



## CITY OF COSTA MESA

P.O. BOX 1200 • 77 FAIR DRIVE • CALIFORNIA 92628-1200

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DEVELOPMENT SERVICES DEPARTMENT

August 31, 2021

HPI Architecture  
115 22<sup>nd</sup> Street  
Newport Beach, CA 92663

### **ZONING VERIFICATION LETTER – MASTER PLAN PROJECT L 55 FAIR DRIVE, COSTA MESA**

Dear Ms. Guance:

This letter has been prepared in response to the request to modify the exterior perimeter of Vanguard University in order to begin implementation of Project L of the approved Vanguard University Master Plan (PA-17-11). The request includes new landscaping and a new fence along the perimeter of Vanguard University on Fair Drive and Newport Boulevard.

#### **BACKGROUND**

Vanguard University of Southern California (formerly Southern California College) is operating on the subject site. The site is bounded by Fair Drive and Costa Mesa City Hall to the north; SR-55 to the east; residential units to the south; and Vanguard Way and residential units to the west.

Vanguard University is a private four-year university with a graduate program in religion. The campus includes a library, classrooms, study halls, dormitories, a gymnasium, administrative offices, a book store and cafeteria, and athletic fields. As of Fall 2017 the campus had an enrollment of 2,089 students: approximately 1,009 students and 900 beds (some single and some family rooms) are in the five dormitory hall buildings located on campus. The current student population count is 1,971.

Vanguard University is zoned Institutional & Recreational District (I&R) and has a General Plan Land Use Designation of Public/Institutional. The total site area of Vanguard University is approximately 38 acres. According to Vanguard University, the campus moved to the subject site in 1950. Because the establishment of the university predates City Incorporation, a Master Plan was not required at that time.

In 2018, the University submitted Planning Application 17-11, a Master Plan for the future development of the University. The Master Plan was anticipated to accommodate up to 2,700 enrolled students and is comprised of 12 separate projects around campus. The Master Plan established development areas and development guidelines for future buildings and related site improvements within a Master Plan framework. The Master Plan

allows for future development of buildings of various types, sizes, and heights within these development areas provided that they are consistent with the guidelines established in the Master Plan. On June 25, 2018, the Planning Commission, on a 5 to 0 vote, took the following actions related to the Master Plan:

1. Adopted, via resolution, the Initial Study/Mitigated Negative Declaration (IS/MND) for the Master Plan;
2. Adopted a resolution approving Project B, the Student Center, separate from the remainder of the Master Plan; and
3. Continued the remainder of the Master Plan to the August 27, 2018 meeting.

On August 27, 2018, the item was continued to the Planning Commission's October 8, 2018 meeting at the request of the Applicant. On October 8, 2018, the Planning Commission approved the remainder of the Master Plan on a 5 to 0 vote. The Planning Commission's approval of the Master Plan was appealed to City Council, who upheld Planning Commission's approval on February 19, 2019 with an additional condition that the final design of the maintenance and operation/warehouse facility (Project C) be forwarded to the Planning Commission for consideration and approval through a public hearing.

The building permit for Project B, the Student Center was issued on June 5, 2018 and was finalized on July 2, 2020.

On December 20, 2018, the Zoning Administrator approved Zoning Application 18-56 to modify the Master Plan to allow for a 4,320-square-foot modular science lab (STEM) building at the center of the campus between the Natural Sciences Building and the Library/Lyceum. The building includes classrooms/laboratories for Environmental Sciences, Anatomy/Physiology, and Chemistry. The modular building is temporary (approved for a three-year period) and is intended to provide interim classroom and lab space while the existing STEM Building is under construction/renovation. The building permit for the temporary classrooms was issued on January 29, 2019.

On June 24, 2021, the Zoning Administrator approved Zoning Application 21-13, a request to construct an approximately 645-square-foot freestanding monument sign; the actual area of the text and logos will be approximately 260-square-feet. A maximum height of 10 feet 9 inches is proposed and the sign is located at the southwest corner of Newport Boulevard and Fair Drive.

## **DESCRIPTION**

The current building permit application was submitted in order to implement a portion of Project L of the approved Master Plan. Project L as described in the Master Plan outlines campus beautification and infrastructure projects including the beautification of the perimeter, landscaping, a new monument sign, and other miscellaneous projects.

The current request implements a portion of Project L and includes improving the streetscape along Fair Avenue and Newport Boulevard including removing and replacing the existing trees and landscaping on private property adjacent to the public sidewalk, replacing the existing public sidewalk in the existing location, and constructing a new decorative powder coated metal perimeter fence with plaster finished pilasters up to 7-foot tall.

The existing trees planted along Fair Drive from the westernmost entry on Vanguard's Campus to near the corner of Fair and Newport are Indian laurels; at the corner of Fair and Newport are Bradford pears. The trees along Newport Boulevard are a mixed planting of Bradford pears, sweet gum, lemon gum, rusty leaf fig, Canary Island pines, Mexican fan palms, and one floss silk tree. The subject trees are about 35 years old, except the two Indian laurels in front of the bookstore, which may be over 50 years old. The application proposes to remove existing trees to accommodate planting 39 new trees.

## **ANALYSIS**

### ***Master Plan Conformance***

The approved master plan allows for a decorative metal fence with CMU pilasters up to 7 feet in height along the campus perimeter. The proposed perimeter fence complies with the master plan and is designed to be similar to other fences on campus including the existing perimeter fence of Vanguard University on Vanguard Way. The fence is proposed to have CMU pilasters with a smooth plaster finish and concrete cap up to 7 feet in height with powder-coated metal fence panels up to 6 feet in height.

The proposed landscaping is consistent with the illustrative landscape plan in the approved Master Plan. The illustrative landscape plan shows the perimeter of the campus along Fair Drive and Newport Boulevard to be lined with 24-inch box Brisbane Box trees. The current application proposes to plant 48-inch box Brisbane Box trees which will be larger than shown in the Master Plan.

The approved Master Plan requires that onsite parking be provided at a minimum ratio of one parking space per two full-time enrolled students. The installation of the new landscaping would reduce the total number of parking spaces to 1,062 once completed; the current student body count is 1,971. Therefore, the number of parking spaces is in compliance with the Master Plan because the 1,062 provided parking spaces exceeds the minimum 985 required spaces.

The landscaping shall be maintained at a maximum height of 30 inches within the visibility triangles at all drive entrances to campus and at the corner of Fair Drive and Newport Boulevard as required by the Municipal Code and, therefore, will not have any negative impact on pedestrian or vehicular safety.

## ***Arborist Report***

The application submitted a report, dated June 24, 2021, from a licensed arborist (Attachment 1) which has been peer reviewed by the City Arborist. The arborist found that the landscaping area along these two streets is not large enough to allow the existing shallow rooted trees to reach their full size without causing more damage to adjacent public sidewalks and creating greater risk to the public. The report found that the Indian laurels' roots have damaged the public sidewalk as well as the private asphalt parking lot. The report indicates that the largest issue is the weak structure of the trees which has reached a critical level as the trees have begun to drop large limbs. The structural weaknesses are now uncorrectable.

The report indicates that the Bradford pears have some of the same weaknesses as the Indian laurels, including scaffold limbs that are pinching and pushing each other out. The sweet gums are also shallow rooted as well as having what appears to be a Xylella infection. The lemon gums are sickly, due to multiple issues including their location in turfed areas, over-watering, lime in the soil, and past Psyllid infestation. The Canary Island pines have grown especially large and have long scaffold limbs, and are at risk of dropping them. The existing grass has negatively affected all the trees, especially along Newport Boulevard. Although the same issues do not impact the existing Mexican fan palms, they are tall and provide little aesthetic benefit.

The report evaluated all 62 trees proposed for removal and found that the original planting was crowded together for more immediate visual impact which has resulted in a number of problems and concerns. Consequently, the arborist indicated that all 62 trees are recommended for removal, due to poor health, shallow rooting, uncorrectable structural weakness, pest and disease issues, inadequate space or remaining life span or, in the case of the Mexican fan palms, lack of aesthetic benefits. As urban street trees, the useful lifespan of all the trees in this confined setting has been completed. CMMC 13-108 (c) requires trees be replaced on site when they are removed. This request would remove 62 trees and 39 new trees would be planted as part of the subject project. The balance of the 23 trees will be planted as part of the remaining portion of Project L (campus beautification) and subsequent projects or phases of the Master Plan resulting in no net decrease in the number of trees on campus.

## **CONCLUSION**

The removal of the existing landscaping is necessary due to the unhealthy nature of the existing trees. The installation of new landscaping, replacement of the sidewalk, and the construction of a new fence complies with the approved Vanguard Master Plan and is approved by the Planning Division. The total number of trees removed will be replaced as the remainder of the Vanguard Master Plan is implemented.

## **CODE REQUIREMENTS**

The applicant is reminded of the following applicable code requirements.

1. The 62 trees removed shall be replanted on campus as part of the ongoing implementation of the Master Plan. The request will plant 39 new trees and 23 trees will need to be planted in subsequent phases of the Master Plan implementation (CMMC 13-108 (c))
2. The on-site landscaping shall be maintained by the University. (CMMC 13-108 (a))
3. The public parkway shall be maintained by the adjacent property owner and shall remain free of dying, dead, diseased, decayed, discarded, and/or overgrown vegetation (CMMC 20-6 (o))
4. Topping or heading back of trees is unacceptable. (CMMC 13-108 (b))
5. Landscaping shall include practices which conserve water. (CMMC 13-108 (d))
6. It is unlawful to plant, maintain, or allow to exist any thorn-bearing plant material contiguous to any public right-of-way. (CMMC 13-105 (g))
7. Landscaping located in proximity to street intersections, or where a driveway intersects a sidewalk, shall conform to the walls, fences, and landscaping standards which are established by resolution of the city council. (CMMC 13-105 (f)).
8. All landscaping shall be separated from parking and vehicular circulation areas by a raised, continuous six -inch Portland cement concrete curb. Alternative designs which accomplish the same purpose may be approved by the planning division. (CMMC 13-105 (d))

If you have any questions or comments, please contact the project planner Chris Yeager at 714.754.4883, or at [christopher.yeager@costamesaca.gov](mailto:christopher.yeager@costamesaca.gov).

Sincerely,



JENNIFER LE  
Director of Economic & Development Services

Attachments: Attachment 1 - Arborist Report  
Attachment 2 - Plans

Property Owner: Vanguard University  
55 Fair Drive  
Costa Mesa, CA 92626



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# Streetscape Tree Evaluation Study

Vanguard University, Fair Drive & Newport Blvd., Costa Mesa, CA

*Prepared for:*

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*Date:* **June 24, 2021**

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# Introduction

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## Background

Vanguard University plans to improve the streetscape along Fair Avenue and Newport Boulevard near their intersection, in the City of Costa Mesa. Originally founded in Pasadena as Southern California Bible School in 1920, the school moved to the present campus in 1950. The name was changed to Vanguard University of Southern California in 1999.

The trees planted along Fair Drive from the entry by the bookstore to near the corner of Fair and Newport are Indian laurels. At the corner Bradford pears are planted. The trees down along Newport Boulevard are a mixed planting of Bradford pears, sweet gum, lemon gum, rusty leaf fig, Canary Island pines, and one floss silk tree. The subject trees are about 35 years old, except the two Indian laurels in front of the bookstore, which may be over 50 years old.

This report concerns 62 trees planted along the two streets. All are maintained by the university. Most of the trees are or were in turf. Under the Indian laurels the turf has been shaded out. The trees along Newport are growing in sloped or slightly mounded turf.



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## Assignment

Mr. Larry Pirkle, has requested that I inspect the trees and prepare a report per the City of Costa Mesa's request. The report documents their condition and their suitability for retention or removal. A map of their location is included. This report includes an inventory of trees by botanical name, their size, health, structural condition, types of defects observed. Representative photographs and a botanic name / common name cross-reference are included in the appendix.

A tree risk assessment was not requested. No soil testing is suggested or requested. Some decline symptoms were noted along Newport, but no diagnostic work was done and no samples were collected for culture. City street trees are controlled by the City, but these trees are maintained by the university.

# Executive Summary

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## Overview of Conditions and Recommendations

This narrow band of landscaping along these two streets is not large enough to allow these shallow rooted trees to reach their full size without causing even more damage and creating greater risk. Vanguard intends to remove 23 Indian laurels, one mimosa, one floss silk tree, 4 lemon gums, two rusty leaf figs, 8 sweet gum, three Canary Island pine, twelve Bradford pears and 8 Mexican fan along these two streets. The Indian laurels' roots have damaged the sidewalk and done some minor damage to the asphalt parking lot. But their main issue is their weak structure has reached a critical level and they have begun to drop large limbs. The structural weaknesses are now uncorrectable. The Bradford pears have some of the same weaknesses as the Indian laurels, very crowded scaffold limbs pinching and pushing each other out. The sweet gums are shallow rooted as well as having what appears to be a *Xylella* infection. The lemon gums are sickly, due to multiple issues, turf grass, over-watering, lime in the soil and past psyllid infestation. The Canary Island pines have especially grown large and long scaffold limbs, and are at risk of dropping them. The grass has negatively affected them and the other trees, especially along Newport. Some of these trees are overhanging parked cars and most are over the sidewalk.

Sixty-two trees were measured and evaluated. These trees represent a small portion of the overall campus tree inventory. The numbering was in order consecutively from 1 to 62, working from in front of the bookstore east and then down Newport to the first driveway. The inventory is included later in this report in the matrix of findings, which details the size, health and

condition of each tree. Eight species are found in this area. The original planting was crowded together for more immediate visual impact. But now lack of root space and inadequate pruning have reduced their remaining life span and safety.

All 62 trees are recommended for removal, due to poor health, shallow rooting, uncorrectable structural weakness, pest and disease issues, and inadequate space or remaining life span. As urban street trees, the useful lifespan in this confined parkway setting has been completed. All the trees are recommended for removal due to these issues, except for the Mexican fan palms, which are currently healthy, but so tall they provide little more aesthetic benefits than telephone poles. The cost of transplanting them is more than their value and more than the cost to replace them with shorter palms of the same species. Also, a new fatal disease (Fusarium) has started in the San Diego area, and it is probably spread by pruning tools.

No part of this report should be construed as a professional risk assessment. A professional risk assessment requires a higher level of inspection and some testing as indicated. The scope of this report does not include a risk assessment nor was a risk assessment requested. However, the common structural problems of the Bradford pears and the Indian Laurels has already started to cause limb failure.

# Findings

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## General

The Indian laurels, *Ficus microcarpa* 'Nitida', along Fair are not very large yet, not even half their potential size, but due to early topping they formed a dense brush of crowded sprouts that are now large limb pressed against each other. These limbs could be shorted, but that would not correct the main problem. These limbs are so densely packed that branch collars cannot be formed, which makes their attachment weak, and they are pressing more and more against each other as they grow in diameter. All trees along this area need to be removed.

The Bradford pears, *Pyrus calleryana* 'Bradford', typically have the same structural problem, even when they haven't been topped. The main limbs are typically crowded together. They could have been spaced out with good early training, but none of these trees had good early training. Now the main limbs have grown longer and longer out from each other for more light to the point they are end-heavy and sagging. This is also an affect of being grown in a fertile lawn area. The nitrogen fertilizer used for the turf weakens the wood, exacerbating the sagging. There are many other newer cultivars of callery pears, but Bradford is considered the worst and rarely planted these days.

Sweet gum, *Liquidambar styraciflua*, can tolerate turf conditions, but will have shallow roots. The shallow roots are then damaged by lawn mowers unless the exposed roots are kept covered in a mulch bed. They have never been an approved street

tree due to their shallow rooting. Currently a bacterial disease, once known as Pierce's disease, *Xylella fastidiosa*, is plaguing this species, olives, oleanders, red leaf plums and several other species. With regular injections, the disease can be controlled, but not cured. The dieback in this group of sweet gums is typical of this disease, but no lab samples have been taken.

The rusty leaf figs, *Ficus rubiginosa*, and other ficus are notorious for lifting paving and small buildings. Possibly two cultivars were planted, one (#45) is larger and more vigorous. The cultivars are typically larger trees. Keep in mind that these are still relatively young trees and will certainly cause more damage as they grow.

Canary Island pines, *Pinus canariensis*, are fast growing but are usually less prone to root problems. However, turf irrigation and compacted soil can still lead to shallow roots, which is not desirable for trees that grow to 100 feet tall. These three pines also have overly long limbs resulting from excess nitrogen fertilizer. The limbs are so large that cutting them back to a reasonable length will leave a large cut and an awkward appearance.

The Mexican fan palms, *Washingtonia robusta*, are currently healthy, but so tall they provide little more aesthetic benefits than telephone poles. They have started naturally shedding fronds and old leaf bases. As a result there may be less trimming needed, but two still have longer skirts of dead fronds. The fronds that are shed now end up stuck in the canopies of the surrounding trees. The cost of transplanting them is more than their value and more than the cost to replace them with shorter palms of the same species. The new fatal disease (*Fusarium oxysporium* forma sp. *Palmarum*) has started in the San Diego area, and it is probably spread by pruning tools. Only removing old dead fronds is the best way to avoid spreading the disease. Removal of old fronds, especially on specimens with significant skirts of dead fronds, is a dangerous and sometimes lethal activity. Skirts have been known to suddenly slough off and onto climbers suffocating them to death

This area is considered as USDA zone 10a. The topsoil *appears* deep and should have good percolation except for the compaction that has slowly occurred. Lawn areas over time become compacted to 90% or more, and to tend to have more runoff and water doesn't penetrate as deep, so roots are shallower. This is not a situation fit for large trees.

Lion-tailing, topping, decay, doglegs, end-heavy branches, included bark and codominant leaders are the primary defects in these trees. Such serious defects jeopardize the survival and/or safety of these trees.

## Matrix of Observations

In the following list the size, species, health and structural condition rating, with defects described. The letter grades are like school grades, i.e. A is excellent, B is good, C is satisfactory, D is declining or unsound, and F is dead or near dead. The other abbreviations are explained after this matrix. Underlined abbreviations indicate severity “m” preceding an abbreviation indicates a minor condition.

Tree #	Species	DBH	HT	SP	Health	Structure	Roots	Comments
1	Ficus m. Nitida	38	45	60	A	C	Sh Asp lift	Cod inc Lt Xing FC
2	Ficus m. Nitida	30	45	52	A	C	Sh Asp lift	Cod inc Lt FC
3	Ficus m. Nitida	25	45	45	B	C	Sh SW lift	Cod inc Lt CrS FC thrips
4	Ficus m. Nitida	26	40	40	A	C-	Sh SW lift	Cod inc Lt CrS FC
5	Ficus m. Nitida	21	40	40	B	C-	Sh MB SW lift	Cod inc Lt <u>CrS</u> Xing
6	Ficus m. Nitida	20	40	40	A	C-	Sh MB SW lift	Cod inc Lt <u>CrS</u>
7	Ficus m. Nitida	26	40	40	A	C-	Sh MB SW lift	Cod inc Lt <u>CrS</u>
8	Ficus m. Nitida	24	40	40	A	C-	Sh MB SW lift	Cod inc Lt <u>CrS</u> TO
9	Ficus m. Nitida	18	40	40	B	C-	Sh MB SW lift	Cod inc Lt <u>CrS</u> FC
10	Ficus m. Nitida	19	40	40	B	C-	Sh MB 1sRF	Cod inc Lt <u>CrS</u>
11	Ficus m. Nitida	22	40	40	A	C-	Sh MB	Cod inc Lt <u>CrS</u> FC Tinj
12	Ficus m. Nitida	21	45	40	A	C-	Sh MB SW lift	Cod inc Lt <u>CrS</u>
13	Ficus m. Nitida	22	40	35	B	C-	Sh MB SW lift	Cod inc Lt <u>CrS</u>
14	Ficus m. Nitida	19	40	40	A	C-	Sh <u>MB</u> SW lift	Cod inc Lt <u>CrS</u>
15	Ficus m. Nitida	25	45	45	A	C-	Sh MB SW lift	Cod inc Lt <u>CrS</u> FC
16	Ficus m. Nitida	17	35	38	C	C-	Sh MB <u>SW lift</u>	Cod inc Lt <u>CrS</u> Brk mSp

Tree #	Species	DBH	HT	SP	Health	Structure	Roots	Comments
17	Ficus m. Nitida	21	40	40	B	C-	Sh MB SW lift	Cod inc Lt <u>CrS</u>
18	Ficus m. Nitida	18	40	40	A	C-	Sh MB SW lift	Cod inc Lt CrS Xing
19	Ficus m. Nitida	24	45	45	B	C-	Sh MB <u>SW lift</u>	Cod inc Lt <u>CrS</u>
20	Ficus m. Nitida	17	35	40	C	C-	Sh SW lift	Cod inc Lt <u>CrS</u> mSp
21	Ficus m. Nitida	18	40	40	B	C-	Sh MB	Cod inc Lt <u>CrS</u>
22	Ficus m. Nitida	26	45	45	A	C-	Sh MB	Cod inc Lt <u>CrS</u> FC
23	Ficus m. Nitida	20	45	45	A	C-	Sh MB SW lift	Cod inc Lt <u>CrS</u> thrips
24	Pyrus c. Bradford	20	35	35	A	C-	Sh MB	Cod inc Lt <u>CrS</u>
25	Pyrus c. Bradford	15	30	22	C	C-	okay	Cod inc Lt <u>CrS</u> FC
26	Pyrus c. Bradford	22	35	35	B	C-	Sh	Cod inc Lt <u>CrS</u>
27	Pyrus c. Bradford	20	30	35	B	C-	Sh MB	Cod inc CrS_2long sags
28	Pyrus c. Bradford	19	30	40	C	C-	Sh MB	Cod inc CrS_2long sags
29	Pyrus c. Bradford	20	30	40	C	C-	Sh MB	Cod inc CrS_2long sags
30	Pyrus c. Bradford	17	32	35	C	C-	Sh	Cod inc CrS_2long sags
31	Pyrus c. Bradford	16	30	40	C	C-	Sh MB	Cod inc CrS_2long sags
32	Liquidambar styraciflua	12	45	27	D	D	Sh MB	Cod 2long Db Xylella
33	Liquidambar styraciflua	9	38	20	D	D	Sh	Brk chlor Db Xylella cod top
34	Liquidambar styraciflua	15	45	30	C-	C-	Sh MB	Seedy 2long Db Xylella cod top
35	Corymbia citriodora	17	50	35	D	C-	okay	Cod kt Sp Db 1s psyllids
36	Corymbia citriodora	14	55	40	C-	C-	okay	Hanger DLS Sp mDb psyllids

Tree #	Species	DBH	HT	SP	Health	Structure	Roots	Comments
37	Corymbia citriodora	11	45	35	C-	C-	okay	DLT DLS Sp mDb psyllids
38	Corymbia citriodora	27	70	50	C	C	mSW lift	mSp
39	Ficus rubiginosa	14	26	30	C	C	Sh MB	Cod Leans
40	Liquidambar styraciflua	12	45	20	B	C	Sh	Cod Hd epi, Ficus root partly girdles
41	Liquidambar styraciflua	10	45	25	B	C-	Sh	Cod 2long mDb epi
42	Liquidambar styraciflua	9	45	15	C	C	Sh	Cod Cr 2long
43	Liquidambar styraciflua	10	45	25	C	C	Sh	Cod mDb 2long sags epi
44	Liquidambar styraciflua	15	45	30	C-	C-	Sh	Cod Db
45	Ficus rubiginosa	20	30	42	B	C	Sh MB SW lift	Cod mDb n North side
46	Pyrus c. Bradford	15	28	40	C	C-	Sh 1/2 girdled	Cr#45 cod inc 2long sags FC
47	Pyrus c. Bradford	18	50	40	C	C-	Sh	Cod inc 2long sags FC Db
48	Washingtonia robusta	19	60'th	12'	A	A	okay	okay
49	Washingtonia robusta	17	60'	12'	A	A	okay	Starting to shed leaf bases
50	Washingtonia robusta	18	60'	12'	A	A	okay	Starting to shed leaf bases
51	Pyrus c. Bradford	14	28	32	C	C-	Sh	Sp cod inc 2long sags
52	Pyrus c. Bradford	16	30	35	B	C-	Weak graft	Cod inc 2long sags
53	Washingtonia robusta	18	50	12'	B	A	okay	10' long skirt
54	Washingtonia robusta	18	60	12'	A	A	okay	Starting to shed leaf bases
55	Washingtonia robusta	18	50	12'	B	A	okay	Starting to shed leaf bases
56	Washingtonia robusta	17	60	12'	A	A	okay	8' long skirt



Tree #	Species	DBH	HT	SP	Health	Structure	Roots	Comments
57	Washingtonia robusta	18	55	12'	B	A	okay	Starting to shed leaf bases
58	Pinus canariensis	23	65	25	B	C	Sh	Cod 2long sags
59	Pinus canariensis	24	65	40	B	C	Sh	2long sags
60	Pinus canariensis	28	55	50	B	C	Sh	2long sags Hazard
61	Ceiba speciosa	25	45	50	C	C-	Sh MB	Dead limbs sags EH haz
62	Albizia julibrissin	22"b	28	32	B	B	Sh	okay

b = a basal measurement of low branching trees. (e.g., 36"b) A single trunk tree is about 12 to 20 percent smaller at "breast height" compared to a basal measurement.

## Explanation of Abbreviations Used in the Matrix

The abbreviations used in describing the structural condition of the trees are listed below. Arboricultural terms are defined in the glossary. Underlined abbreviations indicate severity. An "m" in front of an abbreviation means minor significance e.g., mDB = minor dieback.

1s=one-sided

1sRF = one-sided root flare

2long = limb too long

Awk = awkward

brk = break

Bldg = building

Chlor = chlorotic

Cod=codominant

Cr=crowded

CrS = crowded scaffold limbs

Db=dieback

DBH – Diameter at breast height,  
i.e. 4.5'

Dk=decay

DL=Dog-leg

DLT = dogleg trunk

DLS = dogleg scaffold limb

EH=end heavy

Epi = epicormic shoots

FC=flush cut

Gird = girdling root or wire

Hd = headed

Inc=included bark

Inj=injury

Lt=lion-tailed

MB = mower blight

NoRF = no root flare

OP=over pruned

OL = over-lifted

RF = root flare

S = scaffold

Sh = shallow roots

Sp=sparse

Sup = suppressed

SW = sidewalk

TO=tear out

Topd = topped

Xing = crossing limbs

# Analysis

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## Tree Preservation Prospects

This landscape is now about 35 years old. Growing in turf has kept the roots in a shallow layer of soil, and this results in less volume of soil for roots between the surrounding curbs. And now the years have passed and the response of some of the trees to their crowded conditions is to decline. The trees with more aggressive roots have damaged nearby hardscape and may have had their roots cut. From an investment viewpoint, these trees have served their useful life span, and to remove some now and leave others will impact the roots and health of those that remain. Leaving the Mexican fan palms would not accomplish anything worthwhile. Those are about the only group of trees in good health and condition.

New trees, better chosen for their space, intended use and better trained, would cost less to maintain and would have more potential for future growth, safety, life span and beauty.

These trees are mostly young to middle aged. Thirty-five years is not very long in tree terms, but for urban street trees is fairly typical. The space these trees now occupy is not large enough that any tree could be planted and live a normal life span, but it is large enough that well-chosen smaller species, with enough spacing, could. Compared to many trees in open natural sites, the existing trees are functionally getting old. Compared to their potential in nature, most could more than double in mass with necessary root space. That means double the mass of roots and upper structure. That is not sustainable.

The recommendations section will not provide clearance radii for protection of trees to remain, because none are recommended to remain.

If the City requires that the University retain all or most of the trees as possible, the risk to students and staff must be considered. I have tried to estimate from visible indications and knowledge of the species' their ability to respond to corrective pruning or not. Generally, the ficus will tolerate severe pruning and root damage, but even so it will not correct their fundamental structural problems and it will not make any more root space.

There are no trees on site that are of sufficient value to justify boxing and transplanting them. Boxing and transplanting is time consuming and expensive. Then it would take a decade or more for full recovery for trees of this size. At the time the mature tree is replanted, it may no longer have near the same amount of vitality or beauty it had when selected for preservation.

# Recommendations

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## Specific Recommendations

All 62 trees listed above should be removed, roots and all.

The remaining soil should be deep ripped and amended according to agronomic testing and lab report.

Stake out all utility locations to avoid serious damage and more clearly identify the conflicts.

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## Justification for Removal Recommendations

Large, fast growing trees that were planted too close together in a narrow space and too close together. These trees were also planted in turf, and therefore have more shallow roots than they would in a natural setting. They have had pruning that focused more on making them look pruned than avoiding or correcting structural defects. The Indian laurels were topped and the resulting sprouts allowed to grow over many years. California State Government Code 53067 decries topping and lists the problems caused by it. Risk is increasing continually as the limbs grow longer, heavier and more pressed together.

The Bradford pears have the same weak attachment problems as the Indian laurels and their limbs are arching out and sagging under the end weight and weak wood. Limb failure is likely in the near future. Their shallow roots have been damaged by lawn mowers.

The sweet gums have dieback and dead tops. They appear to be dying from Xylella. Their shallow roots have been damaged by lawn mowers.

The lemon gums have awkward structure, poor health and a recent psyllid infestation.

The Canary Island pines have overly long, heavy limbs and weak wood due to turf grass conditions, and they are crowding out the adjoining floss silk tree.

The Mexican fan palms have reached the age where dead fronds are shed and the fronds are getting stuck in the trees.

The University takes this very seriously, and is doing their best to make a safe environment for the students and staff.

# Appendix

- A. Resume
- B. Photographs
- C. Tree map

## **RESUME: GREGORY W. APPLGATE, ASCA, ASLA**

### **PROFESSIONAL REGISTRATIONS:**

ASCA Registered Consulting Arborist #365  
ASCA Tree & Plant Appraisal Qualified  
International Society of Arboriculture, Certified Arborist Number WC-180a  
International Society of Arboriculture, Tree Risk Assessment Qualified

**EXPERIENCE:** Mr. Applegate is CEO of Arborgate Consulting and an independent registered consulting arborist. He has been in the horticulture field since 1963, providing professional arboricultural consulting since 1984 within both private and public sectors. His expertise includes appraisal, tree preservation, diagnosis of tree growth problems, construction impact mitigation, expert witness testimony, tree risk assessment, pruning programs, species selection and health monitoring.

Mr. Applegate has consulted for insurance companies, major developers, theme parks, schools, universities, homeowners, homeowners' associations, landscape architects, landscape contractors, property managers, attorneys and governmental bodies.

Notable projects on which he has consulted are: Disneyland, Disneyland Hotel, DisneySeas-Tokyo, Disney's Wild Animal Kingdom, the New Tomorrowland, Disney's California Adventure, Disney Hong Kong project, Knott's Berry Farm, J. Paul Getty Museums, Tustin Ranch, Newport Coast, Crystal Court, Newport Fashion Island Palms, Bixby Ranch Country Club, Playa Vista, The Irvine Company, MTA Expo Line, MWD-California Lakes, Paseo Westpark Palms, Loyola-Marymount campus, Cal Trans, Cal Tech, Cal State Long Beach, Pierce College, The Irvine Concourse, UCI, USC, UCLA, LA City College, LA Trade Tech, East LA College, Riverside City College, Crafton Hills College, MTA projects, and the State of California review of the Landscape Architecture License exam (re: plant materials)

### **EDUCATION:**

Bachelor of Science in Landscape Architecture,  
California State Polytechnic University, Pomona 1973  
Arboricultural Consulting Academy (by ASCA)  
Arbor-Day Farm, Kansas City 1995  
Continuing Education Courses in Arboriculture  
required to maintain Certified Arborist status and for ASCA registration

### **PROFESSIONAL AFFILIATIONS:**

American Society of Landscape Architects (ASLA), emeritus  
American Society of Consulting Arborists (ASCA), Registered Member  
International Society of Arboriculture (ISA), Certified Member  
California Oak Foundation, Member  
California Tree Failure Report Program, UC Davis, Participant  
Street Tree Seminar (STS), Member

### **COMMUNITY AFFILIATIONS:**

Horticulture Advisory Committee, Saddleback College (1988 until 1998)  
Landscape Architecture License Exam, Reviewer, Cal Poly Pomona (1986-90)  
American Institute of Landscape Architects (L.A.) Board of Directors (1980-82)  
California Landscape Architect Student Scholarship Fund - Chairman (1985)  
Guest lecturer at Cal Poly, Saddleback College, UCI, UCLA & Palomar Junior College

## B. Photographs



#1





#2 Indian laurel by driveway.



Mimosa #62 in foreground. Indian laurels #3 to 7 behind



Indian laurels #6 to 10



Trees #9 to 13



Trees #11 to 15



Indian laurels #16 to 20



Indian laurels #19 to 23



Note where one limb has been pinched out due to the common crowding of scaffold limbs at the same elevation





Early topping led to crowding of scaffold limbs at the same elevation.



Note multiple points of included bark.



Shallow rooting and lion-tailing makes them less safe.



The aggressive Ficus roots cause lifted paving and trip and fall accidents.



Note gall wasp and thrip damage.



Bradford pears #24 to 26 – note crowded scaffold limbs.



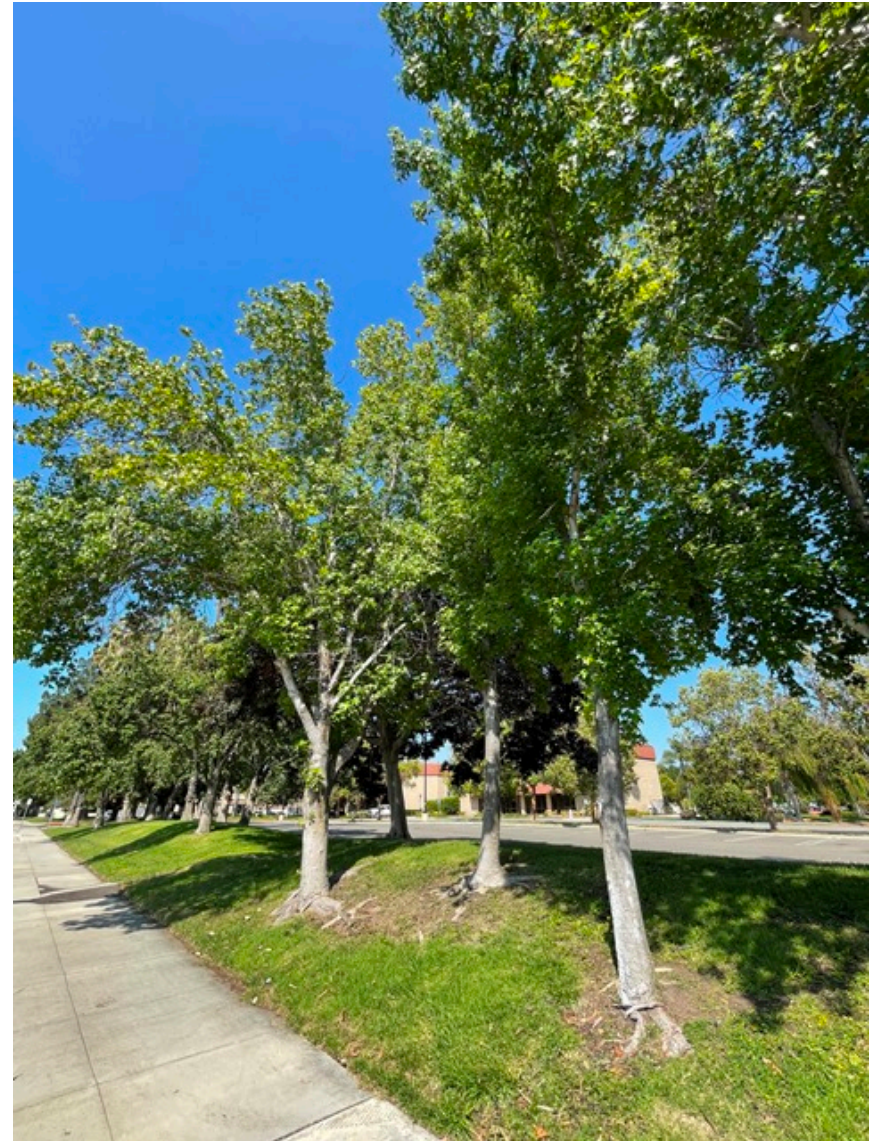
Bradford pears #27 to 31



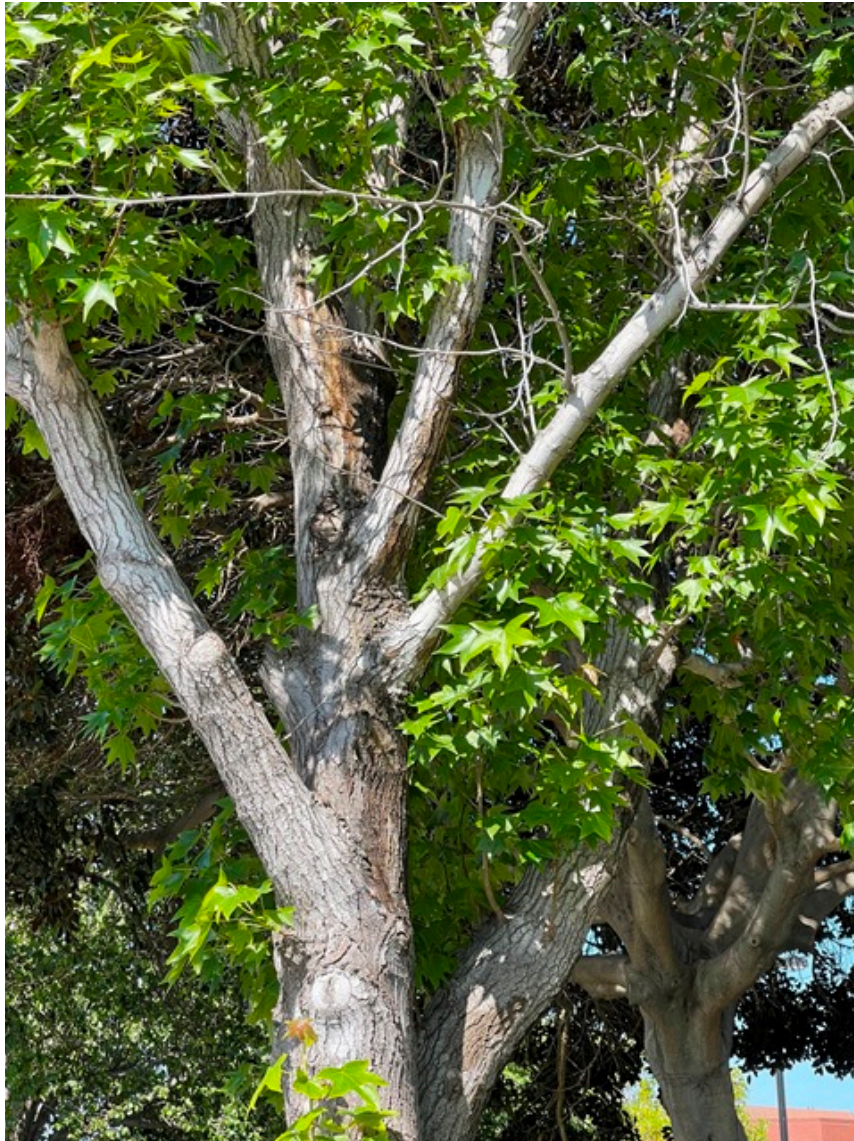
Sweet gums #32 to 34 – note dieback



Lemon gums #35 to 38



Sweet gums #40 to 44 – note shallow roots.



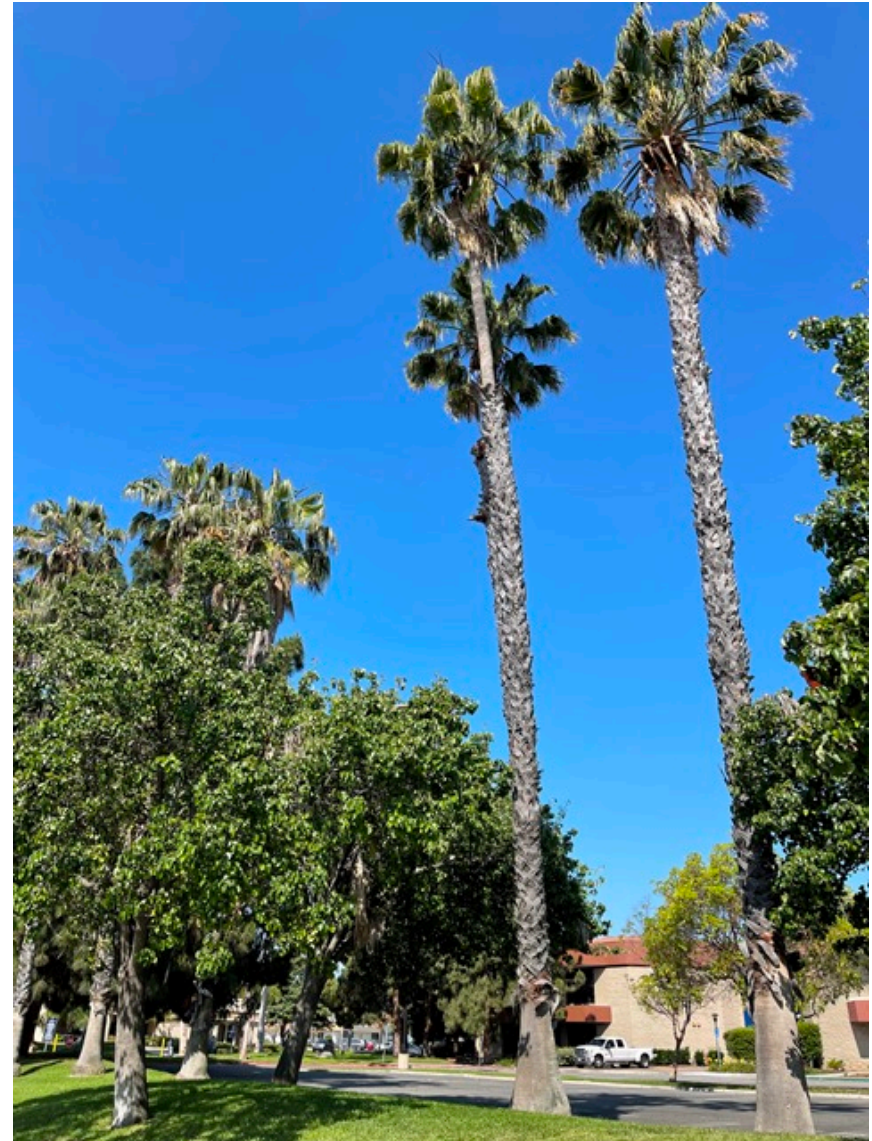
Sweet gum #44 – note bleeding likely caused by Xylella infection.



Rusty leaf fig #45



#46 & 47 Bradford pears



Mexican fan palms #48 to 50 – note leaf bases being shed





Mexican fan palms #53 to 57 – some leaf bases and fronds being shed.



Canary Island pines 58 & 59



Canary Island pine #60 – note overly long limbs and lack of a leader.



#61 Floss silk tree – note shallow roots and mower blight

## C. Tree Map

This map is available in digital form for printing at larger sizes.



# Disclaimer

Good, current information on tree preservation has been applied. However, even when every tree is inspected, inspection involves sampling, therefore some areas of decay or weakness may be missed. Many trees have cut roots, but the number, size and placement of the cut roots is hidden. A formal tree hazard evaluation was not requested or performed. Weather, winds and the magnitude and direction of storms are not predictable and some failures may still occur despite the best application of high professional standards. Future tree maintenance will also affect the trees health and stability and is not under the supervision or scrutiny of this consultant. Continuing construction activity such as paving, compaction and trenching will also affect the health and safety, but are unknown and unsupervised by this consultant. Trees are living, dynamic organisms and their future status cannot be predicted with complete certainty by any expert. This consultant does not assume liability for any tree failures involved with this property.

# Certification

I, Gregory W. Applegate, certify to the best of my knowledge and belief:

That the statements of fact contained in this report, are true and correct. That the report analysis, opinions, and conclusions are limited only the reported assumptions and limiting conditions, and are my personal unbiased professional analysis, opinions and conclusions.

That I have no present or prospective interest in the vegetation that is the subject of this report, and I have no personal interest or bias with respect to the parties involved.

That my compensation is not contingent upon a reporting that favors the cause of the client or the attainment of stipulated result.

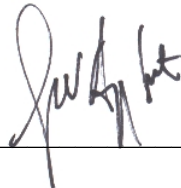
That my analysis, opinions, and conclusions were developed, and this report has been prepared, in conformity with the standards of arboricultural practice.

That I have made a personal inspection of the plants that are the subject of this report. No one provided significant professional assistance to the person signing this report.

Arbrogate Consulting, Inc.

Gregory W. Applegate

Registered Consulting Arborist #365



Date 6-24-2021

# Glossary

<b>ANSI-A300</b>	American National Standards Institute performance standards for the care and maintenance of trees, shrubs and other woody plants.
<b>Arboricultural</b>	Pertaining to the awareness, care, evaluation, identification, growing, maintenance, management, planting, selection, treatment, understanding, valuation and so forth of trees and other woody plants and their growing environments, particularly in shade and ornamental (non-crop/commodity) settings.
<b>Arboriculture</b>	The selection, cultivation, and care of trees, vines, and shrubs.
<b>Arborist</b>	A person possessing the technical competence through experience and related training to provide for or supervise the management of trees or other woody plants in a landscape setting.
<b>ASCA</b>	The American Society of Consulting Arborists, Inc. a professional society, as described in its by-laws.
<b>Bark</b>	Tissue on the outside of the vascular cambium. Bark is usually divided into inner bark - active phloem and aging and dead crushed phloem - and outer bark.
<b>Botanical name</b>	The Latin binomial by which a plant species is known. Same as Latin or Scientific Name. It consists of genus and specific epithet. Each species has only one valid botanical name worldwide.
<b>Caliper</b>	Diameter of a nursery-grown or small size tree trunk. Larger trees are usually measured at 4ø feet (see DBH) Trees with calipers 4 inches and below are measured at 6 inches above grade(ANSI Z60-1-1990) Trees above 4 inches, but still transplantable are measured at 12 inches above grade.
<b>Canker</b>	An area of dead bark caused by certain fungal infections.

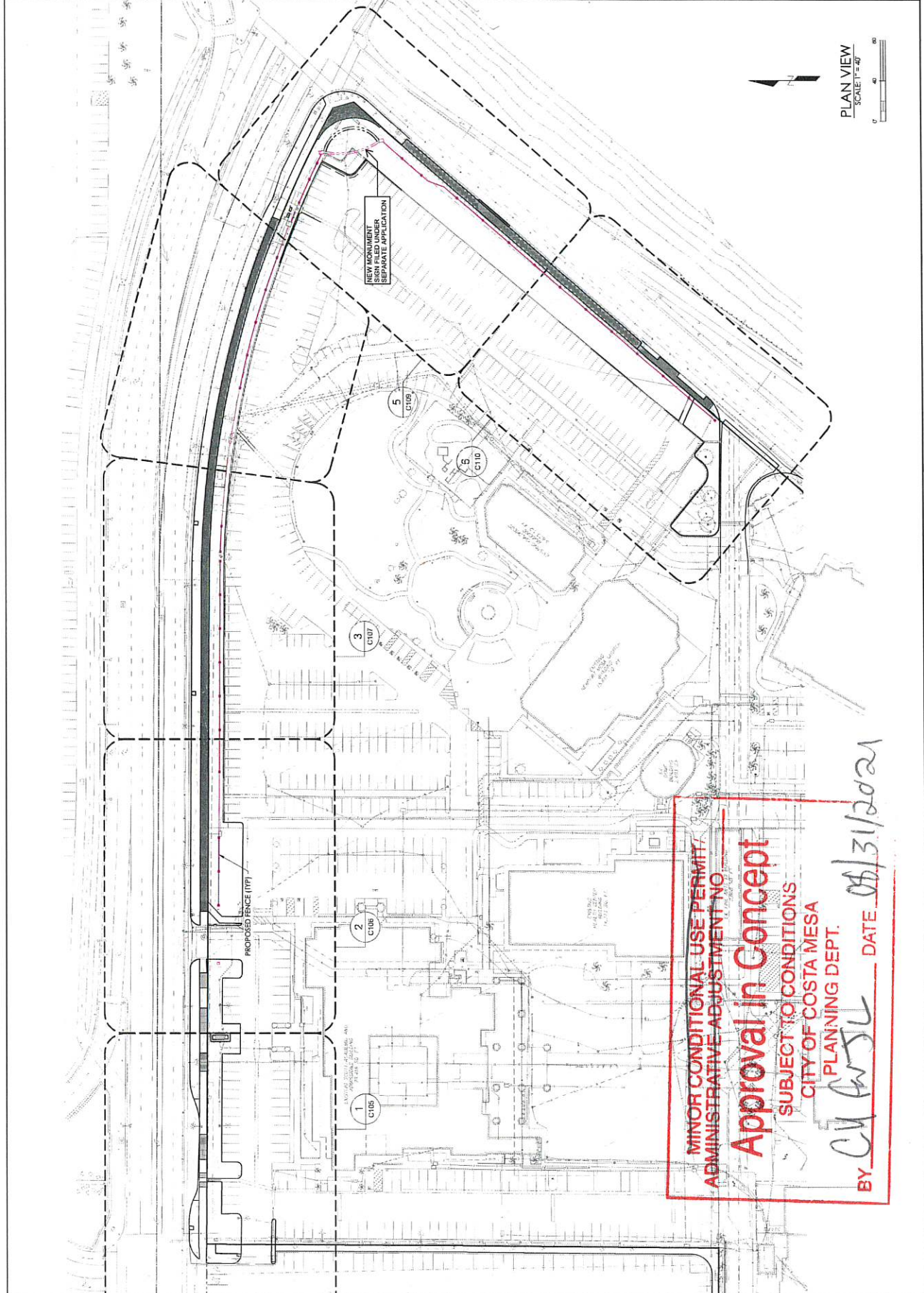
<b>Caliper</b>	Diameter of a tree trunk. Larger trees are usually measured at 4½ feet (see DBH) Trees with calipers 4 inches and below are measured at 6 inches above grade(ANSI Z60-1-1990) Trees above 4 inches, but still transplantable are measured at 12 inches above grade.
<b>Canker</b>	An area of dead bark caused by certain fungal infections.
<b>Codominant</b>	Leaders equal in size and relative importance, developed from 2 apical buds at the top of a stem. Each codominant stem is an extension of the stem below it. There are no branch collars or trunk collars at the bases of codominant stems.
<b>Common name</b>	One or more names in the local language for a plant. The same plant can be known by many different common names, varying widely by location.
<b>Compaction</b>	(Soil Compaction) The compression of soil, causing a reduction of pore space and an increase in the bulk density of the soil. Tree roots cannot grow in compacted soil.
<b>Cleaning</b>	(Crown cleaning) Selective pruning to remove one or more of the following non-beneficial parts: dead, diseased, and/or broken branches
<b>Climbing spurs</b>	Sharp, pointed devices strapped to a climber’s lower legs used to assist in climbing trees. (syn.: gaffs, hooks, spurs, spikes, climbers
<b>Crotch</b>	The point or angle at which two branches or a branch and leader meet.
<b>Crown reduction</b>	Reducing the size of the canopy using thinning versus heading cuts. Should not exceed 20 to 25 percent branch removal.
<b>Crown restoration</b>	Restoration of natural and/or structurally sound form to a tree which has been previously topped, headed or damaged. (synonym – crown restructure pruning)
<b>DBH</b>	Diameter of the trunk, measured at breast height or 54 inches above the average grade. See caliper.
<b>Decay</b>	Progressive deterioration of organic tissues, usually caused by fungal or bacterial organisms, resulting in loss of cell structure, strength, and function. In wood, the loss of structural strength.
<b>Deciduous</b>	Trees or shrubs which shed their leaves at the end of each growing season.
<b>Dieback</b>	Progressive death of buds, twigs and branch tissues, on individual limbs, or throughout the canopy.
<b>Dripline</b>	A projected line on the ground that corresponds to the spread of branches in the canopy; the farthest spread of branches.

<b>Epicormic</b>	Epi - upon; cormic – stem. Branches that are upon the stem, i.e. sprouting from either dormant buds in the cambial zone, or from buds sprung anew from ray traces. Epicormic shoots are a sign that energy reserves have been lowered.
<b>Establishment:</b>	The point after planting when a tree’s root system has grown sufficiently into the surrounding soil to support growth and anchor the tree
<b>Evergreen</b>	retains its leaves throughout the year.
<b>Flush cut</b>	Pruning technique in which both branch and stem tissue are removed, generally considered poor practice
<b>Foliage</b>	The live leaves or needles of the tree; the plant part primarily responsible for photosynthesis.
<b>Fruit</b>	A ripened ovary, together with any other parts which may develop with it, containing one, two or more seeds.
<b>Gaffs</b>	See climbing spikes
<b>Grading</b>	Also Regrading. Intentional altering of topography and soil levels, using machinery.
<b>Hanger</b>	A broken limb or branch that has not yet fallen.
<b>Hazardous condition</b>	when a tree has been assessed and found to be likely to fail and cause an unacceptable degree of injury, damage or disruption, i.e. it poses a high or extreme risk.
<b>Heading</b>	Pruning techniques where the cut is made to a bud, weak lateral branch or stub.
<b>Included bark</b>	The pattern of development at branch junctions where bark is turned inward rather than pushed out forming a branch bark ridge. Bark embedded within the crotch between a branch and the trunk or between two or more stems that prevents the formation of a normal branch bark ridge. This often occurs in branches with narrow-angled attachments or branches resulting from the loss of the leader. Such attachments are weak and subject to splitting out.
<b>Leader</b>	A main stem or branch of a tree that is (usually) codominant with other main stems.
<b>Limb</b>	A large lateral branch growing from the main trunk.
<b>Lion-tailing</b>	The removal of all, or a great deal of, the inner branches and/or watersprouts from the crown of a tree. Lion’s Tailing is not an acceptable pruning practice, see ANSI A-300.10.1.7.



<b>Mower blight</b>	damage caused by young trees or roots being nicked by lawn mowers and, to a lesser extent, weed whackers and trimmers. This includes the strings of trimmers causing gashes, as well as the frames and decks of lawn mowers repeatedly rubbing and bumping against the same area of the tree. Repeated nicking and lashing in a single area will cause a wound in the bark. This wound to the bark kills off the food transport vessels. Bark (phloem) transfers sugars from the leaves back into the tree roots. This wound in the bark can also become home for micro-organisms that will further damage the tree, possibly causing decay.
<b>Mulch</b>	Substances spread on top of the ground to conserve water, protect against erosion, retain moisture, and protect the roots of trees from heat, cold or drought. The substances are typically organic, such as compost, manure or bark chips.
<b>Narrow crotch</b>	for eucalyptus a branch angle of less than 15 degrees – for other trees a branch angle less than 30 degrees.
<b>Over pruned</b>	removal of more than 10 to 30 percent, depending on health, species and time of year – often evidenced by formation of epicormic shoots.
<b>Percolation</b>	The downward movement of water through soil.
<b>Phloem</b>	Conducting tissue for products of photosynthesis.
<b>Pruning</b>	The selective removal of plant parts to meet specific goals and objectives
<b>Psyllid</b>	A small sucking insect that attacks the leaves of certain species of eucalyptus trees. They have a small waxy scale-like covering which may look like a scale insect. The honeydew they secrete is usually colonized by sooty mold. A severe attack can defoliate trees. They have no predators in this ecosystem.
<b>Resistograph</b>	An instrument used to detect and measure the extent of decay in trees and wood. The Resistograph drills a 3 mm hole into the trunk and produces a graph of the resistance encountered
<b>Risk</b>	the combination of the likelihood of an event and severity of the potential consequences.
<b>Risk assessment</b>	the systematic process to identify, analyze, and evaluate tree risk.
<b>Risk management</b>	the application of policies, procedures, and practices used to identify, evaluate, mitigate, monitor, and communicate tree risk.
<b>Root crown</b>	Area at the base of a tree where the roots and stem merge (synonym - root collar)
<b>Root system</b>	The portion of the tree containing the root organs, including buttress roots, transport roots, and fine absorbing roots; all underground parts of the tree.

<b>Root zone</b>	The area and volume of soil around the tree in which roots are normally found. May extend to three or more times the branch spread of the tree, or several times the height of the tree.
<b>Scaffold limb</b>	Primary structural branch of the crown.
<b>Shoot</b>	Stem or branch and its leaves, especially when young
<b>Species</b>	Taxonomic classification below genus. Also a group of individuals considered set apart from other species by consistent differences in morphology, ecology or reproductive behavior.
<b>Sprouts:</b>	New shoots originating from epicormic or adventitious buds, not to be confused with suckers. (syn.: watersprouts, epicormic shoots.
<b>Stress</b>	"Stress is a potentially injurious, reversible condition, caused by energy drain, disruption, or blockage, or by life processes operating near the limits for which they were genetically programmed." Alex Shigo
<b>Structural pruning:</b>	Pruning to improve branch architecture
<b>Subordination</b>	Pruning to reduce the size and ensuing growth rate of a branch or leader in relation to other branches or leaders.
<b>Suppressed</b>	Trees which have been overtopped and whose crown development is restricted from above
<b>Thinning</b>	Pruning technique where branches are removed at their point of origin or to a large lateral at least on-half the diameter of the removed branch.
<b>Topping</b>	The practice of cutting large limbs back severely, without regard to form or habit of the tree. Cuts are usually made between lateral branch nodes. This practice is extremely injurious to trees, and promotes decay in the canopy.
<b>Trees</b>	Woody plants with a single or few trunks near the base, typically over 15 feet in height.
<b>Trunk</b>	The main stem or axis of a tree that is supported and nourished by the roots and to which branches are attached.
<b>Wound</b>	Any injury, which induces a compartmentalization response.



MINOR CONDITIONAL USE PERMIT  
 ADMINISTRATIVE ADJUSTMENT NO. \_\_\_\_\_  
**Approval in Concept**  
 SUBJECT TO CONDITIONS  
 CITY OF COSTA MESA  
 PLANNING DEPT.  
 BY CH AWSL DATE 08/31/2021

NEW MONUMENT  
 SIGN FILED UNDER  
 SEPARATE APPLICATION

PROPOSED FENCE (FP)

1 CLUB

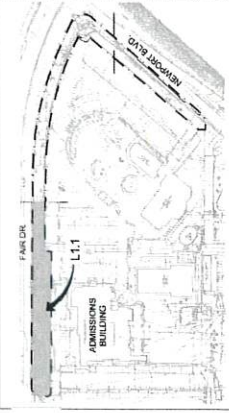
2 CLUB

3 CLUB

5 CLUB

B CLUB

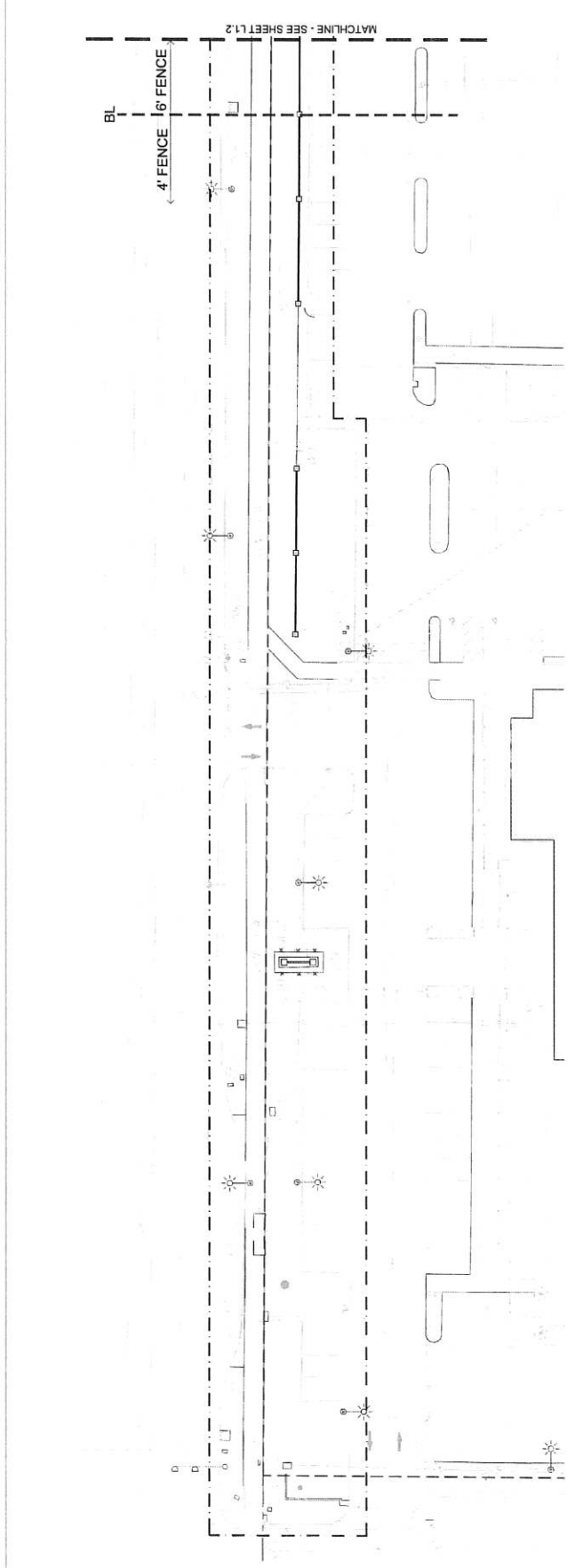
PLAN VIEW  
 SCALE: 1" = 40'



SCALE: N.T.S.  
0 10 20 40 60



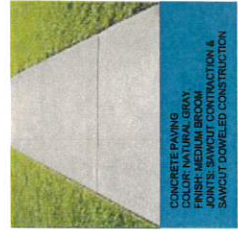
FOR COMPLETE HARDSCAPE SCHEDULES & NOTES - SEE SHEET L1.0  
FOR HARDSCAPE DETAILS - SEE SHEET L2.1  
FOR FENCE ELEVATIONS - SEE SHEET L2.2  
FOR LANDSCAPE SPECIFICATIONS - SEE SHEET L8.1 - L8.3



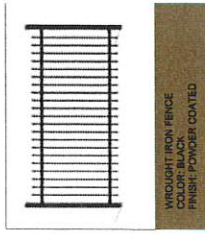
**HARDSCAPE**



CONCRETE CURB  
COLOR: NATURAL GRAY  
FINISH: LIGHT BROOM  
JOINTS: SAW CUT, JOINTS



CONCRETE PAVING  
COLOR: NATURAL GRAY  
FINISH: MEDIUM BROOM  
SAW CUT JOINTS TO CONSTRUCTION & SAW CUT JOINTS TO CONSTRUCTION



WROUGHT IRON FENCE  
COLOR: BLACK  
FINISH: POWDER COATED

**REFERENCE KEYNOTES**

KEY	DESCRIPTION	DETAIL
A	EXISTING A/C PAVING TO REMAIN	PER CIVIL ENG PLANS
B	EXISTING CONCRETE PAVING TO REMAIN	PER CIVIL ENG PLANS
C	EXISTING UTILITY	PER CIVIL ENG PLANS
D	EXISTING MONUMENT SIGN	PER CIVIL ENG PLANS
E	EXISTING LIGHT FIXTURE	PER CIVIL ENG PLANS
F	NEW MONUMENT SIGN FILED UNDER SEPARATE APPLICATION	-
G	NEW CONCRETE PAVING	PER CIVIL ENG PLANS
H	NEW CONCRETE CURB	PER CIVIL ENG PLANS
I	LIGHT FIXTURE AT MONUMENT SIGN FILED UNDER SEPARATE APPLICATION	-
J	PROPERTY LINE	-

**WALL SCHEDULE**

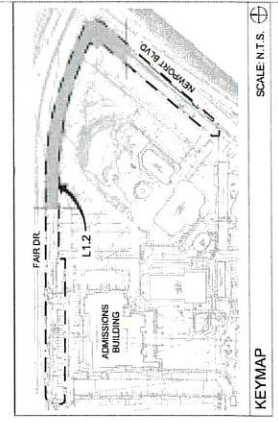
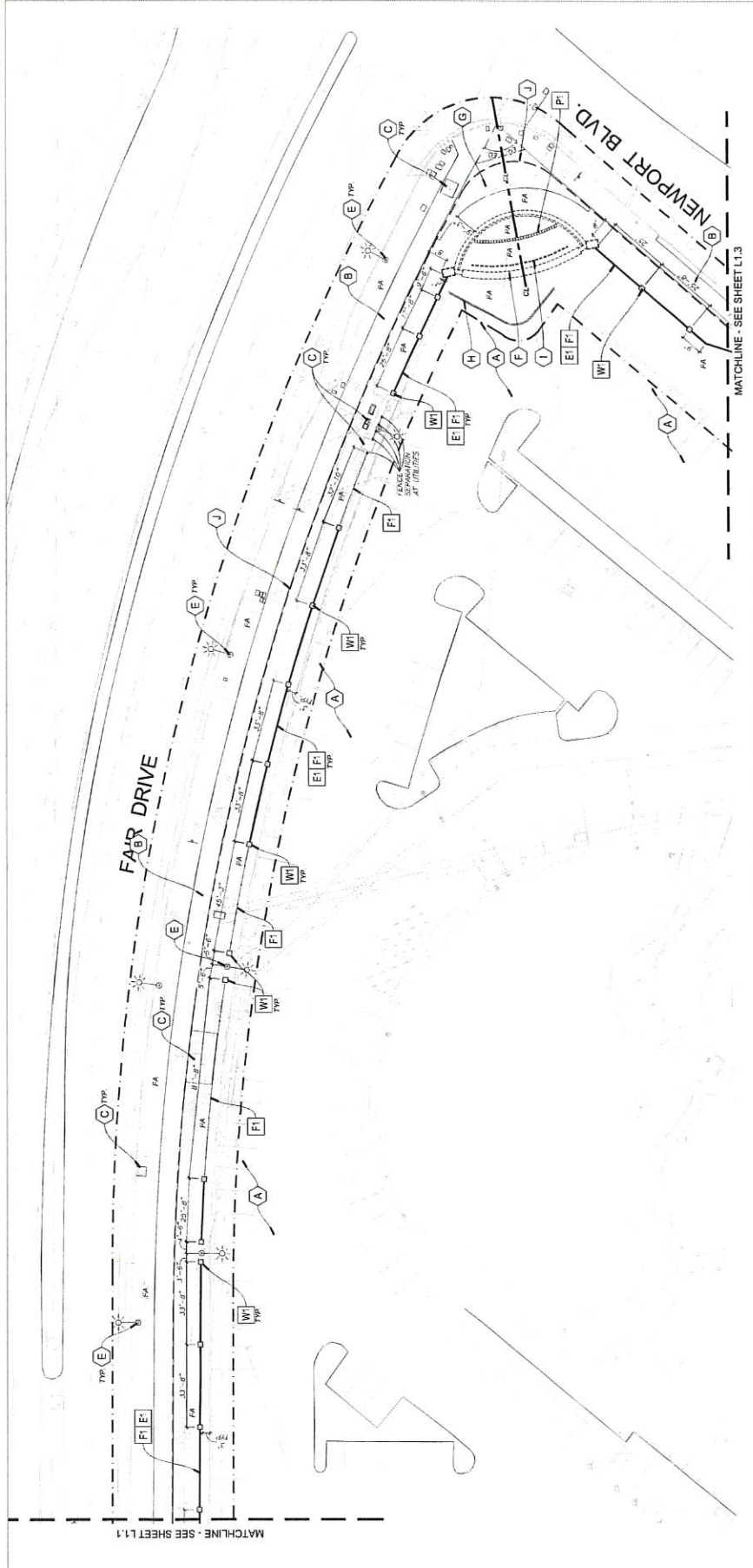
KEY	DESCRIPTION	DETAIL	MFR. / SUPPLIER	COLOR	FINISH	JOINTS
W	ALUMINUM PLASTER WITH PRE-CAST CAP	SA-01	-	TO MATCH BUILDING	BLACK	-

**FENCE AND RAILING SCHEDULE**

KEY	DESCRIPTION	DETAIL	MFR. / SUPPLIER	MODEL	COLOR	FINISH
F	METAL FENCE PANELS	A.B.C. L2.1	CUSTOM	-	BLACK	POWDER COATED

**EDGING SCHEDULE**

KEY	DESCRIPTION	DETAIL	MFR. / SUPPLIER	MODEL	COLOR	FINISH
E	8" CONCRETE MOW CURB BELOW FENCING	D. L2.1	-	-	NATURAL GRAY	LIGHT BROOM



SCALE: N.T.S.

FOR COMPLETE HARDSCAPE SCHEDULES & NOTES - SEE SHEET L1.0  
FOR HARDSCAPE DETAILS - SEE SHEET L2.1  
FOR FENCE ELEVATIONS - SEE SHEET L2.2  
FOR LANDSCAPE SPECIFICATIONS - SEE SHEET L3.1 - L3.3

KEY	DESCRIPTION	DETAIL	MFR / SUPPLIER	COLOR	FINISH	JOINTS	COMMENTS
WT	WALKWAY PASTER WITH PRECAST CAP	S4.01	-	TO MATCH BUILDING	SMOOTH PLASTER TO MATCH BUILDING	-	-

KEY	DESCRIPTION	DETAIL	MFR / SUPPLIER	MODEL	COLOR	FINISH	COMMENTS
F1	METAL FENCE PANELS	A,B,C,L3.1	CUSTOM	-	BLACK	POWDER COATED	-

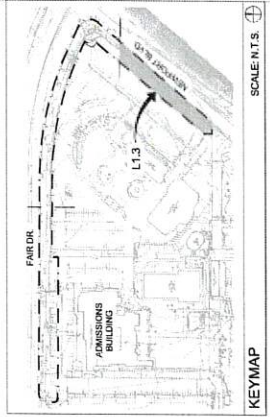
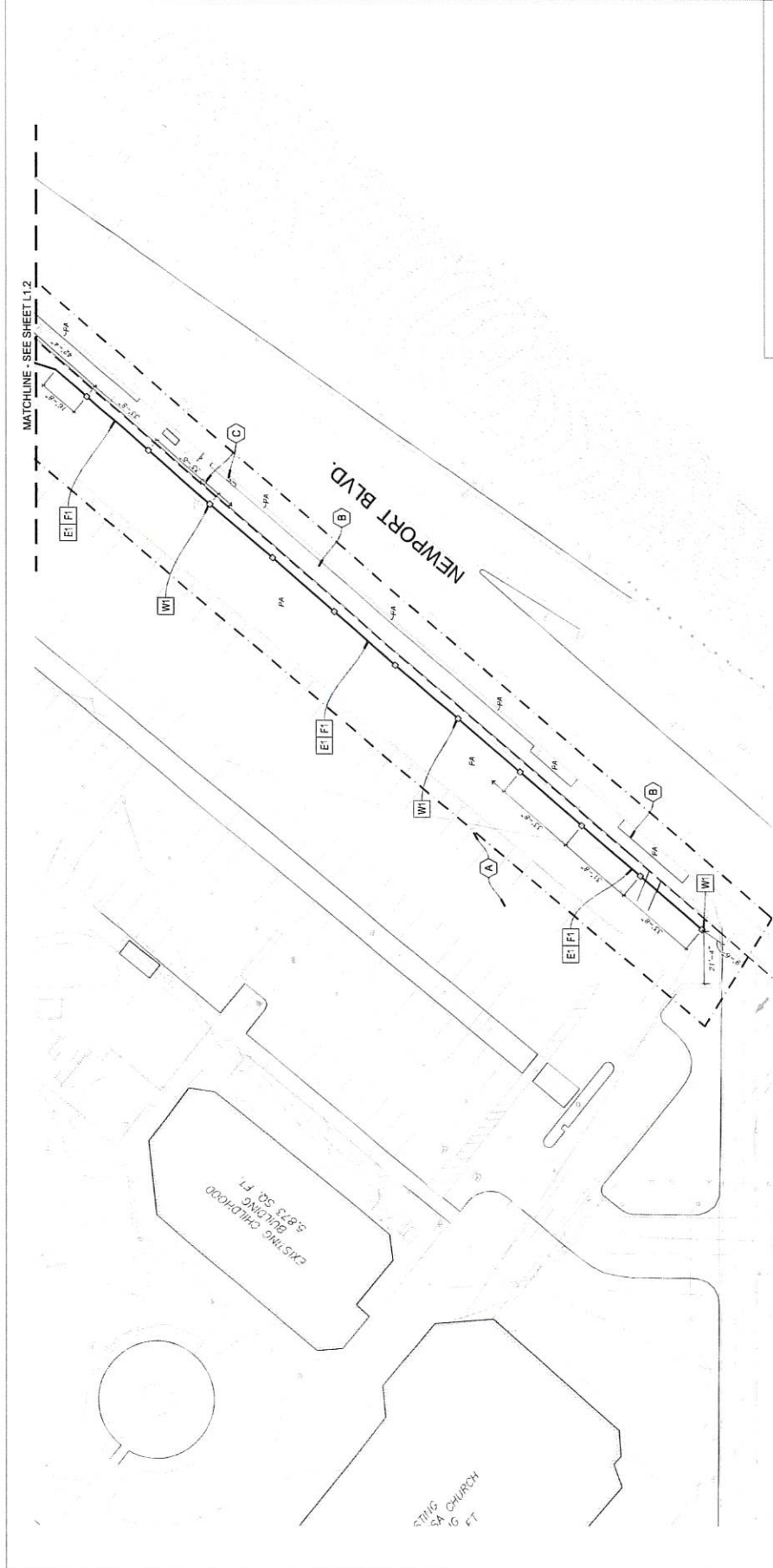
KEY	DESCRIPTION	DETAIL	MFR / SUPPLIER	MODEL	COLOR	FINISH	COMMENTS
E1	6" CONCRETE MONUMENT CURB (BELOW FINISH)	D,L3.1	-	-	NATURAL GRAY	LIGHT BROOM	-

KEY	DESCRIPTION	DETAIL	MFR / SUPPLIER	COLOR	FINISH	JOINTS	COMMENTS
P1	PRECAST CONCRETE PAVERS	E,L2.1	DS-157V PAVES (860) 705-3434	NATURAL	MEDIUM BROOM FINISH	2" SPACING BETWEEN PAVERS	ALL SIDES

KEY	DESCRIPTION	DETAIL
A	EXISTING A.C. PAVING TO REMAIN	PER CIVIL END PLANS
B	EXISTING CONCRETE PAVING TO REMAIN	PER CIVIL END PLANS
C	EXISTING UTILITY	PER CIVIL END PLANS
D	EXISTING MONUMENT SIGN	PER CIVIL END PLANS
E	EXISTING LIGHT FIXTURE	PER CIVIL END PLANS
F	NEW MONUMENT SIGN FILED UNDER SEPARATE APPLICATION	PER CIVIL END PLANS
G	NEW CONCRETE PAVING	PER CIVIL END PLANS
H	NEW CONCRETE CURB LIGHT FIXTURE AT MONUMENT SIGN PER SEPARATE APPLICATION	PER CIVIL END PLANS
I	PROPERTY LINE	-

SYMBOL	DESCRIPTION
---	DOWELED CONSTRUCTION JOINT
---	CONSTRUCTION JOINT
PA	PLANTING AREA



FOR COMPLETE HARDSCAPE SCHEDULES & NOTES - SEE SHEET L1.0  
FOR HARDSCAPE DETAILS - SEE SHEET L2.1  
FOR FENCE ELEVATIONS - SEE SHEET L2.2  
FOR LANDSCAPE SPECIFICATIONS - SEE SHEET L8.1 - L8.3

WALL SCHEDULE						
KEY	DESCRIPTION	DETAIL	MFR./SUPPLIER	COLOR	FINISH	COMMENTS
W	ALUMINUM PLASTER WITH PRE-CUT TOP	SA-91	-	TO MATCH BUILDING	SMOOTH PLASTER TO MATCH BUILDING	-

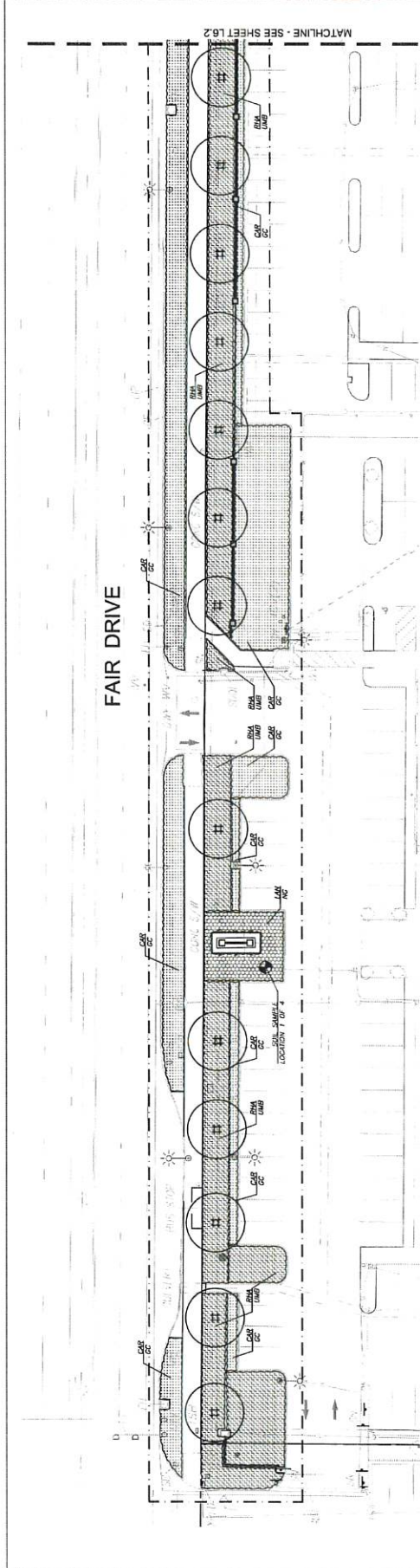
NOTES:  
A. CONTRACTOR SHALL PREPARE MOCKUPS FOR WALLS. SEE MOCKUP REQUIREMENTS SHEET L1.0.  
B. PROVIDE AN ISOLATION JOINT WHERE FENCING MEETS VERTICAL SURFACES SUCH AS BUILDING WALL STEPS, OR AS NOTED IN THESE DRAWINGS.

FENCE AND RAILING SCHEDULE						
KEY	DESCRIPTION	DETAIL	MFR./SUPPLIER	MODEL	COLOR	COMMENTS
F	METAL FENCE PANELS	A,B,C,L3.1	CUSTOM	-	BLACK	POWDER COATED

EDGING SCHEDULE						
KEY	DESCRIPTION	DETAIL	MFR./SUPPLIER	MODEL	COLOR	COMMENTS
E	CONCRETE LOW CURB LIGHT BROOM	D,L2.1	-	-	NATURAL GRAY	LIGHT BROOM

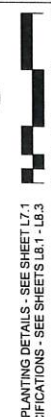
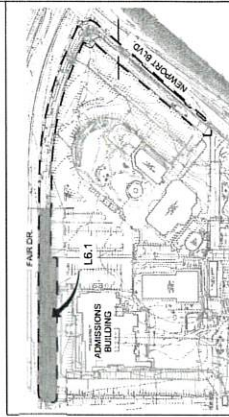
REFERENCE KEYNOTES		
KEY	DESCRIPTION	DETAIL
A	EXISTING A.C. PAVING TO REMAIN	PER CIVIL ENG PLANS
B	EXISTING CONCRETE PAVING TO REMAIN	PER CIVIL ENG PLANS
C	EXISTING UTILITY	PER CIVIL ENG PLANS
D	EXISTING MONUMENT SIGN	PER CIVIL ENG PLANS
E	EXISTING LIGHT FIXTURE	PER CIVIL ENG PLANS
F	NEW MONUMENT SIGN FIED UNDER SEPARATE APPLICATION	-
G	NEW CONCRETE PAVING	PER CIVIL ENG PLANS
H	NEW CONCRETE CURB	PER CIVIL ENG PLANS
I	LIGHT FIXTURE AT MONUMENT SIGN FIED UNDER SEPARATE APPLICATION	-
J	PROPERTY LINE	-

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
---	DOWELED CONSTRUCTION JOINT
---	CONSTRUCTION JOINT
1/2	PLANTING AREA



**PLANT SCHEDULE**

TREES		SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE / FORM	HT. X SPRD. / GAL. (WATER)	WATER USE	DESCRIPTION	DETAIL	QTY
#			LOPHOSTEMON CONFERTUS	BRISBANE BOX	48" BOX STD.	14'-10" H X 5'-7" X 5" GAL.	M	STREET TREE ON FAIR DRIVE	A, L7.1	29
SHRUBS, GRASSES, & GROUNDCOVERS		SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	WATER USE	DESCRIPTION	DETAIL	QTY
CAF			CARISSA M. 'GREEN CARPET'	DWARF NATAL PLUM	5 GAL.	30" O.C.	L	EVERGREEN LOW SHRUB	B.C. L7.1	2799
DLV			DANELIA LITTLE REY	LITTLE REY FLAX LILY	1 GAL.	24" O.C.	L	UPRIGHT ACCENT	B.C. L7.1	724
RPH			RAPHILOPS LABELATA	YEEDO HAWTHORN	5 GAL.	30" O.C.	L	EVERGREEN SHRUB	B.C. L7.1	2109
LAW			LANTANA 'NEW GOLD'	NEW GOLD LANTANA	1 GAL.	30" O.C.	NL	FLOWERING LOW SHRUB	B.C. L7.1	148
LW			LIGUSTRUM JAPONICUM 'TEKANUM'	WAXLEAF PRIVET	10 GAL.	48" O.C.	M	EVERGREEN SHRUB	B.C. L7.1	3
LOW			LOWNERA JAPONICA 'YALLUNAK'	JAPANESE HONEYSUCKLE	FLATS	12" O.C.	L	GROUND COVER	B.C. L7.1	3
BLW			BULBUS MICROPHILLA VAR. 'JAPONICA'	GREEN BEAUTY BOWWOOD	1 GAL.	30" O.C.	L	LOW SCREENING HERBAGE	B.C. L7.1	18



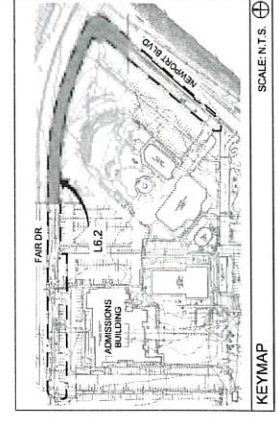
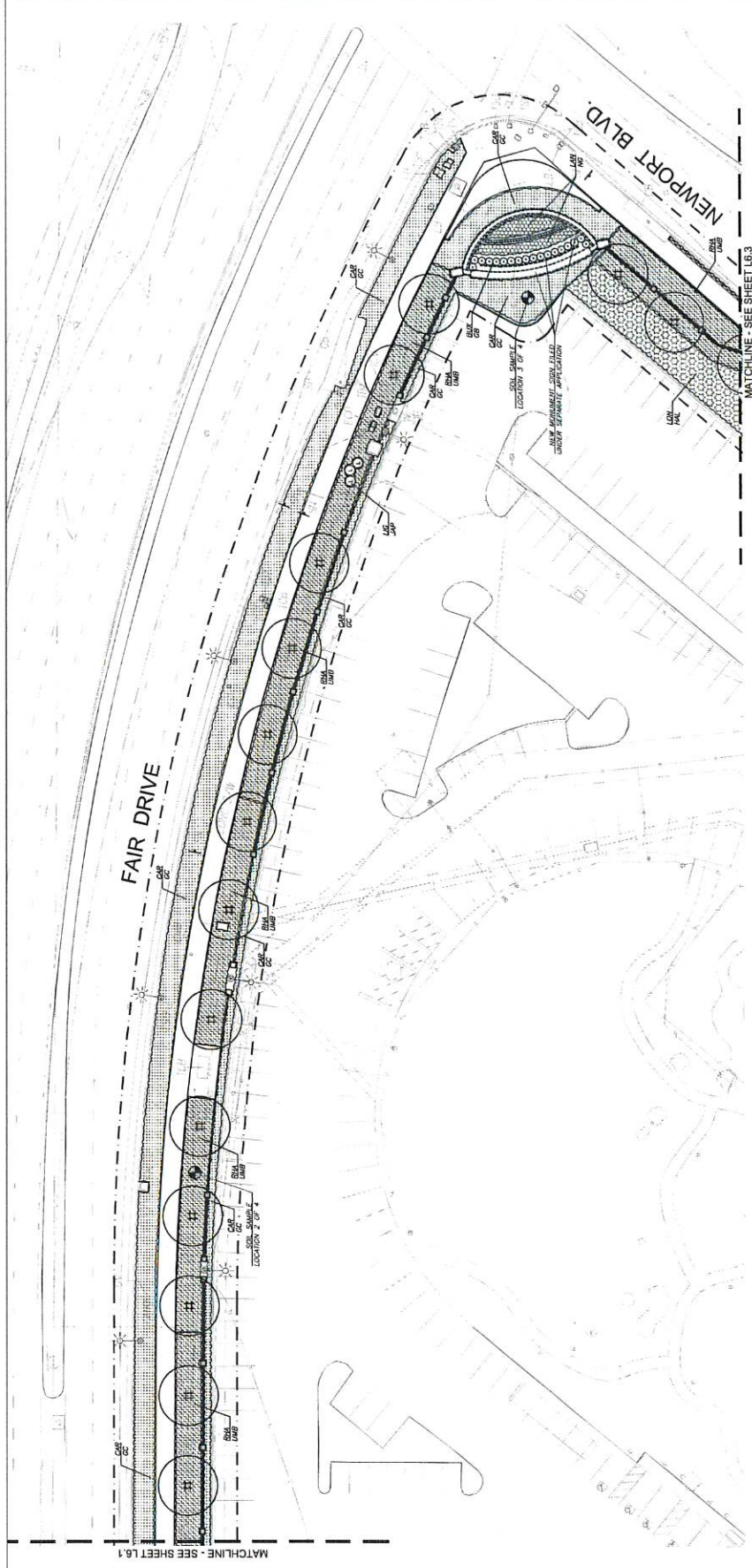
FOR PLANTING DETAILS - SEE SHEET L7.1  
 FOR LANDSCAPE SPECIFICATIONS - SEE SHEETS L6.1 - L6.3



# LOPHOSTEMON CONFERTUS / BRISBANE BOX

L CARISSA M. 'GREEN CARPET' / DWARF NATAL PLUM

DLV DANELIA LITTLE REY / LITTLE REY FLAX LILY

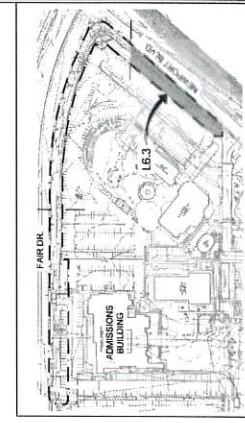
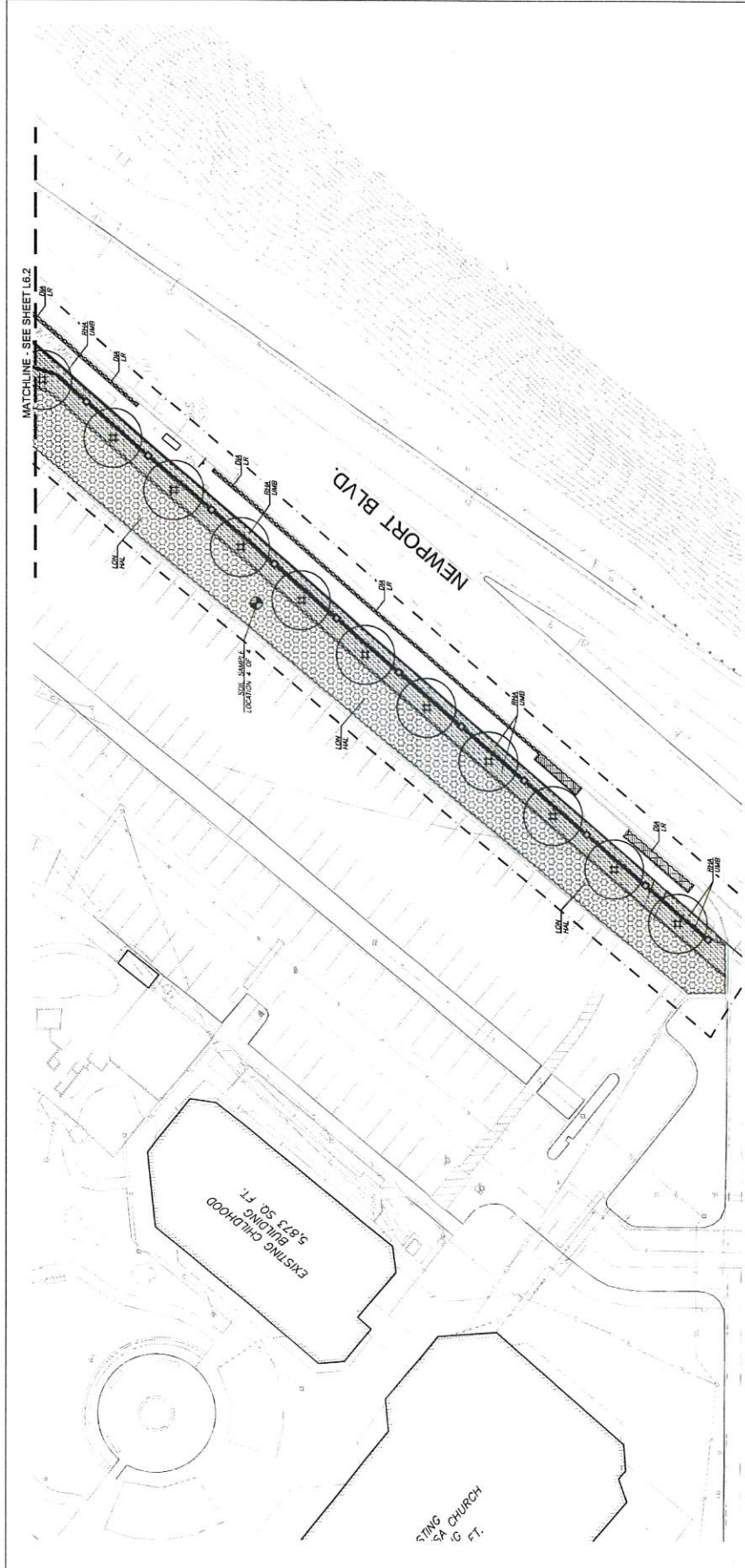


**PLANT SCHEDULE**

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE / FORM	MT. X SPRD. X CAL. (MIN)	WATER USE	DESCRIPTION	DETAIL	QTY.
#	LOPHOSTEMON CONFERTUS	BRISBANE BOX	48" HOK 3" ID.	14" DIA X 47" X 3" CAL.	M	STREET TREE ON FAIR DRIVE	A. L7.1	29
<b>SHRUBS, GRASSES &amp; GROUNDCOVERS</b>								
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	WATER USE	DESCRIPTION	DETAIL	QTY.
CAR	CARISSA M. GREEN CARPET	DWARF NATAL PLUM	5 GAL.	30" O.C.	L	EVERGREEN LOW SHRUB	B.C.L7.1	2798
DM LR	DANIELA LITTLE REY	LITTLE REY FLAX LILY	1 GAL.	24" O.C.	L	UPRIGHT ACCENT	B.C.L7.1	726
RPA UMB	RHAPHIDOPUS UMBELLATA	YEDDO HAWTHORN	5 GAL.	30" O.C.	L	EVERGREEN SHRUB	B.C.L7.1	2100
LAW	LANTANA X NEW GOLD	NEW GOLD LANTANA	1 GAL.	30" O.C.	VL	FOUR SEASONS COLOR	B.C.L7.1	148
LS	LEUCISTYLIUM JAPONICUM	WAKILAMP PRIVET	15 GAL.	48" O.C.	M	EVERGREEN SHRUB	B.C.L7.1	3
LOW PAL	LONGISERIA JAPONICA HILLIAMI	JAPANESE HONEYBUCKLE	PLANTS	12" O.C.	L	GROUND COVER	B.C.L7.1	7681 SF.
LOW GR	BANUS MICROPHYLLA VAR. JAPONICA GREEN BEAUTY	GREEN BEAUTY BOWWOOD	1 GAL.	30" O.C.	L	LOW SCREENING	B.C.L7.1	18

WATER USE KEY: H = HIGH WATER USE, M = MODERATE WATER USE, L = LOW WATER USE. WATER USE STATED IS PER WATER USE CLASSIFICATION OF LANDSCAPE SPECIES (ALSO REFERRED TO AS WUCOLS IV) FOR THE CITY OF COSTA MESA.





**PLANT SCHEDULE**

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE / FORM	HT. X SPREAD X GAL. (WATER USE)	WATER USE	DESCRIPTION	DETAIL	QTY.	
#	LOPHOSTEMON CONFERTUS	BRISBANE BOX	48" DIA X 6'7" X 3" BT	16" (P) X 6'7" X 3" GAL.	M	STRIPES (SEE ON PAIR DRIVE)	A, L2.1	29	
<b>SHRUBS, GRASSES &amp; GROUNDCOVERS</b>									
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	WATER USE	DESCRIPTION	DETAIL	QTY.	
CAF	CAREX M. GREEN CARPET	SHARP NATAL PLUM	5 GAL.	36" O.C.	L	EVERGREEN LOW SHRUB	B.C. L2.1	2796	
DM	DANIELA LITTLE REV	LITTLE REV FLAX LILY	1 GAL.	24" O.C.	L	UPRIGHT ACCENT SHRUB	B.C. L2.1	724	
DM	RHAMNOLIPS LABELATA	YEDDO HAWTHORN	5 GAL.	36" O.C.	L	EVERGREEN SHRUB	B.C. L2.1	2108	
LAV	LANTANA X NEW GOLD	NEW GOLD LANTANA	1 GAL.	36" O.C.	VL	FLOWERING LOW SHRUB	B.C. L2.1	148	
LAV	LIQISTRUM JAPONICUM	HAKULEAF PRIVET	5 GAL.	48" O.C.	M	EVERGREEN SHRUB	B.C. L2.1	3	
LAV	LONGICHA JAPONICA	JAPANESE HONEYSUCKLE	PLATS	12" O.C.	L	GROUND COVER	B.C. L2.1	7891	
LAV	LIQISTRUM JAPONICUM	GREEN HEARTY BOTTWOOD	1 GAL.	36" O.C.	L	LOW SPREADING SHRUB	B.C. L2.1	18	

WATER USE: W = VERY LOW WATER USE, L = LOW WATER USE, M = MODERATE WATER USE, H = HIGH WATER USE. WATER USE STATUSES PER WATER USE CLASSIFICATION OF LANDSCAPE SPECIES (ALSO REFERRED TO AS WHOLELY BY THE CITY OF COSTA MESA)