

APPENDIX 8.2
Tree Survey Report

TREE SURVEY REPORT

985 Montague Expressway
Milpitas, California



PREPARED FOR
Branagh Development
100 School Street
Danville CA 94526

PREPARED BY

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April 17, 2015

TREE PRESERVATION REPORT
985 Montague Expressway
Milpitas, California

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Tree Survey

Introduction and Overview

Branagh Development is planning to develop a self-storage facility located at 985 Montague Expressway, in Milpitas. Ed Brennan, Consulting Arborist, was asked to prepare a Tree Report for the project for review by the City of Milpitas.

This report provides the following information:

1. A survey of trees currently growing on the site.
2. An evaluation of each tree's suitability for preservation.
3. An assessment of the impacts of constructing the proposed project on the trees.
4. Guidelines for preserving selected trees during development.

Survey Methods

Trees were surveyed on March 12, 2015. The survey included trees greater than 6" in diameter. The survey procedure consisted of the following steps:

1. Identifying the tree as to species;
2. Tagging each tree with an identifying number and recording its location on a map;
3. Measuring the trunk diameter at a point 54" above grade;
4. Evaluating the health and structural condition using a scale of 1 – 5:
 - 5** - A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species.
 - 4** - Tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.
 - 3** - Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care.
 - 2** - Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
 - 1** - Tree in severe decline, dieback of scaffold branches and/or trunk; most of foliage from epicormics; extensive structural defects that cannot be abated.
5. Rating the suitability for preservation as "good", "moderate" or "poor". Suitability for preservation considers the health, age and structural condition of the tree, and its potential to remain an asset to the site for years to come.

Good: Trees with good health and structural stability that have the potential for longevity at the site.

Moderate: Trees with somewhat declining health and/or structural defects than can be abated with treatment. The tree will require more intense management and monitoring, and may have shorter life span than those in 'good' category.

Poor: Tree in poor health or with significant structural defects that cannot be mitigated. Tree is expected to continue to decline, regardless of treatment. The species or individual may have characteristics that are undesirable for landscapes, and generally are unsuited for use areas.

Description of Trees

Twenty-two trees (22) trees were evaluated. Descriptions of each tree are found in the **Tree Survey** and locations are plotted on the **Tree Survey Map** (see Attachments). A summary is provided in Table 1.

The site is relatively flat and rectangular in shape. The previous site use was industrial.

The tree species were growing on the site. Fruitless mulberry and Mexican fan palm were the most commonly occurring species with four trees each. The fruitless mulberries were in fair condition, while the Mexican fan palms were in good condition. There were also three glossy privets, three coast red elderberries, and two each of Eugenia and olive. A single tree each represented another four species.

Table 1: Condition ratings and frequency of occurrence of trees.

Common Name	Scientific Name	Condition Rating			No. of Trees
		Poor (1-2)	Fair (3)	Good (4-5)	
Ash	<i>Fraxinus sp.</i>	--	1	--	1
Glossy privet	<i>Ligustrum lucidum</i>	--	3	--	3
Fruitless mulberry	<i>Morus alba</i>	--	4	--	4
European olive	<i>Olea europaea</i>	--	2	--	2
Chinese pistache	<i>Pistachia chinensis</i>	--	1	--	1
Valley oak	<i>Quercus lobata</i>	--	--	1	1
Coast red elderberry	<i>Sambucus callicarpa</i>	--	2	1	3
Brazilian pepper	<i>Schinus terebinthifolus</i>	--	1	--	1
Eugenia	<i>Syzigium paniculatum</i>	--	2	--	2
Mexican fan palm	<i>Washingtonia robusta</i>	--	--	4	4
Total		0 0%	16 73%	6 27%	22 100%

Thirteen of the 22 trees grew within a large oleander hedge that grows along the eastern and northern border of the site. The remaining trees grow along the western border.

Valley oak and coast red elderberry are native to the area.

Protected Trees

Milpitas' Tree Ordinance defines **Protected Trees** as those with a trunk of 12" (37" circumference) or greater in diameter (for commercial property), regardless of the species. Nine (9) of the surveyed trees met the size criteria and are therefore protected trees. They include four fruitless mulberries, three Mexican fan palms, an ash, and a valley oak. The **Tree Survey** indicates if an individual tree is a Protected tree or not.

Suitability for Preservation

Before evaluating the impacts that will occur during development, it is important to consider the quality of the tree resource itself, and the potential for individual trees to function well over an extended length of time. Trees that are preserved on development sites must be carefully selected to make sure that they may survive development impacts, adapt to a new environment and perform well in the landscape. My goal is to identify trees that have the potential for long-term health, structural stability and longevity. For trees growing in open fields, away from areas where people and property are present, structural defects and/or poor health presents a low risk of damage or injury if they fail. However, we must be concerned about safety in use areas. Therefore, where development encroaches into existing plantings,

we must consider their structural stability as well as their potential to grow and thrive in a new environment. Where development will not occur, the normal life cycles of decline, structural failure and death should be allowed to continue.

Evaluation of suitability for preservation considers several factors:

- **Tree health**
Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees.
- **Structural integrity**
Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees should not be preserved in areas where damage to people or property is likely.
- **Species response**
There is a wide variation in the response of individual species to construction impacts and changes in the environment. In our experience, for example, Calif. black walnut is sensitive to construction impacts, while coast is tolerant of site disturbance.
- **Tree age and longevity**
Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young trees are better able to generate new tissue and respond to change. The potential longevity of the Monterey pines is low because of the mature age and infection with pitch canker.

Each tree was rated for suitability for preservation based upon its age, health, structural condition and ability to safely coexist within a development environment (see **Tree Survey** for suitability ratings for individual trees).

Table 2: Tree Suitability for Preservation

Good	These are trees with good health and structural stability that have the potential for longevity at the site. Four (4) trees were rated as good in suitability for preservation. These were the four Mexican fan palms.
Moderate	Trees in this category have fair health and/or structural defects that may be abated with treatment. Trees in this category require more intense management and monitoring, and may have shorter life-spans than those in the "good" category. Eighteen (18) trees were rated as moderate in suitability for preservation. This group contains the balance of trees on the site, including the fruitless mulberries, coast red elderberries, glossy privets, European olives, eugenias, Brazillian pepper, and valley oak.
Poor	Trees in this category are in poor health or have significant defects in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings or be unsuited for use areas. No (0) trees were included in this category.

Evaluation of Impacts and Recommendations for Preservation

Appropriate tree retention develops a practical match between the location and intensity of construction activities and the quality and health of trees. The **Tree Survey** was the reference point for tree condition and quality. Potential impacts from construction were evaluated using the Conceptual Site Plan provided by the James Goodman Architecture.

My recommendation is to remove the 13 trees growing in the oleander hedge that follows the east border of the site. In my opinion the trees do little to contribute to the visual screen provided by the hedge, and may cause it to decline due to competition for light and water. The eight trees on the western border are in locations where grading for buildings will occur, meaning they must be removed.

The valley oak (#22) grows off-site near the northwest corner of the property and is recommended for preservation. Preservation of this tree is predicated on following the **Tree Preservation Guidelines** that follow.

Tree Preservation Guidelines

Certain trees will be designated for preservation based on their suitability for preservation and location relative to the development plan. Once those decisions have been made, the following recommendations will help reduce impacts to trees from development and maintain and improve their health and vitality through the clearing, grading and construction phases.

The goal of tree preservation is not merely tree survival during development but maintenance of tree health and beauty for many years. Trees retained on sites that are either subject to extensive injury during construction or are inadequately maintained become a liability rather than an asset. The response of individual trees will depend on the amount of excavation and grading, the care with which demolition is undertaken, and the construction methods. Coordinating any construction activity inside the Tree Protection Zone can minimize these impacts.

Pre-construction treatments and recommendations

1. The construction superintendent shall meet with the Consulting Arborist before beginning work to discuss work procedures and tree protection.
2. Fence trees to enclose the **TREE PROTECTION ZONE** (leaving space for pedestrian entrance) prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link. Fences are to remain until all grading and construction is completed.

Recommendations for tree protection during construction

1. No grading, construction, demolition or other work shall occur within the **TREE PROTECTION ZONE**. Any modifications must be approved and monitored by the Consulting Arborist.
2. Grading within the dripline of any tree shall be monitored by the consulting arborist.
3. Any root pruning required for construction purposes shall receive the prior approval of, and be supervised by, the Consulting Arborist.
4. Supplemental irrigation shall be applied as determined by the Consulting Arborist.
5. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.

6. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the **TREE PROTECTION ZONE**.
7. Any additional tree pruning needed for clearance during construction must be performed by a Certified Arborist and not by construction personnel.
8. As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore, foundations, footings and pavements on expansive soils near trees should be designed to withstand differential displacement.



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Tree Survey Map page 1

prepared for:
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985 Montague Expressway, Milpitas CA

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Tree Survey Map page 2

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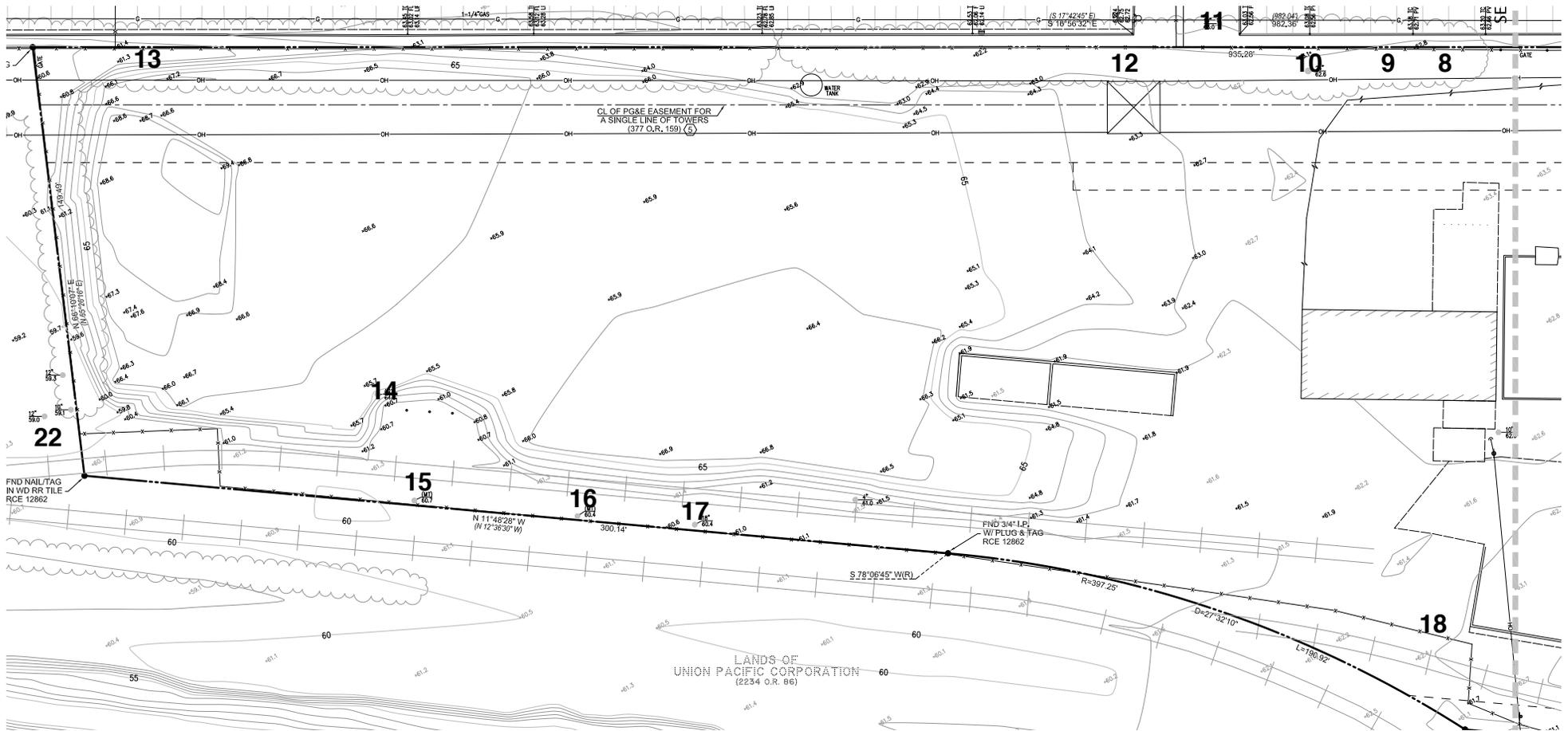
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*Base map provided by Kier & Wright
Civil Engineers & Surveyors, Inc.

TREE No.	SPECIES	TRUNK DIAMETER (inches)	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	PROTECTED TREE ?	COMMENTS
1	Fruitless mulberry	17	3	Moderate	Yes	Previously topped.
2	Glossy privet	9	3	Moderate	No	Single trunk, high crown.
3	Fruitless mulberry	15	3	Moderate	Yes	Previously topped.
4	Glossy privet	8	3	Moderate	No	Trunk divides at 15'.
5	Fruitless mulberry	12	3	Moderate	Yes	Previously topped.
6	Eugenia	6,2,2	3	Moderate	No	Trunks attach at 3'.
7	Glossy privet	7	3	Moderate	No	Trunk divides at 5'.
8	Fruitless mulberry	27	3	Moderate	Yes	Large broken branch.
9	Olive	7,6,5	3	Moderate	No	Trunks attach at 1'.
10	Olive	6	3	Moderate	No	Trunk divides at 5'.
11	Ash	13	3	Moderate	Yes	Several broken branches.
12	Mexican fan palm	29	4	Good	Yes	Good form and health.
13	Eugenia	6,4,2	3	Moderate	No	Trunks attach at 1'.
14	Coast red elderberry	7,7,6,6,5,4	3	Moderate	No	Multi-stemmed at base.
15	Chinese pistache	7,76,6	3	Moderate	No	Trunks attach at 3'.
16	Brazilian pepper	7,7,6,6	3	Moderate	No	Trunks attach at 3'.
17	Mexican fan Palm	27	4	Good	Yes	Good form and health.
18	Coast red elderberry	10,8,8,6	4	Moderate	No	Trunks attach at 1'.
19	Mexican fan palm	11	4	Good	No	Good form and health.
20	Mexican fan palm	21	4	Good	Yes	Good form and health.
21	Coast red elderberry	6,4,3	3	Moderate	No	Trunks attach at base.
22	Valley oak	22	4	Moderate	Yes	Good form and health.