

## Appendix D – New or Updated Appendices to the EIR

This Appendix contains:

- Updated City Arborist's Approval, July 10, 2023 (portion of Appendix B to the Draft EIR).
- Updated vibration calculations for Alternative 3, the Applicant's Alternative (portion of Appendix E to the Draft EIR).

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# Updated City Arborist's Approval, July 10, 2023

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## CITY OF SARATOGA ARBORIST APPROVAL Conditions of Approval and Tree Protection Plan

Prepared by Christina Fusco, City Arborist  
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Application No. **ARB19-0039**  
Address: **14500 Fruitvale Avenue**  
Owner: Oddfellows Home of California  
APN: 397-12-012

**Date: June 28, 2020**

### REPORT HISTORY:

Report 1: November 25, 2020  
Report 4: This report replaces previous reports for this project.  
July 10, 2023

### PROJECT SCOPE:

The applicant has submitted plans to build five new structures on the campus. They include three buildings with independent living units, an auditorium, and a fitness building. A total of **64** protected trees are requested for removal to construct the project. They include trees **1 – 9, 11 – 15, 17 – 19, 21, 23, 24, 26, 31, 32, 24, 46, 48, 53, 72, 75, 79 – 81, 89 – 100, 109 – 111, 115 – 122, 136 – 139, 141-142, 144, 148, and 149**. Tree **112** fell during the 2023 storm season.

### PROJECT DATA IN BRIEF:

|                         |  |
|-------------------------|--|
| Tree security deposit – | Required - \$133,300   |
| Tree protection –       | Required – See Conditions of Approval and attached map.                                    |
| Tree removals –         | Trees <u>listed above</u> are approved for removal once building permits have been issued. |
| Replacement trees –     | Required = \$214,640   |

### ATTACHMENTS:

- 1 – Findings and Tree Information
- 2 – Tree Removal Criteria
- 3 – Conditions of Approval
- 4 – Maps Showing Tree Protection

**FINDINGS:**Documents Reviewed

Saratoga CCRC Independent Living and Campus Expansion plan set dated April 4, 2022.  
The arborist report by David L. Babby written February 22, 2019 and revised May 27, 2021.

Tree Removals

According to Section 15-50.080 of the City Code, whenever a tree is requested for removal as part of a project, certain findings must be made and specific tree removal criteria met. Sixty five (65) trees protected by City Code are in conflict with the project, and meet the City's criteria allowing them to be removed and replaced as part of the project, once building division permits have been obtained. They include trees **1 – 9, 11 – 15, 17 – 19, 21, 23, 24, 26, 31, 32, 24, 46, 48, 53, 72, 75, 79 – 81, 89 – 100, 109 – 111, 115 – 122, 136 – 139, 141-142, 144, 148, and 149**. Tree **112** fell during the 2023 storm season. Attachment 2 contains the tree removal criteria for reference.

New Construction

Based on the information provided, and as conditioned, this project complies with the requirements for the setback of new construction from existing trees under Section 15-50.120 of the City Code.

Tree Preservation Plan

Section 15-50.140 of the City Code requires a Tree Preservation Plan for this project. To satisfy this requirement the following shall be copied onto a plan sheet and included in the final sets of plans:

- 1) The tree information, recommendations and maps showing tree protection from the revised arborist report dated **May 27, 2021**;
- 2) The Project Data in Brief and the Conditions of Approval from this report May 16, 2022.

**Table 1: Tree Removal Criteria that are met from May 27, 2021 report.**

| TREE # | NAME                    | DIAM. (in.) | REASON(S) FOR REMOVAL                         | CITY CRITERIA | APPRAISED VALUE |
|--------|-------------------------|-------------|---|---------------|-----------------|
| 1      | California fan palm     | 18          | Grading, w/in wlkw, joint trench, storm drain | 1, 3 thru 9   | \$240           |
| 2      | Coast redwood           | 81          | Grading, w/in wlkw, Bldg B                    | 3 thru 9      | \$21,800        |
| 3      | California fan palm     | 21          | w/in Bldg B footprint                         | 3 thru 9      | \$270           |
| 4      | California fan palm     | 20          | w/in Bldg B footprint                         | 3 thru 9      | \$290           |
| 5      | California fan palm     | 20          | w/in Bldg B footprint                         | 3 thru 9      | \$290           |
| 6      | California fan palm     | 18          | w/in Bldg B footprint                         | 3 thru 9      | \$290           |
| 7      | California fan palm     | 17          | w/in Bldg B footprint                         | 3 thru 9      | \$290           |
| 8      | Canary Island date palm | 28          | w/in future drive aisle                       | 3 thru 9      | \$3,100         |
| 9      | Canary Island date palm | 27          | w/in future drive aisle                       | 3 thru 9      | \$2,880         |
| 11     | Coast redwood           | 51          | Grading, w/in Colfax Ln                       | 3 thru 9      | \$14,700        |
| 12     | Valley oak              | 27          | Grading, wlkw, Colfax Ln, bioswale            | 3 thru 9      | \$14,000        |
| 13     | Columbia London plane   | 11          | Grading, Colfax Ln, Bldg C                    | 3 thru 9      | \$990           |
| 14     | Columbia London plane   | 14          | w/in Bldg C footprint                         | 3 thru 9      | \$1,430         |
| 15     | Bloodgood London plane  | 23          | w/in Bldg C footprint                         | 3 thru 9      | \$2,550         |
| 17     | Columbia London plane   | 11          | w/in Bldg C footprint                         | 3 thru 9      | \$760           |
| 18     | Columbia London plane   | 11          | w/in Bldg C, low SFP                          | 1, 3 thru 9   | \$0             |
| 19     | Columbia London plane   | 10          | w/in Bldg C footprint                         | 3 thru 9      | \$710           |
| 21     | Tulip tree              | 10          | Grading, wlkw                                 | 3 thru 9      | \$320           |
| 23     | Tulip tree              | 10          | Grading                                       | 3 thru 9      | \$290           |
| 24     | Tulip tree              | 11          | Grading, wlkw                                 | 3 thru 9      | \$570           |
| 26     | Tulip tree              | 11          | Grading                                       | 3 thru 9      | \$340           |
| 31     | Tulip tree              | 14          | Grading, wlkw                                 | 3 thru 9      | \$600           |
| 32     | Tulip tree              | 12          | Grading, wlkw                                 | 3 thru 9      | \$540           |
| 34     | Tulip tree              | 12          | Grading, w/in wlkw                            | 3 thru 9      | \$450           |
| 46     | Columbia London plane   | 13          | W/in Bldg C footprint                         | 3 thru 9      | \$880           |
| 48     | Columbia London plane   | 8           | w/in drive aisle, at Bldg C, low SFP          | 1, 3 thru 9   | \$750           |

**Table 1 continued: Tree Removal Criteria that are met from May 27, 2021 report.**

| TREE # | NAME                   | DIAM. (in.)      | REASON(S) FOR REMOVAL          | CITY CRITERIA | APPRAISED VALUE |
|--------|------------------------|------------------|--------------------------------|---------------|-----------------|
| 53     | Mexican fan palm       | 16               | w/in future street alignment   | 3 thru 9      | \$200           |
| 72     | Coast redwood          | 16               | Grading, at Meeting Room       | 3 thru 9      | \$2,790         |
| 75     | Coast redwood          | 19               | w/in Meeting Room footprint    | 3 thru 9      | \$3,780         |
| 79     | Coast live oak         | 24               | Grading, wlkwy, poor condition | 3 thru 9      | \$3,970         |
| 80     | Coast live oak         | 6                | Grading, wlkwy, low SFP        | 1, 3 thru 9   | \$310           |
| 81     | Coast live oak         | 7                | Grading, w/in wlkwy            | 3 thru 9      | \$730           |
| 89     | Coast live oak         | 18               | Grading                        | 3 thru 9      | \$3,030         |
| 90     | Coast redwood          | 48               | w/in Bldg A footprint          | 3 thru 9      | \$12,900        |
| 91     | Coast redwood          | 45               | w/in Bldg A footprint          | 3 thru 9      | \$10,100        |
| 92     | Coast live oak         | 12, 11           | w/in Bldg A footprint          | 3 thru 9      | \$2,010         |
| 93     | Coast live oak         | 6                | w/in Bldg A footprint, low SFP | 1, 3 thru 9   | \$0             |
| 94     | Coast live oak         | 12               | w/in Bldg A footprint          | 3 thru 9      | \$1,060         |
| 95     | Coast live oak         | 16               | w/in Bldg A footprint          | 3 thru 9      | \$2,210         |
| 96     | Coast live oak         | 9                | w/in Bldg A footprint          | 3 thru 9      | \$630           |
| 97     | Coast live oak         | 7                | w/in Bldg A footprint, low SFP | 1, 3 thru 9   | \$0             |
| 98     | Coast live oak         | 9                | w/in Bldg A footprint, low SFP | 1, 3 thru 9   | \$0             |
| 99     | Coast live oak         | 13               | w/in Bldg A footprint          | 3 thru 9      | \$1,090         |
| 100    | Coast live oak         | 20, 13           | w/in Bldg A footprint          | 3 thru 9      | \$4,060         |
| 109    | Coast redwood          | 25               | Grading, Bldg A, w/in wlkwy    | 3 thru 9      | \$2,850         |
| 110    | Coast redwood          | 26               | w/in Bldg A footprint          | 3 thru 9      | \$4,620         |
| 111    | Coast live oak         | 24               | w/in Bldg A footprint          | 3 thru 9      | \$4,250         |
| 112    | Coast live oak         | 38               | w/in Bldg A footprint          | 3 thru 9      | \$8,700         |
| 115    | Tuscarora crape myrtle | 5, 4(4), 3(3), 2 | Near edge of Bldg A            | 3 thru 9      | \$780           |
| 116    | Tuscarora crape myrtle | 3(3), 2, 1       | w/in Bldg A footprint          | 3 thru 9      | \$200           |
| 117    | Tuscarora crape myrtle | 6, 5, 4, 3, 2    | w/in Bldg A footprint          | 3 thru 9      | \$640           |
| 118    | Coast redwood          | 25, 22           | Grading, w/in wlkwy            | 3 thru 9      | \$7,100         |



**Table 1 continued: Tree Removal Criteria that are met from May 27, 2021 report.**

| TREE # | NAME                    | DIAM. (in.) | REASON(S) FOR REMOVAL                           | CITY CRITERIA | APPRAISED VALUE |
|--------|-------------------------|-------------|---|---------------|-----------------|
| 119    | Coast redwood           | 21, 17      | New wlkwy, grading                              | 3 thru 9      | \$5,400         |
| 120    | Coast redwood           | 33          | New wlkwy, grading, storm drain and water lines | 3 thru 9      | \$8,400         |
| 121    | Coast redwood           | 27          | Grading, w/in wlkwy                             | 3 thru 9      | \$4,970         |
| 122    | Coast redwood           | 45          | Grading, weak structure                         | 3 thru 9      | \$9,400         |
| 136    | Cork oak                | 56          | Grading, w/in wlkwy, bioswale                   | 3 thru 9      | \$18,900        |
| 137    | Columbia London plane   | 16          | w/in future street/parking area                 | 3 thru 9      | \$1,990         |
| 138    | Columbia London plane   | 12          | w/in future street/parking area                 | 3 thru 9      | \$780           |
| 139    | Canary Island date palm | 24          | Fire dept. road width clmce                     | 3 thru 9      | \$2,340         |
| 141    | Valley oak              | 15          | Grading for secondary EVA                       | 3 thru 9      | \$3,600         |
| 142    | Coast live oak          | 19          | Grading for secondary EVA                       | 3 thru 9      | \$2,700         |
| 144    | Purple-leaf cherry plum | 10          | Nearly dead, grading for wlkwy                  | 1, 3 thru 9   | \$0             |
| 148    | Valley oak              | 31          | Grading for secondary EVA                       | 3 thru 9      | \$17,200        |
| 149    | Mexican fan palm        | 20          | w/in secondary EVA                              | 3 thru 9      | \$320           |

**TREE INFORMATION:**

Project Arborist: David L. Babby, Arbor Resources

Date of Report: February 22, 2019, revised March 18, 2020 and May 27, 2021

**Table 2: Tree information from May 27, 2021 arborist report.**

| TREE # | NAME                | DISPOSITION |     | DIAM. (in.) | APPRAISED VALUE |          |
|--------|---------------------|-------------|-----|-------------|-----------------|----------|
|        |                     | RETAIN      | RMV |             | RETAIN          | RMV      |
| 1      | California fan palm | -           | X   | 18          | -               | \$240    |
| 2      | Coast redwood       | -           | X   | 81          | -               | \$21,800 |
| 3      | California fan palm | -           | X   | 21          | -               | \$270    |
| 4      | California fan palm | -           | X   | 20          | -               | \$290    |
| 5      | California fan palm | -           | X   | 20          | -               | \$290    |
| 6      | California fan palm | -           | X   | 18          | -               | \$290    |
| 7      | California fan palm | -           | X   | 17          | -               | \$290    |

Table 2 continued: Tree information from May 27, 2021 arborist report.

| TREE # | NAME                    | DISPOSITION |     | DIAM. (in.) | APPRAISED VALUE |          |
|--------|-------------------------|-------------|-----|-------------|-----------------|----------|
|        |                         | RETAIN      | RMV |             | RETAIN          | RMV      |
| 8      | Canary Island date palm | -           | X   | 28          | -               | \$3,100  |
| 9      | Canary Island date palm | -           | X   | 27          | -               | \$2,880  |
| 10     | Coast redwood           | X           | -   | 89          | \$43,900        | -        |
| 11     | Coast redwood           | -           | X   | 51          | -               | \$14,700 |
| 12     | Valley oak              | -           | X   | 27          | -               | \$14,000 |
| 13     | Columbia London plane   | -           | X   | 11          | -               | \$990    |
| 14     | Columbia London plane   | -           | X   | 14          | -               | \$1,430  |
| 15     | Bloodgood London plane  | -           | X   | 23          | -               | \$2,550  |
| 17     | Columbia London plane   | -           | X   | 11          | -               | \$760    |
| 18     | Columbia London plane   | -           | X   | 11          | -               | \$0      |
| 19     | Columbia London plane   | -           | X   | 10          | -               | \$710    |
| 21     | Tulip tree              | -           | X   | 10          | -               | \$320    |
| 23     | Tulip tree              | -           | X   | 10          | -               | \$290    |
| 24     | Tulip tree              | -           | X   | 11          | -               | \$570    |
| 26     | Tulip tree              | -           | X   | 11          | -               | \$340    |
| 31     | Tulip tree              | -           | X   | 14          | -               | \$600    |
| 32     | Tulip tree              | -           | X   | 12          | -               | \$540    |
| 34     | Tulip tree              | -           | X   | 12          | -               | \$450    |
| 38     | Tulip tree              | X           | -   | 10          | \$210           | -        |
| 39     | Tulip tree              | X           | -   | 14          | \$660           | -        |
| 41     | Coast live oak          | X           | -   | 27          | \$7,400         | -        |
| 42     | Coast live oak          | X           | -   | 15, 12, 11  | \$2,800         | -        |
| 43     | Coast live oak          | X           | -   | 10          | \$580           | -        |
| 46     | Columbia London plane   | -           | X   | 13          | -               | \$880    |
| 48     | Columbia London plane   | -           | X   | 8           | -               | \$750    |
| 53     | Mexican fan palm        | -           | X   | 16          | -               | \$200    |
| 67     | Coast redwood           | X*          | -   | 12          | \$1,720         | -        |

**Table 2 continued: Tree information from May 27, 2021 arborist report.**

| TREE # | NAME             | DISPOSITION |     | DIAM. (in.) | APPRAISED VALUE |          |
|--------|------------------|-------------|-----|-------------|-----------------|----------|
|        |                  | RETAIN      | RMV |             | RETAIN          | RMV      |
| 72     | Coast redwood    | -           | X   | 16          | -               | \$2,790  |
| 73     | Coast redwood    | X*          | -   | 12          | \$2,090         | -        |
| 75     | Coast redwood    | -           | X   | 19          | -               | \$3,780  |
| 79     | Coast live oak   | -           | X   | 24          | -               | \$3,970  |
| 80     | Coast live oak   | -           | X   | 6           | -               | \$310    |
| 81     | Coast live oak   | -           | X   | 7           | -               | \$730    |
| 89     | Coast live oak   | -           | X   | 18          | -               | \$3,030  |
| 90     | Coast redwood    | -           | X   | 48          | -               | \$12,900 |
| 91     | Coast redwood    | -           | X   | 45          | -               | \$10,100 |
| 92     | Coast live oak   | -           | X   | 12, 11      | -               | \$2,010  |
| 93     | Coast live oak   | -           | X   | 6           | -               | \$0      |
| 94     | Coast live oak   | -           | X   | 12          | -               | \$1,060  |
| 95     | Coast live oak   | -           | X   | 16          | -               | \$2,210  |
| 96     | Coast live oak   | -           | X   | 9           | -               | \$630    |
| 97     | Coast live oak   | -           | X   | 7           | -               | \$0      |
| 98     | Coast live oak   | -           | X   | 9           | -               | \$0      |
| 99     | Coast live oak   | -           | X   | 13          | -               | \$1,090  |
| 100    | Coast live oak   | -           | X   | 20, 13      | -               | \$4,060  |
| 101    | Coast redwood    | X           | -   | 37          | \$10,200        | -        |
| 102    | Coast redwood    | X           | -   | 15          | \$1,880         | -        |
| 103    | Coast redwood    | X           | -   | 49          | \$8,100         | -        |
| 104    | Coast redwood    | X           | -   | 30          | \$5,900         | -        |
| 105    | Coast redwood    | X           | -   | 21          | \$2,740         | -        |
| 106    | Coast redwood    | X           | -   | 22, 21, 20  | \$6,800         | -        |
| 107    | Blackwood acacia | X           | -   | 20          | \$0             | -        |
| 108    | Coast redwood    | X           | -   | 27          | \$4,020         | -        |
| 109    | Coast redwood    | -           | X   | 25          | -               | \$2,850  |

**Table 2 continued: Tree information from May 27, 2021 arborist report.**

| TREE # | NAME                    | DISPOSITION |     | DIAM. (in.)         | APPRAISED VALUE |          |
|--------|-------------------------|-------------|-----|---------------------|-----------------|----------|
|        |                         | RETAIN      | RMV |                     | RETAIN          | RMV      |
| 110    | Coast redwood           | -           | X   | 26                  | -               | \$4,620  |
| 111    | Coast live oak          | -           | X   | 24                  | -               | \$4,250  |
| 112    | Coast live oak          | -           | X   | 38                  | -               | \$8,700  |
| 115    | Tuscarora crape myrtle  | -           | X   | 5, 4(4),<br>3(3), 2 | -               | \$780    |
| 116    | Tuscarora crape myrtle  | -           | X   | 3(3), 2, 1          | -               | \$200    |
| 117    | Tuscarora crape myrtle  | -           | X   | 6, 5, 4, 3,<br>2    | -               | \$640    |
| 118    | Coast redwood           | -           | X   | 25, 22              | -               | \$7,100  |
| 119    | Coast redwood           | -           | X   | 21, 17              | -               | \$5,400  |
| 120    | Coast redwood           | -           | X   | 33                  | -               | \$8,400  |
| 121    | Coast redwood           | -           | X   | 27                  | -               | \$4,970  |
| 122    | Coast redwood           | -           | X   | 45                  | -               | \$9,400  |
| 126    | Coast redwood           | X           | -   | 26                  | \$2,700         | -        |
| 129    | Valley oak              | X           | -   | 36                  | \$21,200        | -        |
| 133    | Valley oak              | X*          | -   | 13                  | \$5,600         | -        |
| 136    | Cork oak                | -           | X   | 56                  | -               | \$18,900 |
| 137    | Columbia London plane   | -           | X   | 16                  | -               | \$1,990  |
| 138    | Columbia London plane   | -           | X   | 12                  | -               | \$780    |
| 139    | Canary Island date palm | -           | X   | 24                  | -               | \$2,340  |
| 141    | Valley oak              | -           | X   | 15                  | -               | \$3,600  |
| 142    | Coast live oak          | -           | X   | 19                  | -               | \$2,700  |
| 143    | Valley oak              | X           | -   | 19                  | \$4,800         | -        |
| 144    | Purple-leaf cherry plum | -           | X   | 10                  | -               | \$0      |
| 148    | Valley oak              | -           | X   | 31                  | -               | \$17,200 |
| 149    | Mexican fan palm        | -           | X   | 20                  | -               | \$320    |

**TREE REMOVAL CRITERIA**

Criteria that permit the removal of a protected tree are listed below. This information is from Article 15-50.080 of the City Code and is applied to any tree requested for removal as part of the project. If findings are made that meet the criteria listed below, the tree(s) may be approved for removal and replacement during construction.

- (1)** The condition of the tree with respect to disease, imminent danger of falling, proximity to existing or proposed structures and interference with utility services, and whether the tree is a Dead tree or a Fallen tree.
- (2)** The necessity to remove the tree because of physical damage or threatened damage to improvements or impervious surfaces on the property.
- (3)** The topography of the land and the effect of the tree removal upon erosion, soil retention and the diversion or increased flow of surface waters, particularly on steep slopes.
- (4)** The number, species, size and location of existing trees in the area and the effect the removal would have upon shade, privacy impact, scenic beauty, property values, erosion control, and the general welfare of residents in the area.
- (5)** The age and number of healthy trees the property is able to support according to good forestry practices.
- (6)** Whether or not there are any feasible alternatives that would allow for retaining or not encroaching on the protected tree.
- (7)** Whether the approval of the request would be contrary to or in conflict with the general purpose and intent of this Article.
- (8)** Any other information relevant to the public health, safety, or general welfare and the purposes of this ordinance as set forth in [Section 15-50.010](#)
- (9)** The necessity to remove the tree for economic or other enjoyment of the property when there is no other feasible alternative to the removal.
- (10)** The necessity to remove the tree for installation and efficient operation of solar panels, subject to the requirements that the tree(s) to be removed, shall not be removed until solar panels have been installed and replacement trees planted in conformance with the City Arborist's recommendation.
- (11)** The necessity to remove a tree following the creation of defensible space within 100 feet of a structure located within the Wildland Urban Interface, in accordance with defensible space standards established by CAL FIRE or as determined by Santa Clara County Fire Department, and that risk of increased wildfire cannot reasonably be addressed through maintenance or without tree removal.

**CONDITIONS OF APPROVAL**

1. Owner, Architect, Contractor: It is the responsibility of the owner, architect and contractor to be familiar with the information in this report and implement the required conditions.
2. Permit:
  - a. Receipt of a Planning or Building permit does not relieve applicant of his responsibilities for protecting trees per City Code Article 15-50 on all construction work.
  - b. No protected tree authorized for removal or encroachment pursuant to this project may be removed or encroached upon until the issuance of the applicable permit from the building division for the approved project.
3. Final Plan Sets:
  - a. Shall include the tree information, protection recommendations, and the maps showing tree protection from the arborist report by **David L. Babby** dated **May 27, 2021** copied onto a plan sheet.
  - b. Shall include the Project Data in Brief and the Conditions of Approval sections of the City Arborist report dated May 16, 2022.
4. Tree Protection Security Deposit:
  - a. Is required per City Ordinance 15-50.080.
  - b. Shall be **\$128,500** for tree(s) **10, 38-43, 67, 73, 101-108, 126, 129, 133 and 143**.
  - c. Shall be obtained by the owner and filed with the Community Development Department before obtaining Building Division permits.
  - d. May be in the form of cash, check, or a bond.
  - e. Shall remain in place for the duration of construction of the project.
  - f. May be released once the project has been completed, inspected and approved by the City Arborist.
5. Tree Protection Fencing:
  - a. Shall be installed as shown on the attached map.
  - b. Shall be shown on the Site Plan.
  - c. Shall be established prior to the arrival of construction equipment or materials on site.
  - d. Shall be comprised of six-foot high chain link fencing mounted on 2-inch diameter galvanized posts, driven into the ground and spaced no more than 10 feet apart.
  - e. Shall be posted with signs saying "TREE PROTECTION FENCE - DO NOT MOVE OR REMOVE WITHOUT APPROVAL FROM CITY ARBORIST, CHRISTINA FUSCO (408) 868-1276".
  - f. Wherever protection is needed outside of fences, unprocessed wood chips, or approved equivalent, shall be placed to the edge of the tree's canopy and to a depth of 6 inches.
  - g. Call City Arborist, at (408) 868-1276 for an inspection of tree protection fencing once it has been installed. This is required prior to obtaining building division permits.
  - h. Tree protection fencing shall remain undisturbed throughout the construction until final inspection.

6. Construction: All construction activities shall be conducted outside tree protection fencing unless permitted as conditioned below. These activities include, but are not necessarily limited to, the following: demolition, grading, trenching for utility installation, equipment cleaning, stockpiling and dumping materials (including soil fill), and equipment/vehicle operation and parking.
7. Work inside fenced areas:
  - a. Requires field meeting with City Arborist before performing work.
  - b. Requires City Arborist approval prior to performing work.
  - c. Requires Project Arborist on site to monitor work.
8. Project Arborist:
  - a. Shall be David L. Babby, unless otherwise approved by the City Arborist.
  - b. Shall visit the site every two weeks during grading, trenching or digging activities and every six weeks thereafter.
  - c. Shall provide a letter/email to the City after each inspection. The letters/emails shall document the work performed around trees, include photos of the work in progress, and provide information on the condition of the trees during construction.
  - d. Shall supervise any permitted pruning or root pruning of trees on site. Roots of protected trees measuring two inches in diameter or more shall not be cut without prior approval of the Project Arborist. Roots measuring less than two inches in diameter may be cut using a sharp pruning tool.
9. Tree removal:
  - a. Trees **1 – 9, 11 – 15, 17 – 19, 21, 23, 24,**
  - b. **26, 31, 32, 24, 46, 48, 53, 72, 75, 79 – 81, 89 – 100, 109 – 111, 115 – 122, 136 – 139, 141-142, 144, 148, and 149** meet the criteria for removal and may be removed once building division permits have been obtained.
  - c. Replacement values for new trees are listed below.

|                       |                     |                        |
|-----------------------|---------------------|------------------------|
| 15 gallon = \$350     | 24 inch box = \$500 | 36 inch box = \$1,500  |
| 48 inch box = \$5,000 | 60 inch box = 7,000 | 72 inch box = \$15,000 |
  - d. No trees are requested or approved for removal to construct the project.
  - e. Should any tree be damaged beyond repair, new trees shall be required to replace the tree. If there is insufficient room to plant the necessary number of new trees, some of the value for trees may be paid into the City's Tree Fund.
10. New trees:
  - a. New trees equal to **\$214,640** shall be planted as part of the project before final inspection and occupancy of the new home. New trees may be of any species.
  - b. Trees shall be replaced on or off site according to good forestry practices, and shall provide equivalent value in terms of aesthetic and environmental quality, size, height, location, appearance and other significant beneficial characteristics of the removed trees.
  - c. Replacement values for new trees are listed below.

|                   |                     |                       |
|-------------------|---------------------|-----------------------|
| 15 gallon = \$350 | 24 inch box = \$500 | 36 inch box = \$1,500 |
|-------------------|---------------------|-----------------------|

48 inch box = \$5,000    60 inch box = 7,000    72 inch box = \$15,000

- d. The rest of the replacement trees may be planted anywhere on the property as long as they do not encroach on retained trees.

11. Damage to protected trees that will be retained:

- a. Should any protected tree be damaged beyond repair, new trees shall be required to replace the tree. If there is insufficient room to plant the necessary number of new trees, some of the value for trees may be paid into the City's Tree Fund. Replacement values for new trees are listed below.

15 gallon = \$350      24 inch box = \$500      36 inch box = \$1,500

48 inch box = \$5,000    60 inch box = 7,000      72 inch box = \$15,000

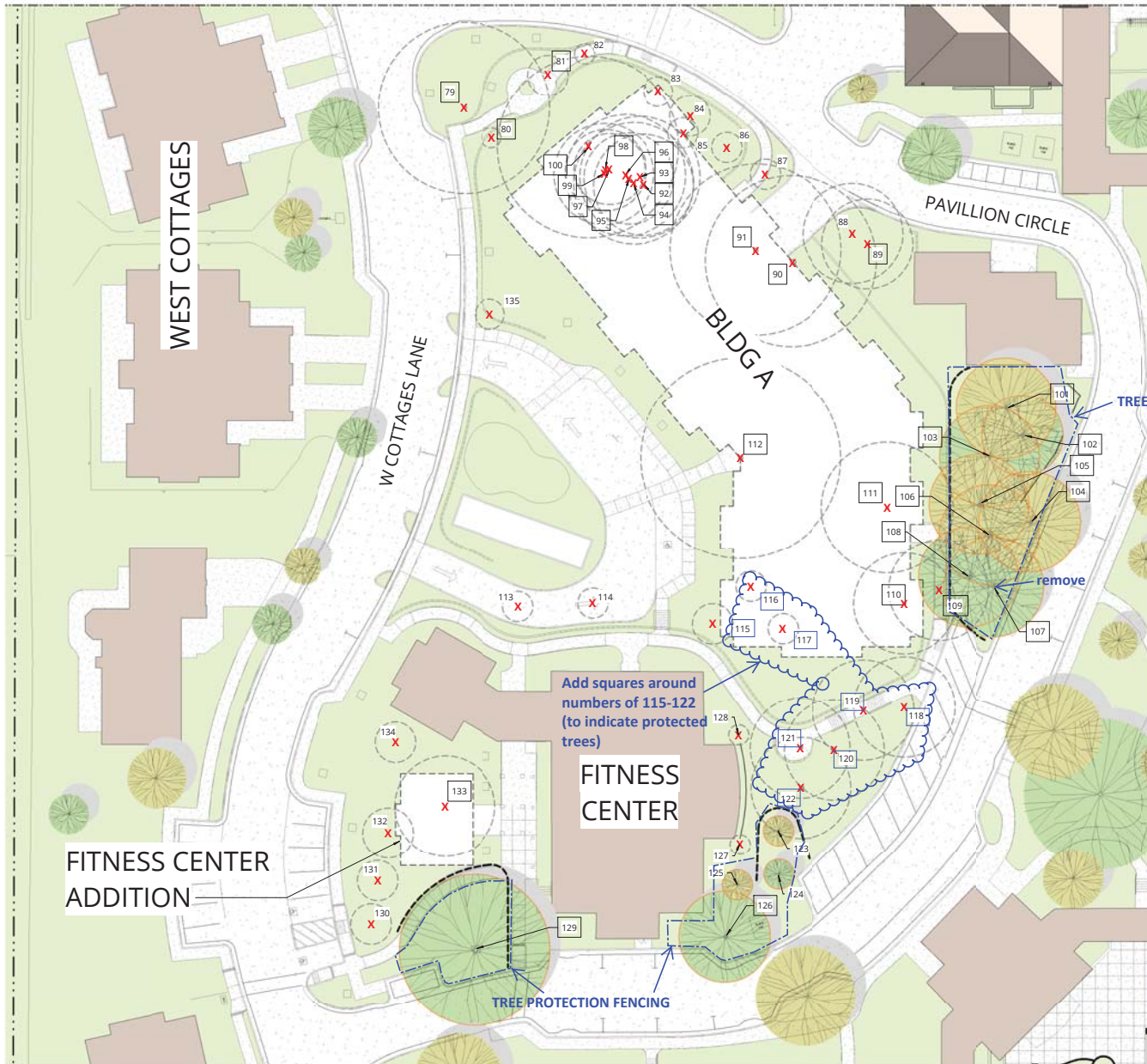
- b. Water loving plants and lawns are not permitted under oak tree canopies. Only drought tolerant plants that are compatible with oaks are permitted under the outer half of the canopy of oak trees on site.

12. Final inspection:





- a. At the end of the project, when the contractor wants to remove tree protection fencing and have the tree protection security deposit released by the City, call City Arborist for a final inspection.
- b. Before scheduling a final inspection from the City Arborist, have the project arborist do an inspection, prepare a letter with their findings and provide that letter to the City for the project file.



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**LEGEND**

-  TREE TO BE REMOVED
-  TREE TO REMAIN
-  PROTECTED TREE
-  TREE PROTECTION FENCING

**NOT FOR CONSTRUCTION**



38 NORTHWEST DAVIS, SUITE 300  
 PORTLAND, OR 97209  
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 1505 5TH AVE., SUITE 300  
 SEATTLE, WA 98101  
 T 206.576.1600  
 1014 HOWARD STREET  
 SAN FRANCISCO, CA 94103  
 T 415.252.7063  
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**SARATOGA RETIREMENT COMMUNITY**

14500 FRUITVALE  
 SARATOGA, CALIFORNIA  
 PACIFIC RETIREMENT SERVICES

| REVISION | DATE | REASON FOR ISSUE |
|----------|------|------------------|
|          |      |                  |
|          |      |                  |
|          |      |                  |

TREE REMOVAL PLAN

SCHEMATIC DESIGN

DATE: 03.30.2020 PROJECT NUMBER: 963117.8

SHEET NUMBER: CS-1.2

**1 TREE REMOVAL PLAN - BUILDING A & FITNESS CENTER**  
 1" = 20'-0"



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**NOT FOR CONSTRUCTION**

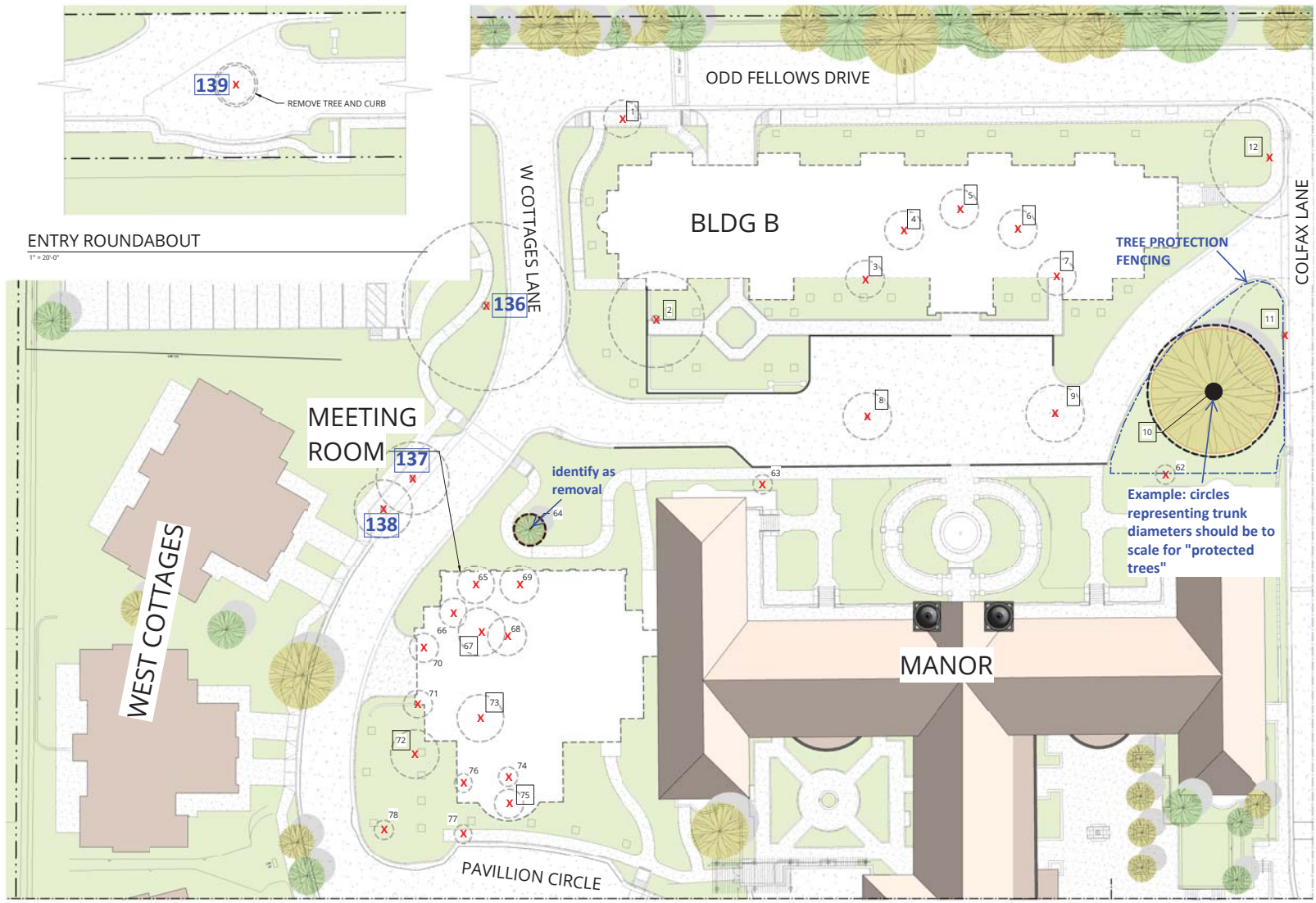


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**LEGEND**



Example: circles representing trunk diameters should be to scale for "protected trees"

**1 TREE REMOVAL PLAN - BUILDING B & MEETING ROOM**  
1" = 20'-0"



| REVISION | DATE | REASON FOR ISSUE |
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|          |      |                  |
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TREE REMOVAL PLAN

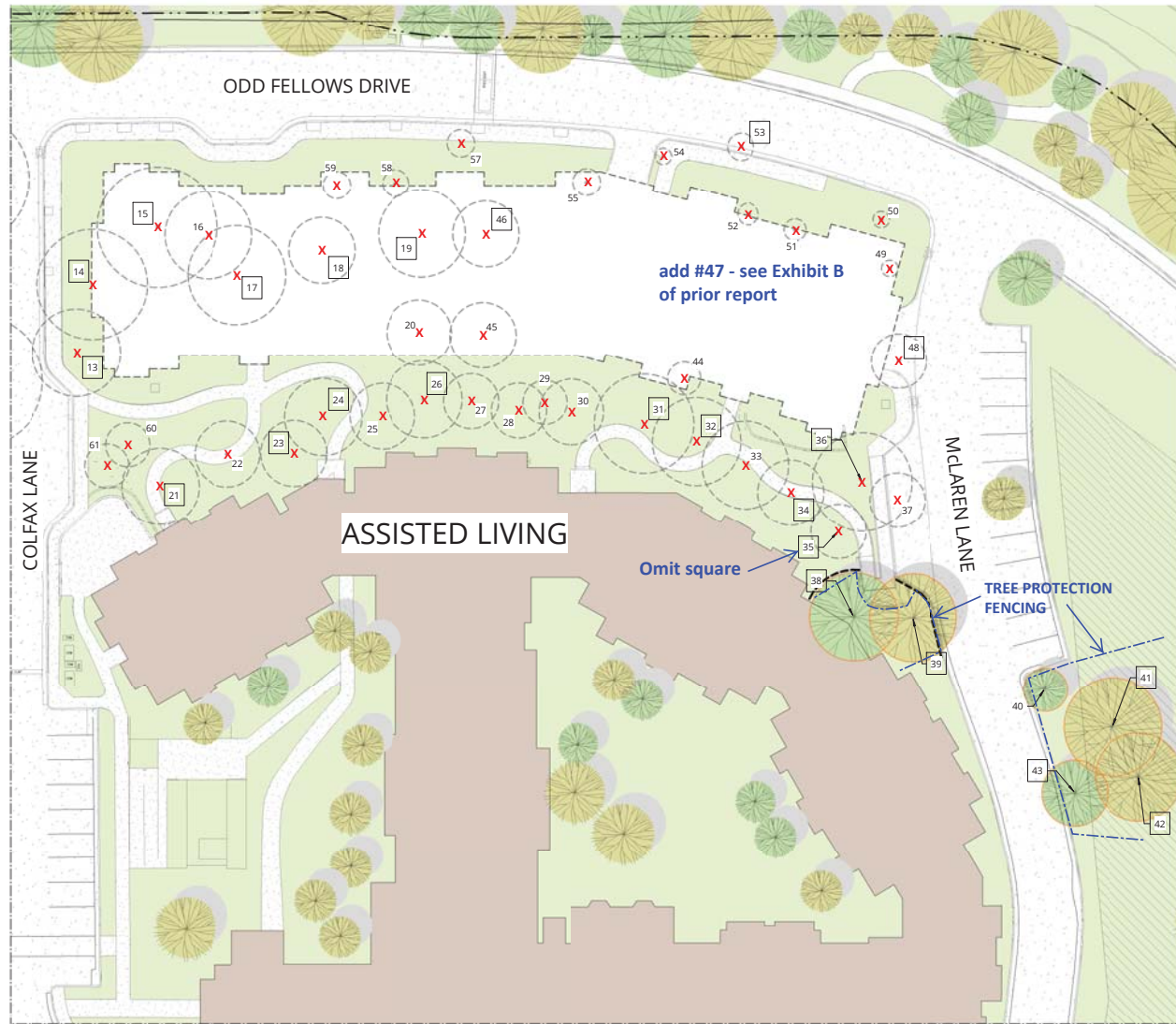
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SHEET NUMBER:

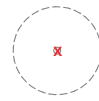
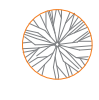


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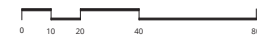
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**LEGEND**

-  TREE TO BE REMOVED
-  TREE TO REMAIN
-  PROTECTED TREE
-  TREE PROTECTION FENCING

**1 TREE REMOVAL PLAN - BUILDING C**  
1" = 20'-0"



**NOT FOR CONSTRUCTION**



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SARATOGA, CALIFORNIA

PACIFIC RETIREMENT SERVICES

| REVISION | DATE | REASON FOR ISSUE |
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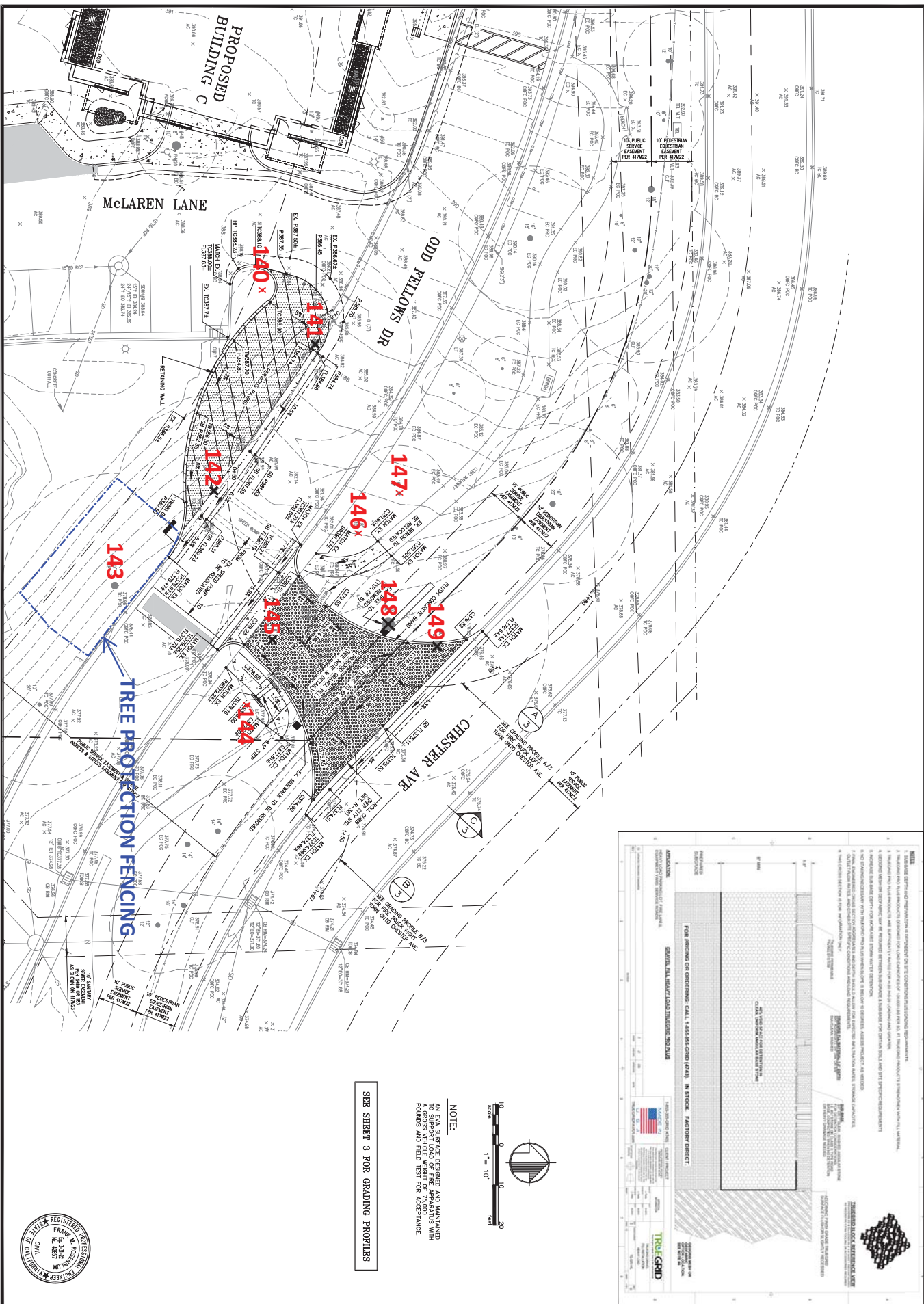
TREE REMOVAL PLAN

SCHEMATIC DESIGN

DATE: 03.30.2020 PROJECT NUMBER: 963117.8

SHEET NUMBER

**CS-1.4**



DATE: 04-28-21  
 SCALE: 1"=10'  
 CHECKED: BH  
 DATE: 11/02/20

**EMERGENCY VEHICLE ACCESS  
 EXHIBIT "C"  
 GRADING LAYOUT**

**SARATOGA RETIREMENT  
 COMMUNITY**  
 14500 FRUITVALE  
 SARATOGA CALIFORNIA

**UNDERWOOD &  
 ROSENBLUM, INC.**  
 civil engineers and surveyors  
 1500 GARDEN STREET, SUITE 200  
 SAN JOSE, CALIFORNIA 95128  
 TEL: (408) 453-1222 FAX: (408) 453-1225

| DATE     | REVISIONS | DESC. |
|----------|-----------|-------|
| 11/11/21 | 1         |       |
| 11/11/21 | 2         |       |
| 11/11/21 | 3         |       |
| 11/11/21 | 4         |       |
| 11/11/21 | 5         |       |
| 11/11/21 | 6         |       |
| 11/11/21 | 7         |       |
| 11/11/21 | 8         |       |
| 11/11/21 | 9         |       |
| 11/11/21 | 10        |       |

# Updated Vibration Calculations for Alternative 3 (Applicant's Alternative)

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## Vibration Calculations - Construction

### Project Construction

| Reference PPV @25 ft (in/sec) | Reference Lv @25 ft (VdB) | Vibration Source | Construction Zone | Sensitive Receptor       | Minimum distance between Source and Receptor (Feet) | Estimated PPV at receptor (in/sec) | Estimated Lv at receptor (VdB) | Threshold for structural damage (in/sec PPV) | Threshold for human annoyance (VdB) |
|-------------------------------|---------------------------|------------------|-------------------|--------------------------|---|------------------------------------|--------------------------------|--|-------------------------------------|
| 0.21                          | 94                        | Roller           | A                 | Manor Building           | 50  | 0.074                              | 85                             | 0.2  | 80                                  |
| 0.21                          | 94                        | Roller           | A                 | 6114/6116 West Cottage   | 75  | 0.040                              | 80                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           | B                 | Manor Building           | 7.5   | 1.278                              | 110                            | 0.2  | 80                                  |
| 0.21                          | 94                        | Roller           | B                 | 14505 Chester Avenue     | 70  | 0.045                              | 81                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           | C                 | Manor Building           | 35  | 0.127                              | 90                             | 0.2  | 80                                  |
| 0.21                          | 94                        | Roller           | C                 | Assisted Living Building | 20  | 0.293                              | 97                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           | Meeting           | Manor Building           | 3   | 5.052                              | 122                            | 0.2  | 80                                  |
| 0.21                          | 94                        | Roller           | Meeting           | 6102-6108 West Cottage   | 50  | 0.074                              | 85                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           | Fitness           | Manor Building           | 360   | 0.004                              | 59                             | 0.2  | 80                                  |
| 0.21                          | 94                        | Roller           | Fitness           | 6118/6120 West Cottage   | 50  | 0.074                              | 85                             | 0.3  | 80                                  |

Source: calculated by AECOM 2020, based on reference values from FTA 2018, Caltrans 2020.

Notes: Vibration levels for large and small excavators are conservatively based on reference values for large and small bulldozers, respectively, as reference values were not available for all equipment types. Similarly, vibration levels for a crawler crane are conservatively based on reference values for a large bulldozer due to lack of equipment-specific reference values. Vibration levels for "sheepsfoot roller" is based on reference value for vibratory roller. Values shown in **bold with asterisk** indicate that applicable thresholds would be exceeded, as discussed further in the text.

Acronyms: in/sec = inches per second; Lv = velocity level in decibels, based on the root mean square velocity amplitude; PPV = peak particle velocity; VdB = velocity decibels.

### Alt 1 Construction

| Reference PPV @25 ft (in/sec) | Reference Lv @25 ft (VdB) | Vibration Source | Construction Zone            | Sensitive Receptor          | Minimum distance between Source and Receptor (Feet) | Estimated PPV at receptor (in/sec) | Estimated Lv at receptor (VdB) | Threshold for structural damage (in/sec PPV) | Threshold for human annoyance (VdB) |
|-------------------------------|---------------------------|------------------|------------------------------|-----------------------------|---|------------------------------------|--------------------------------|--|-------------------------------------|
| 0.21                          | 94                        | Roller           | Skilled Nursing Construction | Manor Building              | 35  | 0.127                              | 90                             | 0.2  | 80                                  |
| 0.21                          | 94                        | Roller           | Skilled Nursing Construction | Assisted Living Building    | 20  | 0.293                              | 97                             | 0.3  | 80                                  |
| 0.089                         | 87                        | Hoe Ram/Dozer    | Healthcare Demolition        | Manor Building              | 325   | 0.002                              | 54                             | 0.2  | 80                                  |
| 0.089                         | 87                        | Hoe Ram/Dozer    | Healthcare Demolition        | Assisted Living Building    | 40  | 0.044                              | 81                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           | Building D Construction      | Manor Building              | 325   | 0.004                              | 61                             | 0.2  | 80                                  |
| 0.21                          | 94                        | Roller           | Building D Construction      | Assisted Living Building    | 40  | 0.104                              | 88                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           | Fitness Center Addition      | Manor Building              | 360   | 0.004                              | 59                             | 0.2  | 80                                  |
| 0.21                          | 94                        | Roller           | Fitness Center Addition      | 6118/6120 West Cottage Lane | 50  | 0.074                              | 85                             | 0.3  | 80                                  |

**Alt 2 Construction**

| Reference PPV @25 ft (in/sec) | Reference Lv @25 ft (VdB) | Vibration Source | Construction Zone | Sensitive Receptor       | Minimum distance between Source and Receptor (Feet) | Estimated PPV at receptor (in/sec) | Estimated Lv at receptor (VdB) | Threshold for structural damage (in/sec PPV) | Threshold for human annoyance (VdB) |
|-------------------------------|---------------------------|------------------|-------------------|--------------------------|---|------------------------------------|--------------------------------|--|-------------------------------------|
| 0.21                          | 94                        | Roller           | A                 | Manor Building           | 50  | 0.074                              | 85                             | 0.2  | 80                                  |
| 0.21                          | 94                        | Roller           | A                 | 6114/6116 West Cottage   | 75  | 0.040                              | 80                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           | C                 | Manor Building           | 35  | 0.127                              | 90                             | 0.2  | 80                                  |
| 0.21                          | 94                        | Roller           | C                 | Assisted Living Building | 20  | 0.293                              | 97                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           | Meeting           | Manor Building           | 3   | 5.052                              | 122                            | 0.2  | 80                                  |
| 0.21                          | 94                        | Roller           | Meeting           | 6102-6108 West Cottage   | 50  | 0.074                              | 85                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           | Fitness           | Manor Building           | 360   | 0.004                              | 59                             | 0.2  | 80                                  |
| 0.21                          | 94                        | Roller           | Fitness           | 6118/6120 West Cottage   | 50  | 0.074                              | 85                             | 0.3  | 80                                  |

**Alt 3 Construction**

| Reference PPV @25 ft (in/sec) | Reference Lv @25 ft (VdB) | Vibration Source | Vibration Source        | Receptor                 | Minimum <sup>1</sup> Distance (feet) | Estimated PPV at receptor (in/sec) | Estimated Lv at receptor (VdB) | Threshold for structural damage (in/sec PPV) | Threshold for human annoyance (VdB) |
|-------------------------------|---------------------------|------------------|-------------------------|--------------------------|--------------------------------------|------------------------------------|--------------------------------|--|-------------------------------------|
| 0.21                          | 94                        | Roller           | Parking Area            | Manor Building           | 85                                   | 0.033                              | 78                             | 0.2  | 80                                  |
| 0.21                          | 94                        | Roller           |                         | 14505 Chester Avenue     | 75                                   | 0.040                              | 80                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           | Building C Construction | Manor Building           | 35                                   | 0.127                              | 90                             | 0.2  | 80                                  |
| 0.21                          | 94                        | Roller           |                         | Assisted Living Building | 20                                   | 0.293                              | 97                             | 0.3  | 80                                  |
| 0.089                         | 87                        | Hoe Ram/Dozer    | Cottage Demolition      | Manor Building           | 95                                   | 0.012                              | 70                             | 0.2  | 80                                  |
| 0.089                         | 87                        | Hoe Ram/Dozer    |                         | 6016 West Cottage Lane   | 10                                   | 0.352                              | 99                             | 0.3  | 80                                  |
| 0.089                         | 87                        | Hoe Ram/Dozer    |                         | 14622 Granite Way        | 25                                   | 0.089                              | 87                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           | Building D Construction | Manor Building           | 95                                   | 0.028                              | 77                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           |                         | 6016 West Cottage Lane   | 10                                   | 0.830                              | 106                            | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           |                         | 14622 Granite Way        | 25                                   | 0.210                              | 94                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           | Cottage Construction    | 6118/6120 West Cottage   | 8                                    | 1.160                              | 109                            | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           |                         | 19300 Chablis Court      | 25                                   | 0.210                              | 94                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           | Meeting Room Addition   | Manor Building           | 3                                    | 5.052                              | 122                            | 0.2  | 80                                  |
| 0.21                          | 94                        | Roller           |                         | 6102-6108 West Cottage   | 50                                   | 0.074                              | 85                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           | Fitness Center Addition | Manor Building           | 360                                  | 0.004                              | 59                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           |                         | 6118/6120 West Cottage   | 50                                   | 0.074                              | 85                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           | Building A Construction | Manor Building           | 50                                   | 0.074                              | 85                             | 0.3  | 80                                  |
| 0.21                          | 94                        | Roller           |                         | 6114/6116 West Cottage   | 75                                   | 0.040                              | 80                             | 0.3  | 80                                  |



**Minimum Distances Required to Avoid Exceeding Thresholds**

**Minimum Distances to avoid Human Annoyance**

| Reference Lv @25 ft (VdB) | Vibration Source | Vibration Source | Receptor | Minimum <sup>1</sup> Distance (feet) | Estimated Lv at receptor (VdB) | Threshold for human annoyance (VdB) |
|---------------------------|------------------|------------------|----------|--------------------------------------|--------------------------------|-------------------------------------|
| 94                        | Roller           | Any              | Any      | 75                                   | 80                             | 80                                  |
| 87                        | Dozer/Drill      | Any              | Any      | 44                                   | 80                             | 80                                  |
| 86                        | Truck            | Any              | Any      | 41                                   | 80                             | 80                                  |

**Minimum Distances to avoid Building Damage (non-engineered timber and masonry buildings)**

| Reference PPV @25 ft (in/sec) | Vibration Source | Vibration Source | Receptor | Minimum <sup>1</sup> Distance (feet) | Estimated PPV at receptor (in/sec) | Threshold for structural damage (in/sec PPV) |
|-------------------------------|------------------|------------------|----------|--------------------------------------|------------------------------------|--|
| 0.21                          | Roller           | Any              | Any      | 25.83                                | 0.200                              | 0.2  |
| 0.089                         | Dozer/Drill      | Any              | Any      | 14.58                                | 0.200                              | 0.2  |
| 0.076                         | Truck            | Any              | Any      | 13.12                                | 0.200                              | 0.2  |

**Minimum Distances to avoid Building Damage (engineered concrete and masonry buildings )**

| Reference PPV @25 ft (in/sec) | Vibration Source | Vibration Source | Receptor | Minimum <sup>1</sup> Distance (feet) | Estimated PPV at receptor (in/sec) | Threshold for structural damage (in/sec PPV) |
|-------------------------------|------------------|------------------|----------|--------------------------------------|------------------------------------|--|
| 0.21                          | Roller           | Any              | Any      | 19.73                                | 0.300                              | 0.3  |
| 0.089                         | Dozer/Drill      | Any              | Any      | 11.13                                | 0.300                              | 0.3  |
| 0.076                         | Truck            | Any              | Any      | 10.01                                | 0.300                              | 0.3  |

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