Phillips
City Landscape Consultant
Landscape Architect, CLA 5602
Certified Arborist, WE-6608A
Refer to the Tree Inventory & Assessment at Leigh Creekside Park report, dated November 4, 2015 for tree species, size, and additional information.
February 10, 2016

Jennifer Russell, Director
City of Lafayette Parks
Trails & Recreation
500 Saint Mary’s Road
Lafayette, CA 94549

Re: Leigh Creekside Park Improvement Plan

Dear Jennifer,

Per the City’s direction, I prepared the following review and summary of the revised Leigh Creekside Improvement Plan, dated January 22, 2016, prepared by James Dixon. This review takes into account the following:

- Revisions that were made from earlier design schemes
- Comments and suggestions made on-site by the Design Review Committee and concerned neighbors on December 18, 2015
- The Tree Inventory & Assessment Plan, dated November 4, 2015, prepared by Inside Out Design
- Comments made at our recent meeting with Mr. Dixon and Niroop Srivatsa on February 2, 2016.

Proposed Site Improvements Summary

The Proposed Site Improvement Plan shows a number of proposed amenities to augment the existing site features: additional picnic tables, assessable walkways, benches, trash receptacles and bike racks. To address some expressed neighborhood wishes for playground equipment, the Improvement Plan also proposes new play structures (i.e. a climbing, artificial boulder rock structure, spring rockers, cargo nets, elevated platforms, etc.) most of which are ADA compliant and meant for children ranging from 9 months to 12 years of age. The proposed play apparatus are historically themed (ice age, hunter-gatherer, pioneer, etc.).
Observations & Recommendations for the revised Leigh Creekside Park Improvement Plan

1. The designer had intentionally located the active play structures directly adjacent to many of the existing trees so that the young users will have direct access to the trees. Based on concerns that the proposed fall zone material and construction activity may adversely impact the health of the trees, previous revisions included pulling the proposed play apparatus away from the trees. Per DRC suggestions however, a consensus was reached to ‘nestle’ the play structures and site features farther into the tree zones, the objective being to keep open views to the heritage oak in the central northern portion of the park. Locating the site features close to the existing tree canopies would also help soften the presence of the introduced structures.

The designer has made the following adaptations to minimize potential tree impacts:

- Removed all concrete walkways, replacing them with either a flexible, porous paving (Flexi-pave) or bark path (for the area in the vicinity of the heritage oak)
- Created a buffer/clearance of the proposed site features around most trees
- Specification of a porous material for the ‘fall zone’ under tree canopies
- The use of logs as an ‘edging’ for the proposed porous paving

The revised plan, however, still shows the use of a concrete curb as an edging material for much of the ‘fall zone’ material. Concerns were voiced by the DRC at the site meeting regarding the incongruous appearance of the curb in the natural setting. Per our conversation at our latest meeting I recommend the following:

a. Substitute the concrete curb edging with steel or aluminum edging. Specify edging to be flush (or just below) with the top of porous paving. This would reduce potential trip hazards as well as to help conceal the edging. All radii and transitions of the metal edging shall be smooth and continuous.
2. At tree #12, a 27” incense cedar, the designer is proposing an elevated deck (approximately 7 feet above finish grade) that would encompass the tree.

   a. Given that the design of the deck encircles the tree and the proximity the tree would have to the young park users, I suggest that the tree be examined by a qualified arborist with extensive experience in Tree Risk Assessment.

   Once the tree has been assessed as structurally sound and stable, I would recommend the following as plans develop for this feature:

   b. Per conversations with the architect, a limited number of posts are proposed to support the deck. Prior to the installation of the deck, an arborist be retained to execute exploratory root searches (via an air spade\(^1\)) to determine if there may be any conflicts with the roots of the cedar and the proposed footing locations for the post supports. The design of the deck should be flexible to allow for adjustment to the post locations.

   c. Specification of a 3.5” max gap between the deck and trunk of the tree.

   d. The plan shows logs laid on their side under the deck essentially encompassing the tree. To prevent any ponding of water at the base of the tree and to allow for positive drainage downslope, specify a 4 inch minimum gap between logs. Locate gap at the low point of the existing grade below the cedar to minimize any grading.

3. The revised plan shows the removal of six (6) ‘protected’ trees, five of which are in conflict with the proposed site features. Per the City’s Tree Protection Ordinance, a protected tree is classified as a tree of any species that retains a diameter of 6” or more on an undeveloped lot. Mitigation measures mandate, at a minimum, replacement trees of two (2) 15 gallon species for each 6” of the diameter, or a fraction there of, of the tree to be removed. In-lieu of on-site replacement trees, the applicant may make payments set forth by the city council for each 15 gallon replacement tree. The in-lieu payment shall be used by the city for a tree education or tree planting program. Recent values have equaled $263 per 15 gallon replacement tree.

\(^1\)Air spade: a pneumatic tool that removes soil, via highly compressed air, minimizing root damage
Below is a list of the following proposed removals, descriptions made in the Tree Inventory Report (italicized), and any mitigation measures that may result due to tree removal.

Tree removals at the proposed Pioneer Time include the following:

- Tree #17, an 18” incense cedar
  Description: *Moderate dieback throughout lower canopy. Crowded.*
  Mitigation requirements: six (6) 15 gallon replacement trees

- Tree #18, an 8” coast live oak
  Description: Crowded. *Subdominant tree. Sparse foliage.*
  Mitigation requirements: Three (3) 15 gallon replacement trees

- Tree #19, an 11” coast live oak
  Description: *Poor branch union at 7 feet above grade where central leader splits to three. Epicormic shoots² beginning to emerge.*
  Mitigation requirements: Four (4) 15 gallon replacement trees

- Tree #20, a 5” coast live oak
  Description: *Subdominant tree.*
  Mitigation requirements: None (0)

Tree removals at the proposed Ice Age Time include the following:

- Tree #23, an 19.5” incense cedar
  Description: *Limited canopy to east due to presence of tree #24.*
  Mitigation requirements: seven (7) 15 gallon replacement trees

Tree removals that are not in conflict with the proposed site improvements:

- Tree #44, an 26.5” Canary Island pine
  Description: *Significant dieback in lower canopy likely due to drought.*
  Mitigation requirements: Nine (9) 15 gallon replacement trees
The total tree replacement count for the proposed tree removals equals twenty (20) 15 gallon replacement trees. Typically, mitigation trees are planted on site. Given the density of trees within the park, however, this is not recommended. An alternative location may be within the adjacent riparian corridor of Las Trampas Creek to the west or potentially another ‘public’ space. To aid in the mitigation requirements, the following substitutions may be made:

- Two (2) 15 gallon replacement trees in exchange for the planting of one (1) 24” box sized tree
- Four (4) 15 gallon replacement trees in exchange for the planting of one (1) 36” box sized tree
- Eight (8) 15 gallon replacement trees in exchange for the planting of one (1) 48” box sized tree
- Sixteen (16) 15 gallon replacement trees in exchange for the planting of one (1) 60” box sized tree
- Thirty-two (32) 15 gallon replacement trees in exchange for the planting of one (1) 72” box sized tree

Conclusion and Continuing Maintenance

I believe that if the proper Tree Protection Measures and guidelines are addressed, the trees in the park site shall continue to thrive or remain stable. Given the future park users proximity to the Tree #12, the 27” incense cedar, where the proposed elevated deck is located, I suggest that the tree be assessed on a biannual basis by a qualified arborist.

Assumptions and Limitations

The Leigh Creekside Park Improvement Plan, based on the topographical survey by the Humann Company is assumed to be accurate. All observations and recommendations made within this review are objective and to the best of the author’s ability. The findings in this report are dependent on the condition of the trees evaluated at the time of the site inspections. This assessment was limited to the visual examination of the trees listed within the report with no dissection, excavation, probing or coring. There is no guarantee, warranty, expressed or implied, that problems, deficiencies or failure may occur in the future. To live (or play) near trees, one must accept some degree of risk.
Please contact me with any questions or if additional information is needed.
Sincerely,
INSIDEOUT DESIGN, INC

Pennell Phillips
City Landscape Consultant
Landscape Architect, CLA 5602
Certified Arborist, WE-6608A
INSIDE OUT DESIGN,
SEPTEMBER 28, 2016
September 28, 2016

Jennifer Russell, Director
City of Lafayette Parks
Trails & Recreation
500 Saint Mary’s Road
Lafayette, CA 94549

Re: Leigh Creekside Park Amended Master Plan

Dear Jennifer,

Per the City’s direction, I have reviewed the Amended Master Plan for the Leigh Creekside Park, dated October 17, 2016, prepared by James Dixon.

Amended Master Plan Summary

Similar to the revised Site Improvement Plan, dated January 22, 2016, the Amended Master Plan shows a number of proposed historically themed (ice age, hunter-gatherer, pioneer, etc.) play structures and educational activities (a climbing, artificial boulder rock structure, lumber wagon, cargo nets, elevated platforms, etc.) most of which are ADA compliant and meant for children ranging from 9 months to 12 years of age. To augment the existing site features: additional picnic tables, accessible walkways, benches, trash receptacles and bike racks area proposed.

The designer has addressed previous concerns raised by the community and previous reviews:

- The previous northern trail that looped around the Heritage Oak has been eliminated
- Many of the play structures have been reduced in size with smaller ‘fall zones’
- The play structures located along Moraga Boulevard have been pulled back in an effort to help preserve existing trees and maintain the wild character along the edge of the park

Two existing trees are deemed for removal: an 18” Incense cedar and 19.5” Incense cedar.
Observations & Recommendations for the Amended Master Plan

1. Two proposed bench locations are within close proximity to existing trees. In an effort to minimize root disturbance, please retain an arborist to perform an exploratory root search, via an air spade¹, to determine if there is a conflict with the post locations of the benches and any roots. The exact location of the bench may be adjusted accordingly based on this information.

2. It appears the proposed ‘Ice Age Time’ site feature is relatively exposed for views from Moraga Boulevard. Consider native, supplemental plantings between the fall zone and sidewalk to help buffer the introduction of the feature. Mass plantings in drifts of 3 to 5 species to reflect the natural character of the setting.

For required mitigation measures for the two tree removals and any other recommendations still germane to the proposed site improvements, please refer to our previous memorandum dated February 10, 2016 and the original Tree Inventory dated November 4, 2015.

Please contact me with any questions or if additional information is needed.

Sincerely,

INSIDEOUT DESIGN, INC

Pennell Phillips
City Landscape Consultant
Landscape Architect, CLA 5602
Certified Arborist, WE-6608A

¹Air spade: a pneumatic tool that removes soil, via highly compressed air, minimizing root damage