

# Tree Management Experts

## Consulting Arborists

3109 Sacramento Street  
San Francisco, CA 94115

Member, American Society of Consulting Arborists  
Certified Arborists, Tree Risk Assessment Qualified

email [Roy@treemanagementexperts.com](mailto:Roy@treemanagementexperts.com)

cell 415.606.3610



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### City of Pacifica

**Attn: Bryan Bautista**  
**151 Milagra Dr.**  
**Pacifica, CA 94044**

**RE: Carmel-Paloma ADA sidewalk project**  
**Tree Protection and Preservation Plan**

**Date: 12/21/23**

## ARBORIST REPORT

And

Tree Protection and Preservation Plan

### Assignment

- Review plans for demolition and new sidewalk and roadway construction.
- Provide a site visit to inspect Protected Trees on adjacent property or in the right-of-way.
- Evaluate tree structure and health.
- Determine construction impacts, tree removal needs, mitigation requirements and tree protection methods, as needed.
- Develop an Arborist Report, per City code requirements.

### Background

The City of Pacifica intends to construct new ADA-accessible sidewalk and roadway features in a 6-block area between Beach and Francisco Boulevards, including both sides of Paloma, Carmel and Santa Maria Avenues. Impacts to trees will include the demolition and replacement of parts of the existing sidewalks, curbs, gutters, roadbed, and utility vaults.

### City Ordinance

The current City ordinance regulating trees, *Chapter 12 – Tree Preservation*, was passed on October 12, 2022. Per Sec. 4-12.01 (b) *The provisions of this chapter apply to all areas within the jurisdiction of the City of Pacifica.* Some key definitions (per Sec. 4-12.02. - *Definitions.*) that are related to this report include:

- (e) “Diameter” or “DBH” shall be the diameter of a tree measured at a standard height of 4.5 feet or 54 inches above grade.
- (g) “Dripline” shall refer to an imaginary vertical line that extends downward from the outermost tips of the tree branches to the ground.
- (n) “Protected tree” shall mean and include:
  - (1) All trees on...private property...which have a trunk with a diameter of 12 inches or greater at DBH.

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(q) "Regulated work" shall mean...any act or actions that could cause irreparable damage, adversely impact health; including, but not limited to...trenching, excavating, altering the grade, or paving within the dripline of a tree...

(x) "Trenching" shall mean any excavation to provide irrigation, install foundations, utility lines, services, pipe, drainage or other improvements below grade.

(y) "Tree protection and preservation plan" shall mean the plan prepared by a qualified arborist...that details existing tree conditions and measures that will be used to protect trees during development, construction, and landscaping activities.

(z) "Trunk protection zone" or "TPZ" shall mean the area of ground extending out from the trunk of a tree in all directions where activity is prohibited to protect tree roots.

Some key prohibited activities (*Sec. 4-12-03. – Prohibited activities.*) that apply to this project include:

It is unlawful for [a] person not...designated by the City to do any of the following with protected trees...:

(b) Placing or maintain...pavement...so that it impedes access to water or air to the roots of any protected tree;

(d) Placing or storing construction equipment or construction material within the trunk protection zone of a protected tree.

## Tree Protection and Preservation Plan

This Arborist Report fulfills the City ordinance requirement for a tree protection and preservation plan, and must be submitted in conjunction with the development proposal.

This plan has been prepared by Roy Leggitt, a Certified Arborist, a member of the American Society of Consulting Arborists, and a member of the International Society of Arboriculture. He has over 35 years of experience as an arborist professional, and has provided consulting services to the City of Pacifica since 1999.

The Certified Arborist, Roy Leggitt, hereby acknowledges the tree protection standards enacted by the City of Pacifica. This report is based on those standards.

### Project Arborist

The Project Arborist is hereby specified as either of these Certified Arborists from Tree Management Experts:

Roy Leggitt [roy@treemanagementexperts.com](mailto:roy@treemanagementexperts.com) 415.606.3610

Aaron Wang [aaron@treemanagementexperts.com](mailto:aaron@treemanagementexperts.com) 847.630.3599

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### Tree Inventory

The tree inventory includes all trees that are 6 inches or greater and are within 50 feet of the project limits of disturbance, including trees on adjacent property and within the public right-of-way, for a total of 47 trees.

Tree #	Addr	Street	Botanic Name	Common Name	DBH	Health	Structure	High Risk Removal	In ROW	Protected/TPZ Overlap	10x TPZ Diameter (ft)	Sheet #
1	20	Carmel	Pinus thunbergii	Japanese black pine	7	Fair	Fair				11' 8"	C1
2	23	Carmel	Hesperocyparis macrocarpa	Monterey cypress	20	Fair	Fair			X	33' 4"	C1
3	41	Carmel	Juniperus chinensis 'Torulosa'	Hollywood juniper	8	Fair	Good				13' 4"	C1
4	87	Carmel	Myoporum laetum	ngaio	10	Good	Good			X	16' 8"	C2
5	1709	Palmetto	Hesperocyparis macrocarpa	Monterey cypress	41.3	Fair	Fair	X	X		N/A	C2
6	120	Carmel	Prunus cerasifera	purple-leaf plum	6	Fair	Fair				10' 0"	C3
7	133	Carmel	Hesperocyparis macrocarpa	Monterey cypress	43.4	Good	Fair		X	X	72' 4"	C3
8	165	Carmel	Hesperocyparis macrocarpa	Monterey cypress	17	Good	Good			X	28' 4"	C3
9	170	Carmel	Euonymus japonicus	Japanese spindle	8	Good	Fair				13' 4"	C3
10	185	Carmel	Metrosideros excelsa	New Zealand Christmas tree	10.4	Good	Good		X	X	17' 4"	C3
11	174	Carmel	Hesperocyparis macrocarpa	Monterey cypress	48.3	Good	Poor		X	X	80' 6"	C3
12	1710	Francisco	Hesperocyparis macrocarpa	Monterey cypress	42.2	Fair	Poor	X	X		N/A	C3
13	4	Paloma	Washingtonia robusta	Mexican fan palm	10	Good	Good			X	16' 8"	C4

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14	4	Paloma	Washingtonia robusta	Mexican fan palm	10	Fair	Good				16' 8"	C4
15	4	Paloma	Washingtonia robusta	Mexican fan palm	14	Good	Good				23' 4"	C4
16	77	Paloma	Metrosideros excelsa	New Zealand Christmas tree	14	Good	Fair			X	23' 4"	C5
17	77	Paloma	Metrosideros excelsa	New Zealand Christmas tree	10	Good	Fair			X	16' 8"	C5
18	77	Paloma	Metrosideros excelsa	New Zealand Christmas tree	12	Good	Fair			X	20' 0"	C5
19	77	Paloma	Metrosideros excelsa	New Zealand Christmas tree	11	Good	Fair			X	18' 4"	C5
20	77	Paloma	Pittosporum crassifolium	karo	11	Fair	Poor				18' 4"	C5
21	77	Paloma	Melaleuca quiquenervia	flax-leaved paperbark	6	Fair	Fair				10' 0"	C5
22	77	Paloma	Melaleuca quiquenervia	flax-leaved paperbark	7	Fair	Fair				11' 8"	C5
23	118	Paloma	Hesperocyparis macrocarpa	Monterey cypress	38.7	Good	Fair		X	X	64' 6"	C6
24	120	Paloma	Hesperocyparis macrocarpa	Monterey cypress	32.9	Good	Fair		X	X	54' 10"	C6
25	134	Paloma	Hesperocyparis macrocarpa	Monterey cypress	38.3	Good	Fair		X	X	63' 10"	C6
26	137	Paloma	Hesperocyparis macrocarpa	Monterey cypress	45.6	Fair	Poor	X	X		N/A	C6
27	165	Paloma	Washingtonia robusta	Mexican fan palm	16	Good	Good			X	26' 8"	C6
28	173	Paloma	Hesperocyparis macrocarpa	Monterey cypress	17	Fair	Fair			X	28' 4"	C6
29	173	Paloma	Hesperocyparis macrocarpa	Monterey cypress	17	Fair	Fair			X	28' 4"	C6
30	173	Paloma	Hesperocyparis macrocarpa	Monterey cypress	17	Fair	Fair			X	28' 4"	C6
31	25	Santa Maria	Myoporum laetum	ngaio	26	Fair	Fair			X	43' 4"	C7

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32	40	Santa Maria	Myoporum laetum	ngaio	28	Very Poor	Poor			X	46' 8"	C7
33	47	Santa Maria	Pittosporum crassifolium	karo	12	Fair	Fair			X	20' 0"	C7
34	66	Santa Maria	Pinus radiata	Monterey pine	22	Good	Fair			X	36' 8"	C8
35	1726	Palmetto	Hesperocyparis macrocarpa	Monterey cypress	27.7	Fair	Fair			X	46' 2"	C8
36	104	Santa Maria	Metrosideros excelsa	New Zealand Christmas tree	15	Good	Good			X	25' 0"	C8
37	121	Santa Maria	Metrosideros excelsa	New Zealand Christmas tree	19.3	Good	Good		X	X	32' 2"	C9
38	142	Santa Maria	Metrosideros excelsa	New Zealand Christmas tree	18.8	Good	Good		X	X	31' 4"	C9
39	145	Santa Maria	Unknown	Unknown	6.4	Very Poor	Very Poor		X	X	10' 8"	C9
40	142	Santa Maria	Trachycarpus fortunei	windmill palm	7	Good	Good				11' 8"	C9
41	142	Santa Maria	Trachycarpus fortunei	windmill palm	7	Good	Good				11' 8"	C9
42	142	Santa Maria	Cordyline australis	cabbage tree	40	Good	Good			X	66' 8"	C9
43	142	Santa Maria	Cordyline australis	cabbage tree	18	Fair	Poor			X	30' 0"	C9
44	142	Santa Maria	Washingtonia robusta	Mexican fan palm	16	Good	Good			X	26' 8"	C9
45	142	Santa Maria	Phoenix canariensis	Canary Island Date Palm	20	Good	Good			X	33' 4"	C9
46	170	Santa Maria	Metrosideros excelsa	New Zealand Christmas tree	16	Good	Good			X	26' 8"	C9
47	170	Santa Maria	Metrosideros excelsa	New Zealand Christmas tree	16	Good	Good			X	26' 8"	C9

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### Tree Removals

Trees 5, 12 and 26

These trees were considered for removal due to their large size, placement, and impacts due to sidewalk, curb, gutter, and road surfaces. An ADA accessibility improvement project will be placing or replacing sidewalks, curbs, gutters and road surfaces in this neighborhood, and the Engineering Division is therefore considering these trees based on project needs.

Engineering had intended to modify the street parking and sidewalk layout wherever necessary to accommodate these trees, as they are doing at other sites. This report is based solely on the condition of the trees as of the inspection date, and does not include any impacts to the root systems that would occur as a consequence of the project. These recommendations are solely based on the poor or very poor structure of these trees, the risk they pose to the surroundings, and the lack of mitigation options. The intended modifications to the streetscape would not reduce risk posed by the trees, and the risk levels are not acceptable.

Trees can be considered as young, young-mature, mature, and over-mature age classes. These trees fall into the over-mature category based on the large size, loss of tops, loss of internal branch structure, many branch failures, root failures/partial uprooting, and the progression of decay. Various combinations of these factors apply to each of these trees.

Because of the large size and probable or imminent likelihood of failure, the surroundings are of critical concern. These locations include streets regularly occupied by parked cars and traffic, overhead utilities (high voltage) and service drops, and many houses and businesses in close proximity to the trees. Pedestrian traffic is particularly frequent in certain areas. There are significant or severe consequences from a large part of any one of these trees failing.

Canopies and root systems have become more and more confined. This is due to the trees becoming larger over time and out of proportion to the available space. As a consequence, some trees are now leaning due to root confinement and partial uprooting, particularly when coupled with decay in the lower trunk and root crown areas. The recent winter storms likely contributed to partial uprooting, and certainly caused major branch losses.

We have been monitoring these trees and making recommendations on behalf of the Department of Public Works for more than 20 years. These trees have been an ongoing concern and issue for more than 20 years due to large branch losses, including several that were 12 inches diameter, and many that were 6 inches or smaller in diameter. The City has been fortunate to have been able to retain these trees without an uprooting or scaffold branch failure during that intervening period. The trees have been partially maintained by PG&E, and partially maintained by the City, therefore reducing risk of branch failures during that timeframe, but still experiencing many larger branch failures and considerable property damage.

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Each of the trees has been evaluated using the ISA Basic Tree Risk Assessment Form, 2017. This is the industry-standard form used to document a tree risk assessment by a Tree Risk Assessment Qualified (TRAQ) individual. A set of photographs for each tree and surroundings follows each of the risk assessments. Photographs are framed to show the overall form of the tree, areas of specific defects, and surrounding infrastructure and targets. The risk assessments and photos are attached to and considered part of this Arborist Report.

Trees that pose high and extreme risk are not normally tolerated in urban areas unless the risk can be reduced and maintained at low or moderate levels. Pruning and supplemental support (ie: cabling) would not be effective at reducing risk levels in these trees.

Based on the high and extreme risk ratings, removal of trees 5, 12 and 26 is recommended.

### Site Plan

All 47 trees are accurately shown on the attached marked set of site plans, as determined by City Engineering and by the Project Arborist in the field. The tree locations, tree protection zones, and 50-foot offsets for zones requiring Project Arborist supervision are shown on the 9 site plan markups, attached.

3 trees (trees 5, 12 and 26) in the ROW are planned for removal due to high risk, per the Arborist Report dated 7/8/23. The fourth tree addressed in this report (# 11) is at 174 Carmel, and it is intended to be preserved during this construction.

12 trees are in the right-of-way (ROW) and will be protected through mitigation measures outlined below.

17 private trees (trees 2, 4, 8, 13, 16, 27, 31, 32, 35, 36, 38, 42, 43, 44, 45, 46 and 47) have tree protection zones that overlap into the work zones and will be protected through mitigation measures outlined below.

18 private trees within 50 feet of the project limits have tree protection zones that are entirely outside the limits of construction, and as such are completely isolated from impacts. Aside from having the Project Arborist on site during work within 50 feet of the 12-inch diameter and larger trees, no further mitigation is required.

### Watering During Construction

Supplemental water cannot be managed or controlled on private property. The 12 trees within the ROW can potentially be irrigated with supplemental water during construction. It is likely, however, that most water-absorbing roots are on private property, not beneath the roadbed. Supplemental water will therefore be limited to the parkstrip and other unpaved

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portions of the ROW. Supplemental watering during construction will be subject to as-found conditions by the Project Arborist during on site monitoring.

### Tree Root Protection

The applicant is hereby provided with a tree protection and preservation plan that makes them responsible for his or her best efforts to preserve all trees which are to remain on the project site.

Per City ordinance (Sec. 4-12.11. (d) (3) ii) the TPZ is a radius of 2 times the trunk diameter

Per City ordinance (Sec. 4-12.11. (d) (3) iii) the TPZ radius shown in Table 1 is 50 feet

### TPZ Activities Requiring Approval from the Director

Parking vehicles, building materials, refuse and excavated spoils.

Work will take place in the entire ROW and will be beneath the canopies of the trees specified above and as shown on the 9 page marked site plans. Because the roadway construction will be immediately adjacent to the 12 ROW trees, trunk protection must be provided by use of a trunk wrap (see below). Activity within the ROW will be continuous, and locations for building materials, refuse and excavated spoils will be managed by off-hauling daily.

Cutting of tree roots by utility trenching, foundation digging, placement of curbs and trenches and other miscellaneous excavation.

Work will take place in the entire ROW and will be beneath the canopies of the trees specified above and as shown on the 9 page marked site plans. Excavation will occur to various extents along the entire length of each blockside. The greatest impacts are likely around tree 11 where a new sidewalk will be installed, at various sites where driveway aprons will be installed, and at utility vaults that require replacement or re-setting.

Soil disturbance or grade change.

Work will take place in the entire ROW and will be beneath the canopies of the trees specified above and as shown on the 9 page marked site plans. Most grade changes will be for purposes of installing ADA accessible sidewalks, repairing existing sidewalks, and installation or repair of driveway aprons. These activities must be done with oversight by the Project Arborist.

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### Drainage changes.

Work will take place in the entire ROW and will be beneath the canopies of the trees specified above and as shown on the 9 page marked site plans. The site is relatively flat, and curb lines will be installed per the flowline profiles, shown on these plans. Grading to establish flowline profiles must be done with oversight by the Project Arborist.

### Mitigation Subject to Approval from the Director

The following mitigation measures to address construction impacts are consistent with those identified in the City Ordinance and with ANSI A300 industry standards.

### *PROJECT ARBORIST ON SITE*

The Project Arborist must be on site during excavation, grading, paving and any other activity within 50 feet of protected trees. 31 trees are 12-inches diameter or larger and 2 trees are less than 12 inches diameter but are in the ROW for a total of 33 trees that require the Project Arborist to be on site. See the data table (above) and the attached site plan markups for these zones, shown as blue circles.

### *REPORT POSTING*

This Arborist Report and Tree Protection and Preservation Plan must be displayed in a conspicuous place or in proximity to the tree or trees on the construction site. It is the recommendation of the Project Arborist that the Arborist Report be posted on one side of each block, at 6 locations.

### *WARNING SIGNS*

Warning signs stating "WARNING Trunk Protection Zone" must be placed on the fencing and cannot be removed.

### *PRE-CONSTRUCTION PRUNING*

Pruning for clearances is likely to be required for 5 trees (tree 10, 31, 37, 46 and 47). All work must be completed according ANSI A300 Pruning Standards, and done under the direction of the Project Arborist.

### *ROOT BUFFERS*

Existing asphalt and concrete surfaces will serve as temporary root buffers. Grading activity that is not on an existing asphalt or concrete surface may only be done with tracked equipment, and must be done under the direction of the Project Arborist. All graded areas that have been accessed with equipment in the absence of a root buffer will be subject to

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inspection by the Project Arborist to determine if there is soil compaction. Any compaction issues will require mitigation, per the Project Arborist.

### *TRUNK WRAP*

Trees within the ROW will require a trunk wrap to protect the bark from impacts due to heavy equipment. A trunk wrap shall consist of:

- 3 layers of orange plastic snow fence to a height of at least 6 feet, secured with zip ties.
- 1 layer of 2" x 4" planking set flat against the trunk and secured with zip ties to the snow fence.
- 3 additional layers of orange plastic snow fence to a height of at least 6 feet, secured with zip ties.

### *TREE PROTECTIVE FENCING*

Work carried out on parcels is typically isolated from trees by the installation of tree protective fencing that consists of 5- or 6-foot high chain link fencing mounted on 2-inch diameter galvanized iron posts, driven into the ground by 2 feet or more and at not more than a 10-foot spacing. This site is along a right-of-way rather than a discrete parcel, and construction will proceed within the length of the right-of-way for each segment or blockside. Fencing cannot be in place due to the nature of construction. City code therefore requires that the Project Arborist be on site when work occurs within 50 feet of protected trees. This requirement will apply to approximately half of the work.

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### Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. Title and ownership of all property considered are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.
2. It is assumed that any property is not in violation of any applicable codes, ordinances, statutes or other governmental regulations.
3. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible. The consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
4. Various diagrams, sketches and photographs in this report are intended as visual aids and are not to scale, unless specifically stated as such on the drawing. These communication tools in no way substitute for nor should be construed as surveys, architectural or engineering drawings.
5. Loss or alteration of any part of this report invalidates the entire report.
6. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior written or verbal consent of the consultant.
7. This report is confidential and to be distributed only to the individual or entity to whom it is addressed. Any or all of the contents of this report may be conveyed to another party only with the express prior written or verbal consent of the consultant. Such limitations apply to the original report, a copy, facsimile, scanned image or digital version thereof.
8. This report represents the opinion of the consultant. In no way is the consultant's fee contingent upon a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
9. The consultant shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule, an agreement or a contract.
10. Information contained in this report reflects observations made only to those items described and only reflects the condition of those items at the time of the site visit. Furthermore, the inspection is limited to visual examination of items and elements at the site, unless expressly stated otherwise. There is no expressed or implied warranty or guarantee that problems or deficiencies of the plants or property inspected may not arise in the future.

### Disclosure Statement

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

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Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. An arborist cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate the trees.

### Certification of Performance

I, Roy C. Leggitt, III, Certify:

- That we have inspected the trees and/or property evaluated in this report. We have stated findings accurately, insofar as the limitations of the Assignment and within the extent and context identified by this report;
- That we have no current or prospective interest in the vegetation or any real estate that is the subject of this report, and have no personal interest or bias with respect to the parties involved;
- That the analysis, opinions and conclusions stated herein are original and are based on current scientific procedures and facts and according to commonly accepted arboricultural practices;
- That no significant professional assistance was provided, except as indicated by the inclusion of another professional report within this report;
- That compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party.

I am a member in good standing of the American Society of Consulting Arborists and a member and Certified Arborist with the International Society of Arboriculture.

I have attained professional training in all areas of knowledge asserted through this report by completion of a Bachelor of Science degree in Plant Science, by routinely attending pertinent professional conferences and by reading current research from professional journals, books and other media.

I have rendered professional services in a full-time capacity in the field of horticulture and arboriculture for more than 35 years.

  
Signed: \_\_\_\_\_  
Certified Arborist WE-0564A

Date: 12/21/23 \_\_\_\_\_

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### Certification of Performance

I, Aaron Wang, Certify:

- That we have inspected the trees and/or property evaluated in this report. We have stated findings accurately, insofar as the limitations of the Assignment and within the extent and context identified by this report;
- That we have no current or prospective interest in the vegetation or any real estate that is the subject of this report, and have no personal interest or bias with respect to the parties involved;
- That the analysis, opinions and conclusions stated herein are original and are based on current scientific procedures and facts and according to commonly accepted arboricultural practices;
- That no significant professional assistance was provided, except as indicated by the inclusion of another professional report within this report;
- That compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party.

I am a member and Certified Arborist with the International Society of Arboriculture.

I have attained professional training in all areas of knowledge asserted through this report by completion of a Bachelor of Science degree in Forestry and Natural Resources, by routinely attending pertinent professional conferences and by reading current research from professional journals, books and other media.

I have rendered professional services in a full-time capacity in the field of horticulture and arboriculture for more than 11 years.

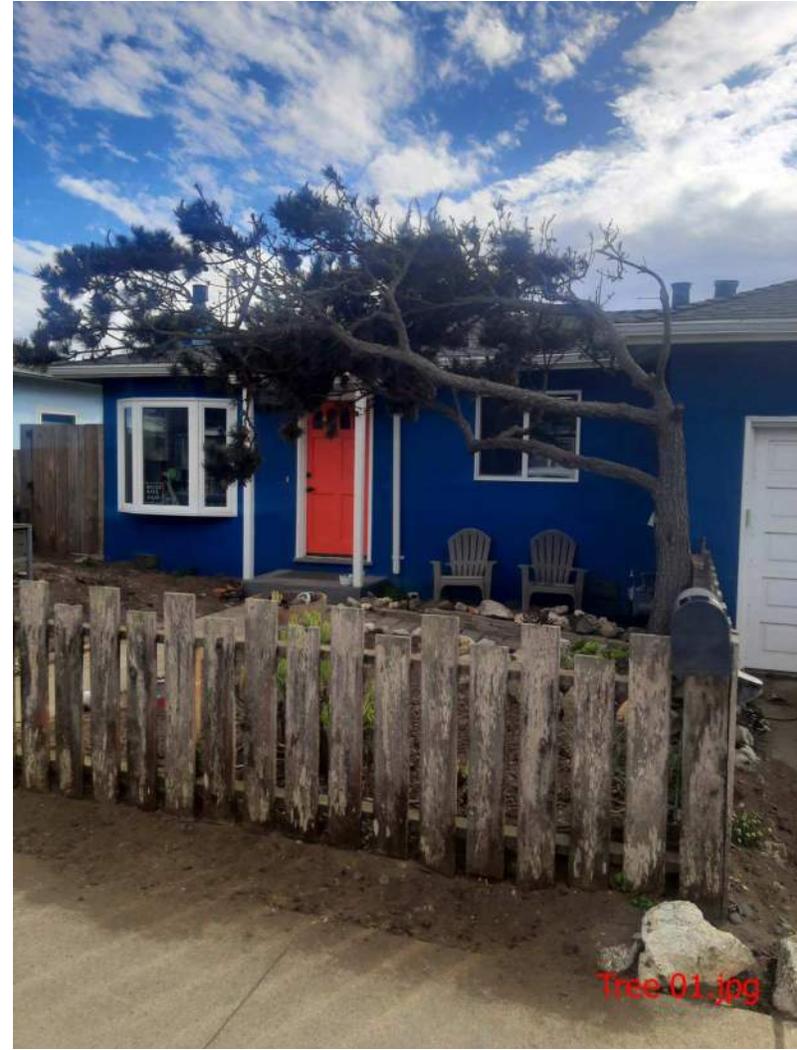
*Signed:* \_\_\_\_\_

*Certified Arborist MW-5597A*

*Date:* 12/21/23

[aaron@treemanagementexperts.com](mailto:aaron@treemanagementexperts.com)

Cell (847) 630-3599



Tree 01.jpg



Tree 02.jpg



Tree 03.jpg



Tree 04.jpg





Tree 09.jpg



Tree 10.jpg



Tree 11.jpg



Tree 12.jpg



Tree 13.jpg



Tree 14.jpg



Tree 15.jpg



Tree 16.jpg





Tree 21.jpg



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Tree 23.jpg



Tree 24.jpg



Tree 25.jpg



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Tree 28.jpg



Tree 29.jpg



Tree 30.jpg



Tree 31.jpg



Tree 32.jpg





Tree 37.jpg



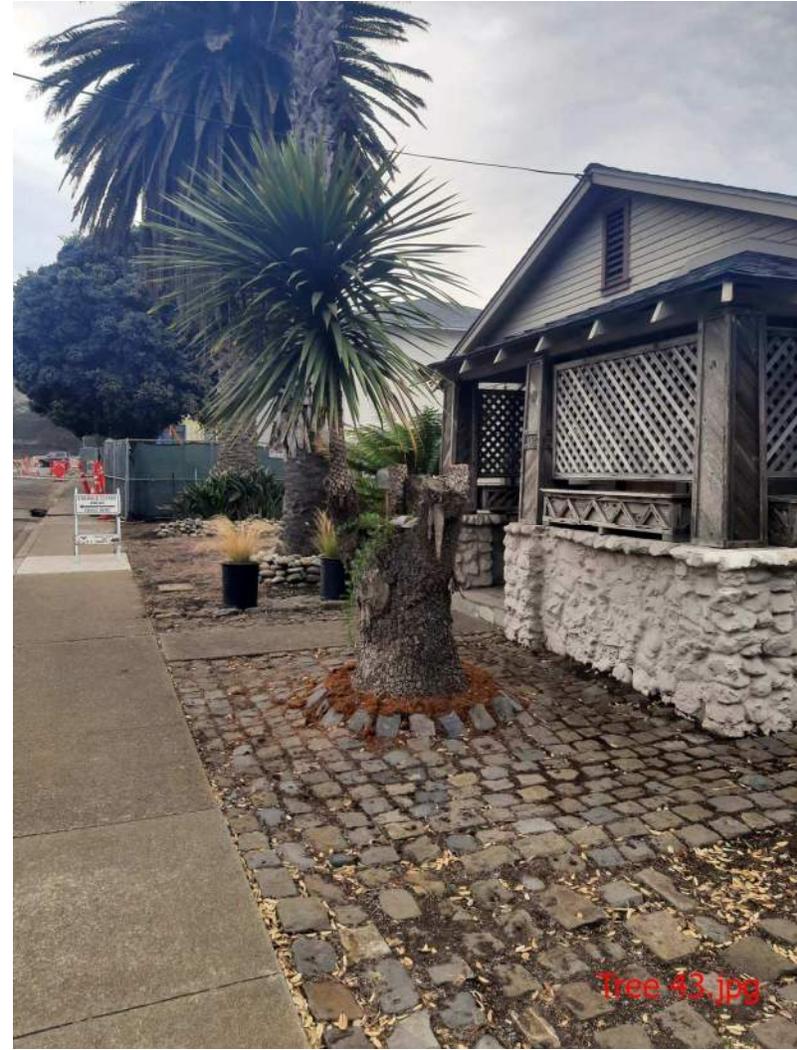
Tree 38.jpg



Tree 39.jpg



Tree 40.jpg





Tree 45.jpg



Tree 46.jpg



Tree 47.jpg





1003 West Cutting Boulevard, Suite 110  
Pt. Richmond, CA 94804  
(510) 215-3620 \* Fax (510) 215-2898



**SHARP PARK PDA  
PEDESTRIAN  
IMPROVEMENT  
PROJECT**

OWNER



151 MILAGRA DRIVE  
PACIFICA, CA 94044

NO.	DATE	DESCRIPTION

PROJECT NO: 1004.19.55  
DESIGNED BY: VL  
DRAWN BY: JL  
CHECKED BY: FH DATE 08/04/2023  
DATE: 08/31/2023

SHEET TITLE

**CARMEL AVENUE "C"  
13+50 TO "C" 17+50**

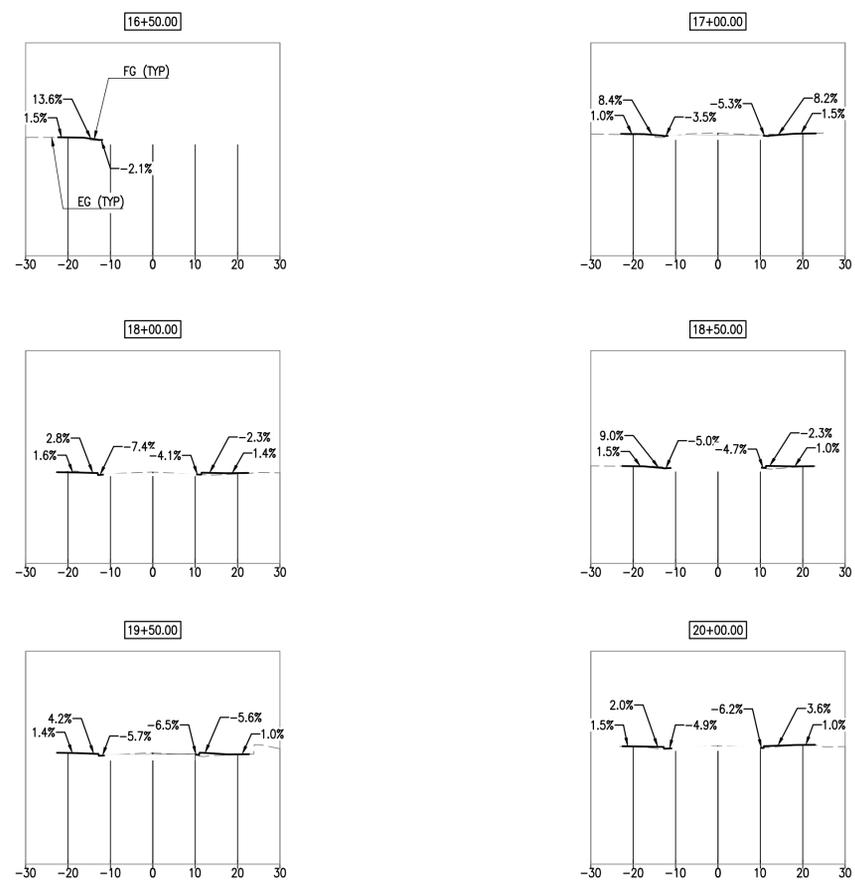
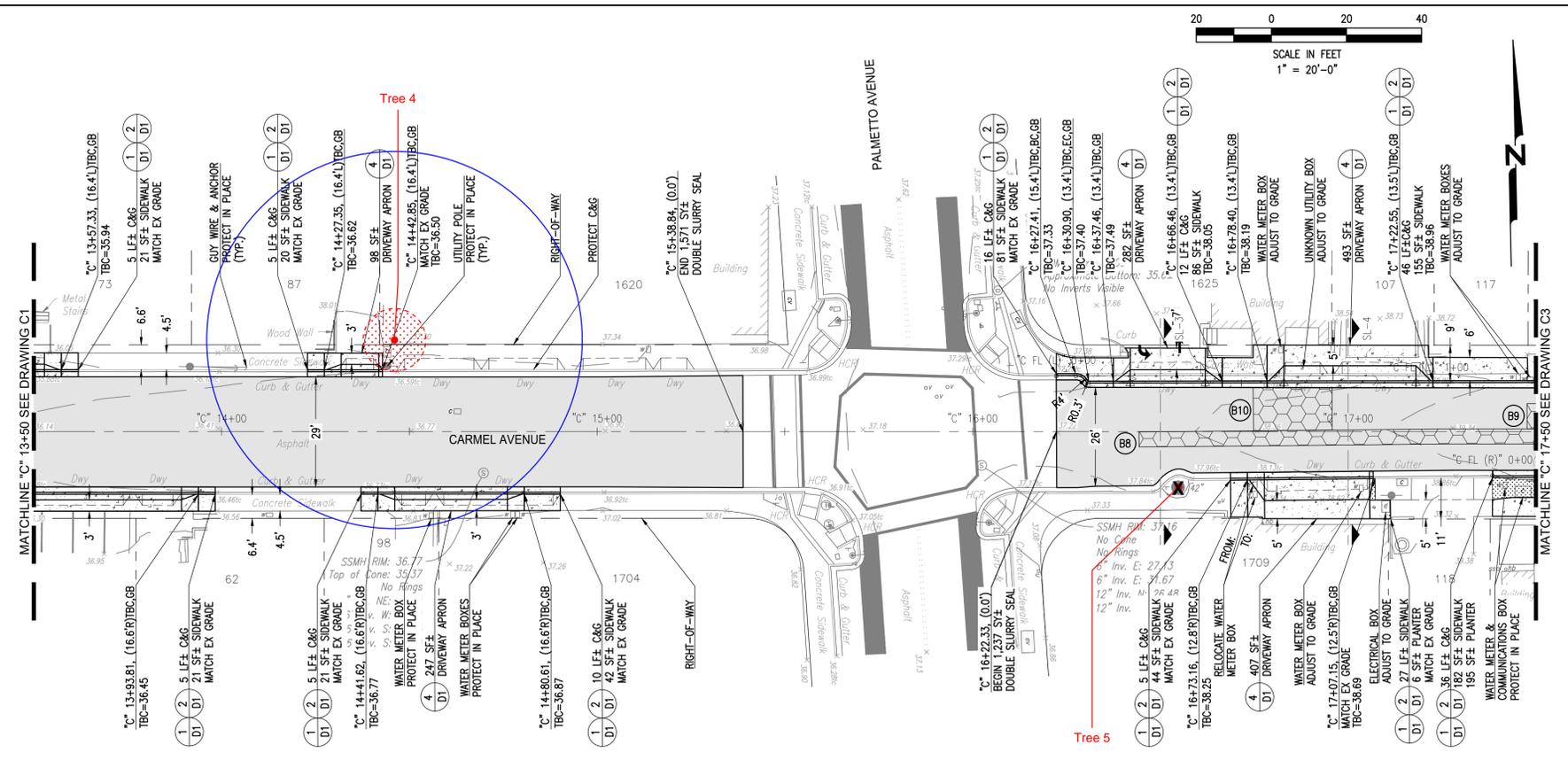
DRAWING  
**C2**

SHEET 4 OF 16

- CONSTRUCTION NOTES:**
- REMOVE ALL EXISTING TRAFFIC STRIPING, PAVEMENT MARKINGS, AND MARKERS PRIOR TO PLACEMENT OF SURFACE SEAL. CARE SHALL BE EXERCISED BY CONTRACTOR SO PAVEMENT IS NOT DAMAGED BY STRIPING REMOVAL.
  - MARKERS AND THERMOPLASTIC STRIPING AND MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST CALTRANS STANDARD SPECIFICATIONS AND CALIFORNIA MUTCD.
  - CONTRACTOR SHALL INVENTORY/FIELD LOCATE THE PAVEMENT STRIPING, MARKINGS, AND MARKERS SO THAT THE NEW PAVEMENT STRIPING AND MARKINGS CAN BE PLACED IN THEIR ORIGINAL LOCATION, EXCEPT AS DIRECTED BY THE ENGINEER, AFTER THE SURFACE SEAL WORK. SEE TECHNICAL SPECIFICATIONS FOR DETAILS.
  - DO NOT APPLY SURFACE SEAL TREATMENT OVER UTILITY COVERS, MONUMENT COVERS, OR GUTTERS. EDGE OF SURFACE SEAL SHALL BE NEAT AND STRAIGHT IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS.
  - PROTECT CONCRETE VALLEY GUTTERS DURING CONSTRUCTION.
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  - ALL BASE REPAIRS, SPOT REPAIRS, AND CRACK SEALING WORK SHALL BE COMPLETED PRIOR TO SURFACE SEAL WORK.
  - ALL C&G IS TYPE "A" UNLESS OTHERWISE NOTED. SEE DETAIL 2/D1.

**BASE REPAIRS (3-INCH DEPTH) (5/D1)**

STREET NAME	BASE REPAIR ID	DIRECTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
CARMEL AVENUE (PALMETTO AVENUE TO FRANCISCO BOULEVARD)	B8	EB	169	4	676
	B9	WB	10	6	60
	B10	WB	21	12	252
CARMEL AVENUE, STREET TOTAL AREA (SF)					988



- Tree Protection Legend**
- X High Risk Removal
  - 10x Tree Protection Zone
  - 50 Foot Offset Requiring Project Arborist Supervision

**Tree Management Experts  
Consulting Arborists**  
Certified Arborists, Certified Tree Risk Assessors  
Contractor's License No. 885953, D-49 Tree Service  
(415) 606-3610 Roy@treemanagementexperts.com

**65% SUBMITTAL  
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FOR REVIEW  
NOT FOR CONSTRUCTION  
DATE: 08/31/2023**



File: P:\Active Projects\Pacifico - 1004\2024.19.55 - Sharp Park Improvement\CAD\Sheet\C2.C1 - Carmel Avenue.dwg | Layout: C2 | Printed Aug 31, 2023 @ 4:53pm | D:\V\24.11 (URS Tech)



**SHARP PARK PDA  
PEDESTRIAN  
IMPROVEMENT  
PROJECT**

OWNER



151 MILAGRA DRIVE  
PACIFICA, CA 94044

NO.	DATE	DESCRIPTION

PROJECT NO: 1004.19.55

DESIGNED BY: VL

DRAWN BY: JL

CHECKED BY: FH DATE 08/04/2023

DATE: 08/31/2023

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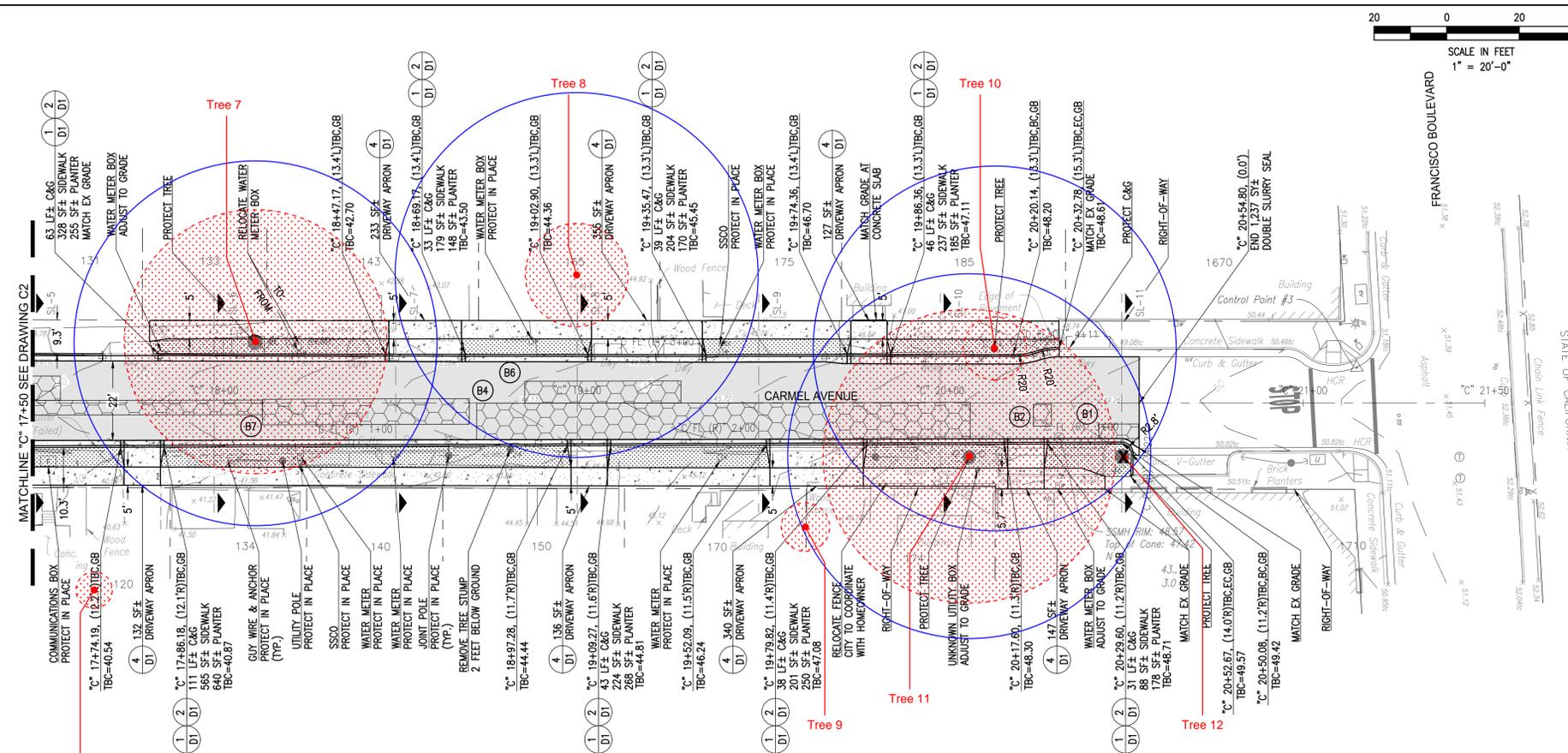
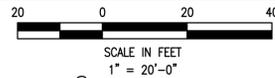
SHEET TITLE

**CARMEL AVENUE "C"  
17+50 TO "C" 20+55**

DRAWING

**C3**

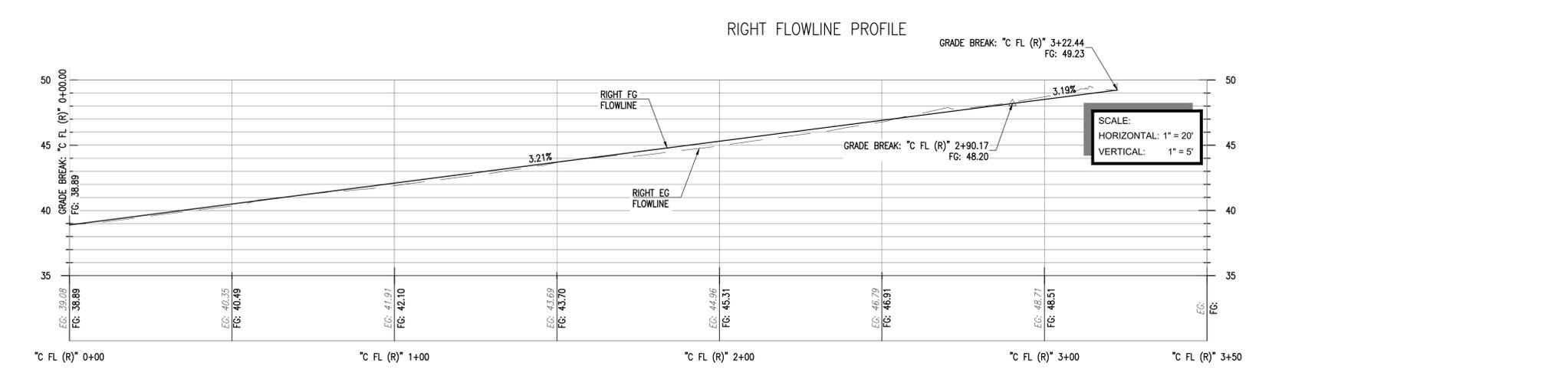
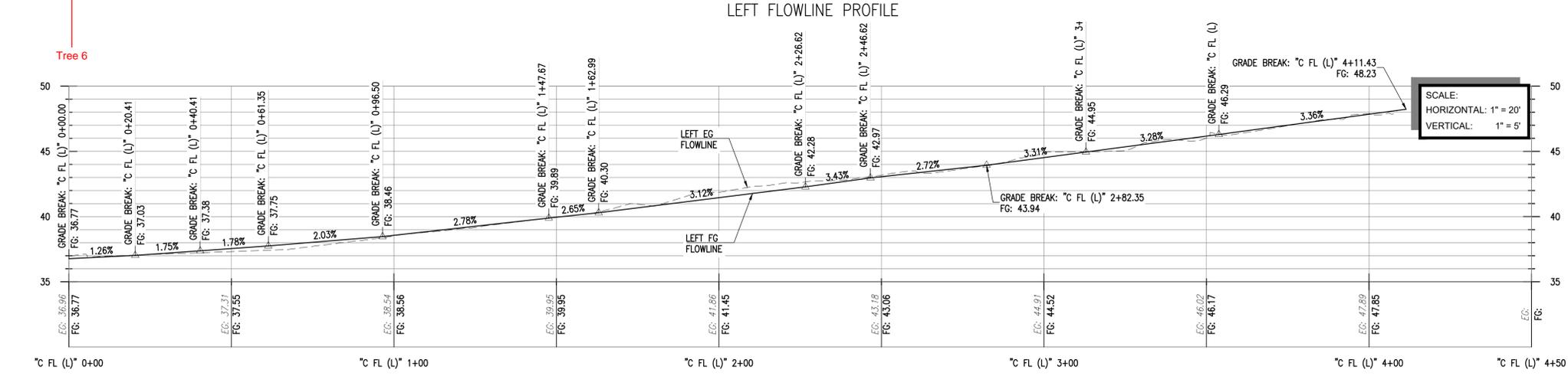
SHEET 5 OF 16



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**BASE REPAIRS (3-INCH DEPTH) 5/D1**

STREET NAME	BASE REPAIR ID	DIRECTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)	
CARMEL AVENUE (PALMETTO AVENUE TO FRANCISCO BOULEVARD)	B1	EB	11	4	44	
	B2	EB	5	6	30	
	B4	EB	136	10	1,360	
	B6	WB	43	6	258	
	B7	EB	57	7	399	
	CARMEL AVENUE, STREET TOTAL AREA (SF)					2,091



- Tree Protection Legend**
- X High Risk Removal
  - 10x Tree Protection Zone
  - 50 Foot Offset Requiring Project Arborist Supervision

**Tree Management Experts**  
Consulting Arborists  
Certified Arborists, Certified Tree Risk Assessors  
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(415) 606-3610 Roy@treemanagementexperts.com

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DATE: 08/31/2023**

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**SHARP PARK PDA  
PEDESTRIAN  
IMPROVEMENT  
PROJECT**

OWNER



151 MILAGRA DRIVE  
PACIFICA, CA 94044

NO.	DATE	DESCRIPTION

PROJECT NO: 1004.19.55  
DESIGNED BY: VL  
DRAWN BY: JL  
CHECKED BY: FH DATE 08/04/2023  
DATE: 08/31/2023

SHEET TITLE  
**PALOMA AVENUE "P"  
10+00 TO "P" 13+50**

DRAWING  
**C4**  
SHEET 6 OF 16

- CONSTRUCTION NOTES:**
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- STRIPING KEYNOTES:**
- INSTALL CALTRANS PAVEMENT MARKING "STOP"; SEE DETAIL 2/D3.
  - INSTALL PAVEMENT MARKING BIKE BLVD; SEE DETAIL 1/D3.
  - INSTALL CALTRANS TYPE D TWO-WAY BLUE MARKER; SEE DETAIL 3/D3.

**BASE REPAIRS** (5/D1)

STREET NAME	BASE REPAIR ID	DIRECTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
PALOMA AVENUE (PALMETTO AVE TO BEACH BOULEVARD)	B1	WB	14	7	98
PALOMA AVENUE, STREET TOTAL AREA (SF)					98

**SPOT REPAIRS** (6/D1)

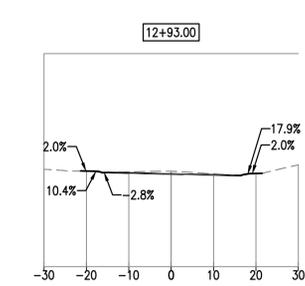
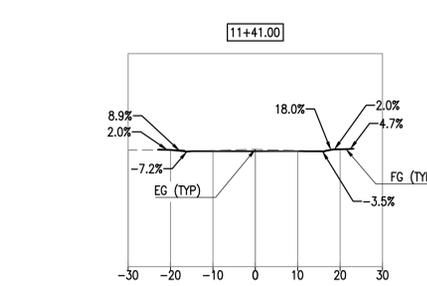
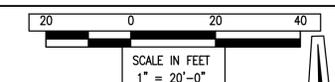
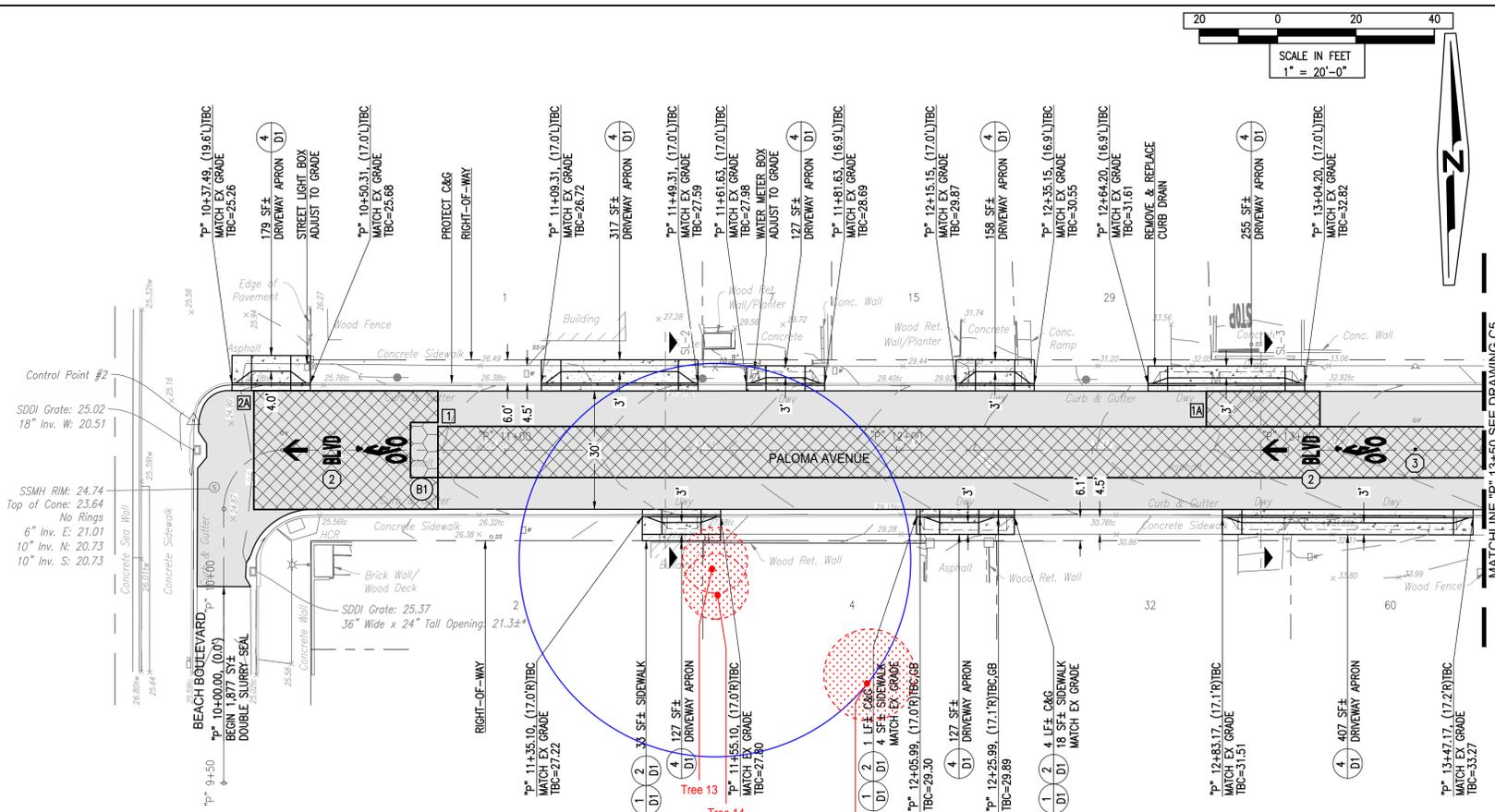
STREET NAME	SPOT REPAIR ID	DIRECTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
PALOMA AVENUE (PALMETTO AVE TO BEACH BLVD)	1	WB	333	13	4,329
	1A	WB	9	29	261
	2A	WB	47	30	1,410
PALOMA AVENUE, STREET TOTAL AREA (SF)					6,000

**Tree Protection Legend**

- X High Risk Removal
- 10x Tree Protection Zone
- 50 Foot Offset Requiring Project Arborist Supervision

**Tree Management Experts**  
Consulting Arborists  
Certified Arborists, Certified Tree Risk Assessors  
Contractor's License No. 888953, D-49 Tree Service  
(415) 606-3610 Roy@treemanagementexperts.com

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NOT FOR CONSTRUCTION  
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**SHARP PARK PDA  
PEDESTRIAN  
IMPROVEMENT  
PROJECT**

OWNER



151 MILAGRA DRIVE  
PACIFICA, CA 94044

NO.	DATE	DESCRIPTION
PROJECT NO:	1004.19.55	
DESIGNED BY:	VL	
DRAWN BY:	JL	
CHECKED BY:	FH	DATE 08/04/2023
DATE:	08/31/2023	

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SHEET TITLE

**PALOMA AVENUE "P"  
13+50 TO "P" 17+50**

DRAWING

**C5**

SHEET 7 OF 16

- CONSTRUCTION NOTES:**
- REMOVE ALL EXISTING TRAFFIC STRIPING, PAVEMENT MARKINGS, AND MARKERS PRIOR TO PLACEMENT OF SURFACE SEAL. CARE SHALL BE EXERCISED BY CONTRACTOR SO PAVEMENT IS NOT DAMAGED BY STRIPING REMOVAL.
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- STRIPING KEYNOTES:**
- INSTALL CALTRANS PAVEMENT MARKING "STOP"; SEE DETAIL 2/D3.
  - INSTALL PAVEMENT MARKING BIKE BLVD; SEE DETAIL 1/D3.
  - INSTALL CALTRANS TYPE D TWO-WAY BLUE MARKER; SEE DETAIL 3/D3.

BASE REPAIRS					
STREET NAME	BASE REPAIR ID	DIRECTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
PALOMA AVENUE (PALMETTO AVENUE TO BEACH BOULEVARD)	B1	WB	23	8	184
PALOMA AVENUE, STREET TOTAL AREA (SF)					184

SPOT REPAIRS					
STREET NAME	SPOT REPAIR ID	DIRECTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
PALOMA AVENUE (PALMETTO AVE TO BEACH BLVD)	2	WB	149	12	1,788
	3	WB	62	14	868
PALOMA AVENUE, STREET TOTAL AREA (SF)					2,656

**Tree Protection Legend**

- High Risk Removal
- 10x Tree Protection Zone
- 50 Foot Offset Requiring Project Arborist Supervision

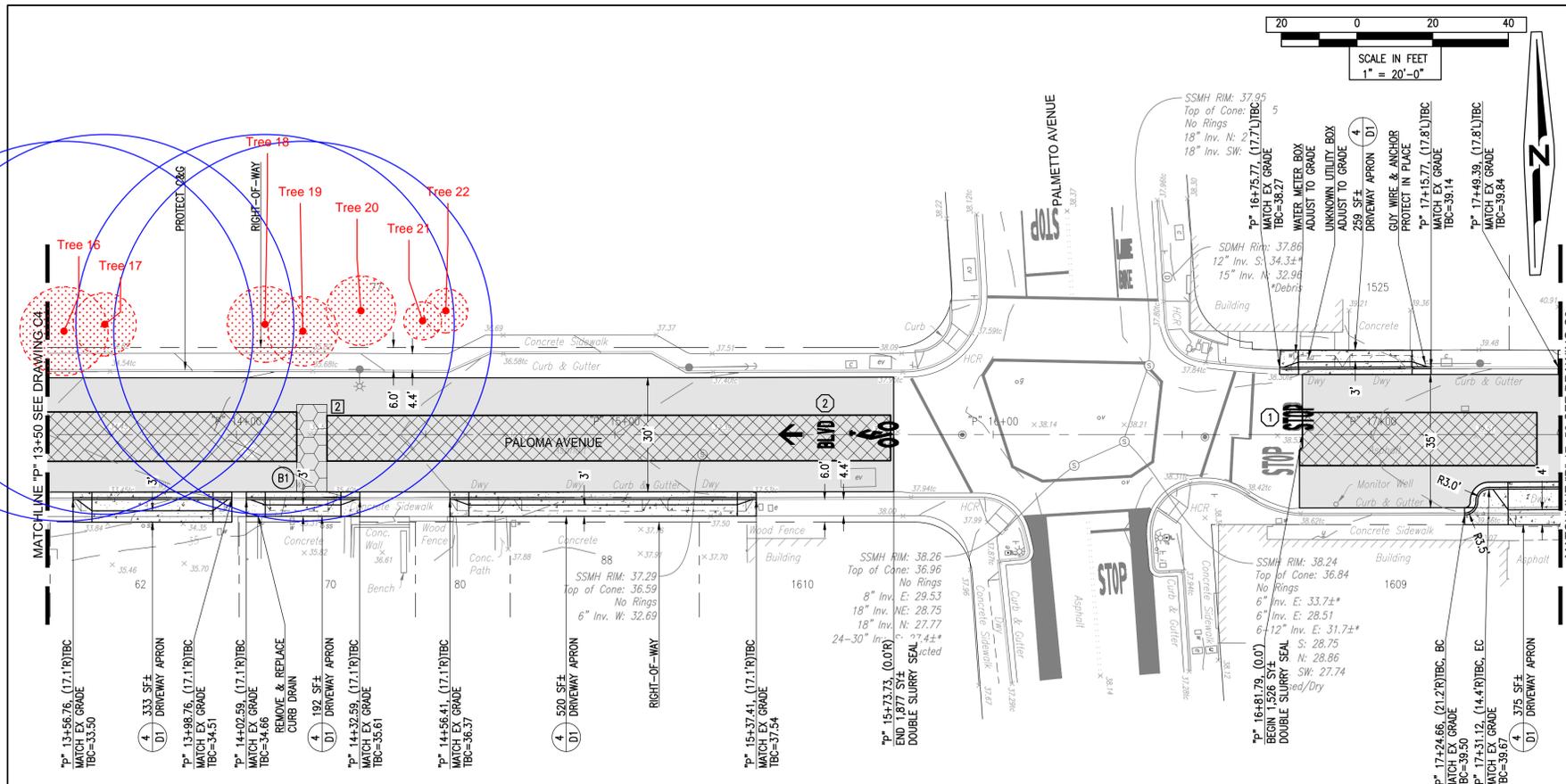
**Tree Management Experts**  
Consulting Arborists

Certified Arborists, Certified Tree Risk Assessors  
Contractor's License No. 885953, D-49 Tree Service  
(415) 606-3610 Roy@treemanagementexperts.com

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**SHARP PARK PDA  
PEDESTRIAN  
IMPROVEMENT  
PROJECT**

**CITY OF PACIFICA**  
151 MILAGRA DRIVE  
PACIFICA, CA 94044

NO.	DATE	DESCRIPTION

PROJECT NO: 1004.19.55  
DESIGNED BY: JL  
DRAWN BY: VL  
CHECKED BY: FH DATE 08/04/2023  
DATE: 08/31/2023

SHEET TITLE  
**PALOMA AVENUE "P"  
17+50 TO "P" 21+65**

DRAWING  
**C6**  
SHEET 8 OF 16

- CONSTRUCTION NOTES:**
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  - INSTALL PAVEMENT MARKING BIKE BLVD; SEE DETAIL 1/D3.
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**BASE REPAIRS** (5/D1)

STREET NAME	BASE REPAIR ID	DIRECTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
PALOMA AVENUE (PALMETTO AVENUE TO FRANCISCO BOULEVARD)	B2	EB	13	4	52
	B3	EB	38	8	304
	B4	WB	7	11	77
	B5	WB	5	12	60
	B6	WB	27	15	405
PALOMA AVENUE, STREET TOTAL AREA (SF)					898

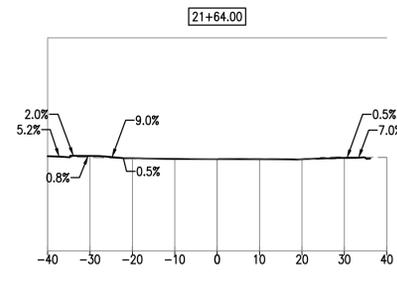
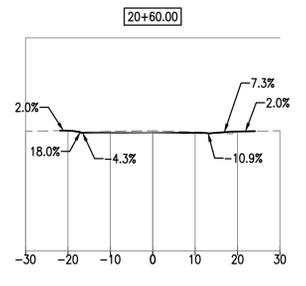
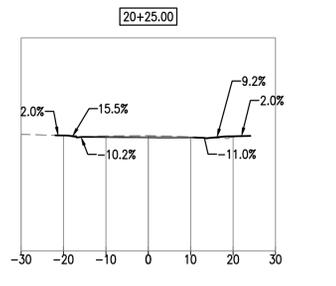
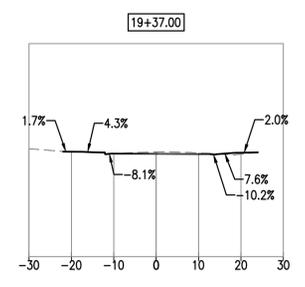
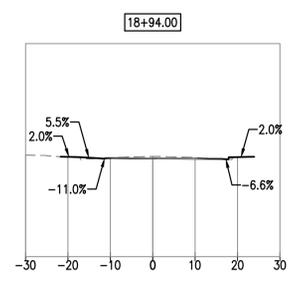
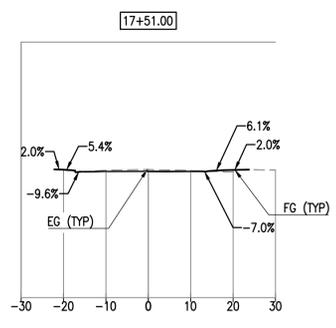
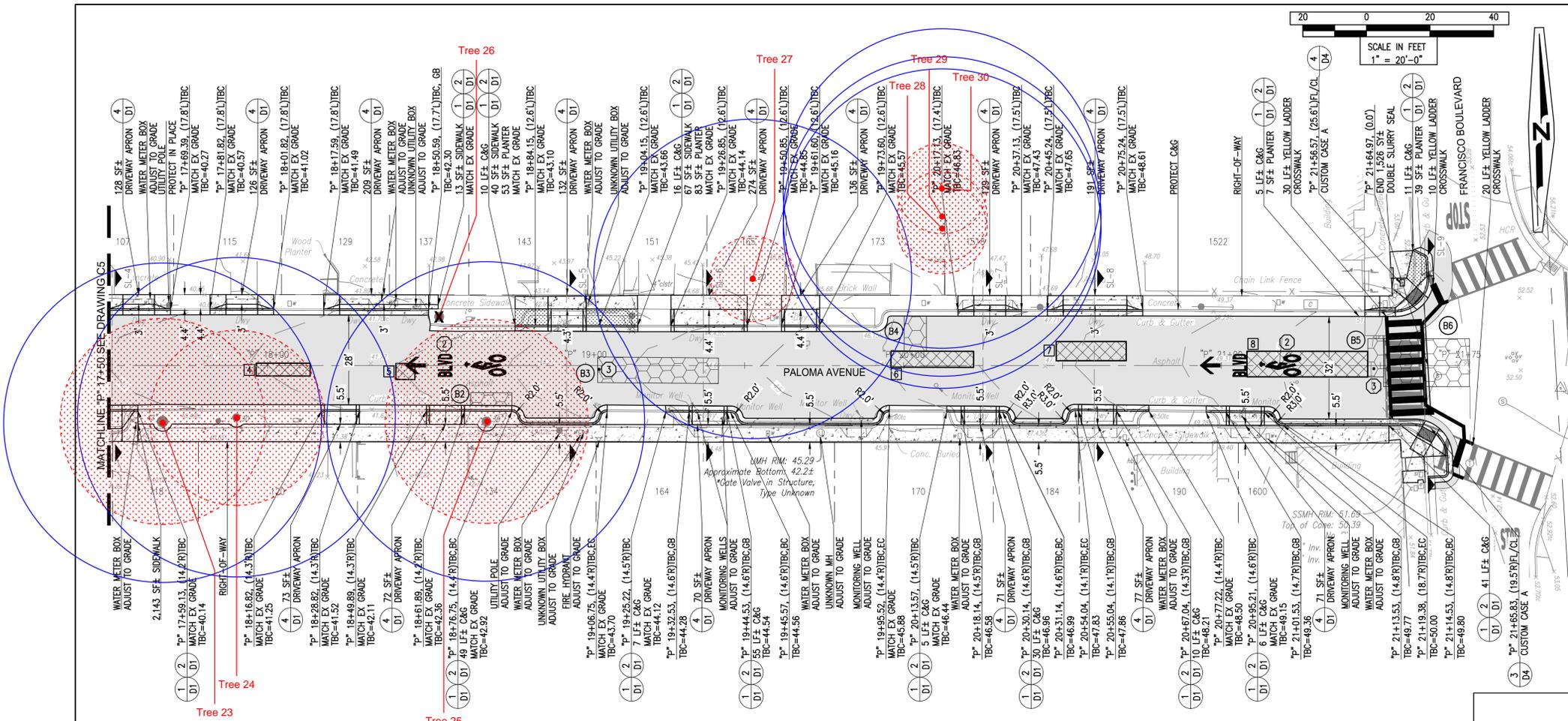
**SPOT REPAIRS** (6/D1)

STREET NAME	SPOT REPAIR ID	DIRECTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
PALOMA AVENUE (PALMETTO AVENUE TO FRANCISCO BOULEVARD)	4	EB	17	4	68
	5	EB	6	5	30
	6	WB	26	5	130
	7	WB	22	6	132
	8	EB	38	6	228
PALOMA AVENUE, STREET TOTAL AREA (SF)					588

- Tree Protection Legend**
- X High Risk Removal
  - 10x Tree Protection Zone
  - 50 Foot Offset Requiring Project Arborist Supervision

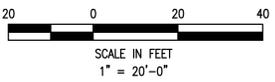
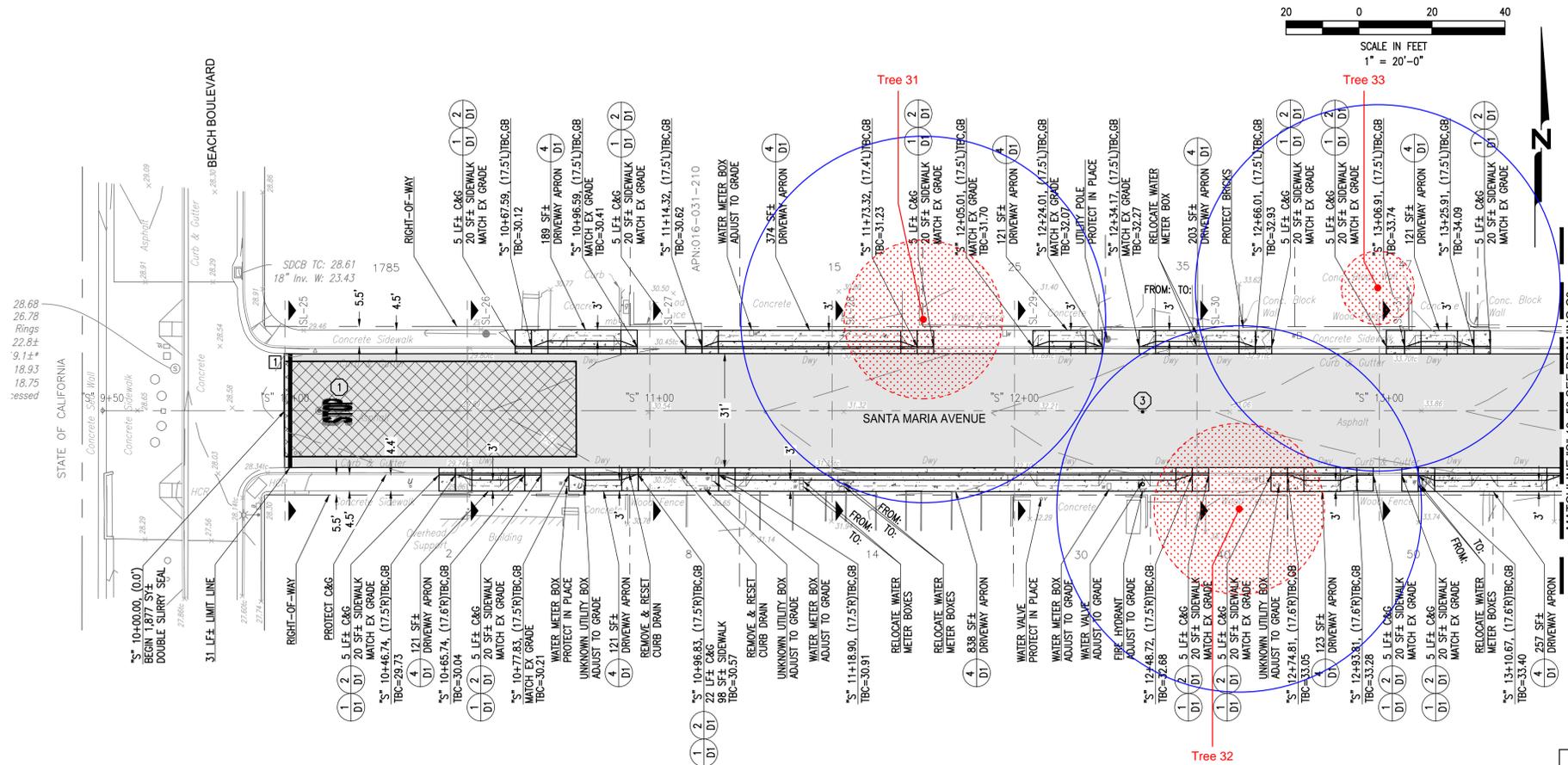
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  - CONTRACTOR SHALL INVENTORY/FIELD LOCATE THE PAVEMENT STRIPING, MARKINGS, AND MARKERS SO THAT THE NEW PAVEMENT STRIPING AND MARKINGS CAN BE PLACED IN THEIR ORIGINAL LOCATION, EXCEPT AS DIRECTED BY THE ENGINEER, AFTER THE SURFACE SEAL WORK. SEE TECHNICAL SPECIFICATIONS FOR DETAILS.
  - DO NOT APPLY SURFACE SEAL TREATMENT OVER UTILITY COVERS, MONUMENT COVERS, OR GUTTERS. EDGE OF SURFACE SEAL SHALL BE NEAT AND STRAIGHT IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS.
  - PROTECT CONCRETE VALLEY GUTTERS DURING CONSTRUCTION.
  - FINAL LOCATIONS AND SIZES OF BASE/SPOT REPAIRS WILL BE MARKED AND RECORDED FOR PAYMENT BY THE ENGINEER, CONTRACTOR, AND CITY REPRESENTATIVE DURING A FIELD VISIT PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL.
  - ALL BASE REPAIRS, SPOT REPAIRS, AND CRACK SEALING WORK SHALL BE COMPLETED PRIOR TO SURFACE SEAL WORK.
  - ALL C&G IS TYPE "A" UNLESS OTHERWISE NOTED. SEE DETAIL 2/D1.

- STRIPING KEYNOTES:**
- INSTALL CALTRANS PAVEMENT MARKING "STOP"; SEE DETAIL 2/D3.
  - INSTALL PAVEMENT MARKING BIKE BLVD; SEE DETAIL 1/D3.
  - INSTALL CALTRANS TYPE D TWO-WAY BLUE MARKER; SEE DETAIL 3/D3.

SPOT REPAIRS (6 D1)					
STREET NAME	SPOT REPAIR ID	DIRECTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
SANTA MARIA AVENUE (PALMETTO AVENUE TO BEACH BOULEVARD)	1	WB	80	26	2,080
SANTA MARIA AVENUE, STREET TOTAL AREA (SF)					2,080

- Tree Protection Legend**
- X High Risk Removal
  - 10x Tree Protection Zone
  - 50 Foot Offset Requiring Project Arborist Supervision

**Tree Management Experts**  
 Consulting Arborists  
 Certified Arborists, Certified Tree Risk Assessors  
 Contractor's License No. 885953, D-49 Tree Service  
 (415) 606-3610 Roy@treemanagementexperts.com



**65% SUBMITTAL**  
**PRELIMINARY**  
**FOR REVIEW**  
**NOT FOR CONSTRUCTION**  
 DATE: 08/31/2023

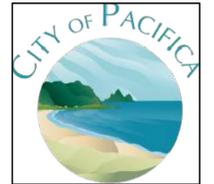


**NCE**  
 1003 West Cutting Boulevard, Suite 110  
 Pt. Richmond, CA 94804  
 (510) 215-3620 \* Fax (510) 215-2898



**SHARP PARK PDA  
 PEDESTRIAN  
 IMPROVEMENT  
 PROJECT**

**CITY OF PACIFICA**



151 MILAGRA DRIVE  
 PACIFICA, CA 94044

NO.	DATE	DESCRIPTION
PROJECT NO:	1004.19.55	
DESIGNED BY:	VL	
DRAWN BY:	JL	
CHECKED BY:	FH	DATE 08/04/2023
DATE:	08/31/2023	

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SHEET TITLE

**SANTA MARIA AVENUE  
 "S" 10+00 TO "S" 13+50**

DRAWING

**C7**

SHEET 9 OF 16



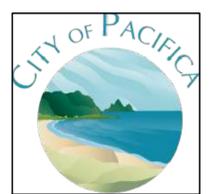


1003 West Cutting Boulevard, Suite 110  
Pt. Richmond, CA 94804  
(510) 215-3620 \* Fax (510) 215-2898



**SHARP PARK PDA  
PEDESTRIAN  
IMPROVEMENT  
PROJECT**

OWNER



151 MILAGRA DRIVE  
PACIFICA, CA 94044

NO.	DATE	DESCRIPTION

PROJECT NO: 1004.19.55  
DESIGNED BY: JL  
DRAWN BY: VL  
CHECKED BY: FH DATE: 08/04/2023  
DATE: 08/31/2023

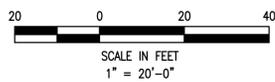
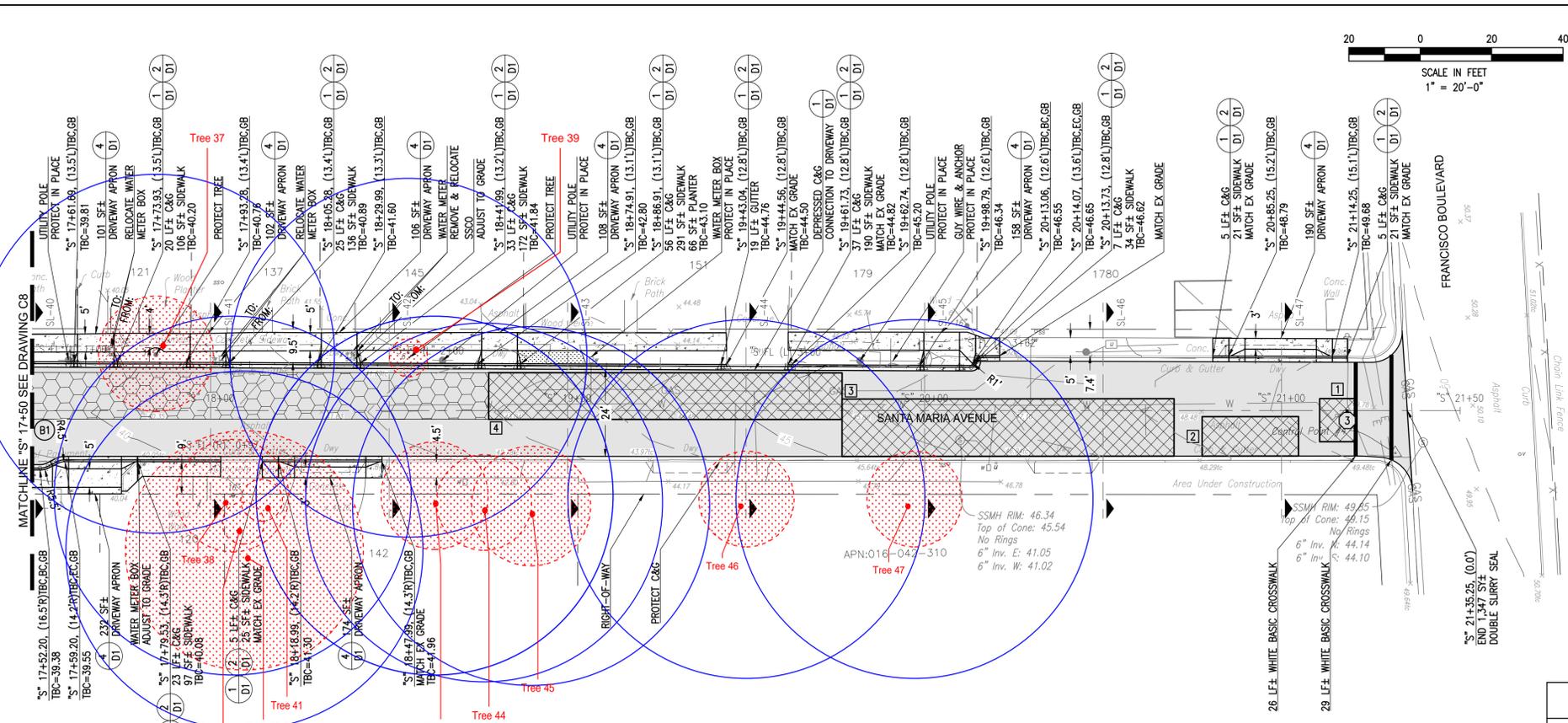
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SHEET TITLE

**SANTA MARIA AVENUE  
"S" 17+50 TO "S" 21+35**

DRAWING  
**C9**

SHEET 11 OF 16



STATE OF CALIFORNIA

- CONSTRUCTION NOTES:**
- REMOVE ALL EXISTING TRAFFIC STRIPING, PAVEMENT MARKINGS, AND MARKERS PRIOR TO PLACEMENT OF SURFACE SEAL. CARE SHALL BE EXERCISED BY CONTRACTOR SO PAVEMENT IS NOT DAMAGED BY STRIPING REMOVAL.
  - MARKERS AND THERMOPLASTIC STRIPING AND MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST CALTRANS STANDARD SPECIFICATIONS AND CALIFORNIA MUTCD.
  - CONTRACTOR SHALL INVENTORY/FIELD LOCATE THE PAVEMENT STRIPING, MARKINGS, AND MARKERS SO THAT THE NEW PAVEMENT STRIPING AND MARKINGS CAN BE PLACED IN THEIR ORIGINAL LOCATION, EXCEPT AS DIRECTED BY THE ENGINEER, AFTER THE SURFACE SEAL WORK. SEE TECHNICAL SPECIFICATIONS FOR DETAILS.
  - DO NOT APPLY SURFACE SEAL TREATMENT OVER UTILITY COVERS, MONUMENT COVERS, OR GUTTERS. EDGE OF SURFACE SEAL SHALL BE NEAT AND STRAIGHT IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS.
  - PROTECT CONCRETE VALLEY GUTTERS DURING CONSTRUCTION.
  - FINAL LOCATIONS AND SIZES OF BASE/SPOT REPAIRS WILL BE MARKED AND RECORDED FOR PAYMENT BY THE ENGINEER, CONTRACTOR, AND CITY REPRESENTATIVE DURING A FIELD VISIT PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL.
  - ALL BASE REPAIRS, SPOT REPAIRS, AND CRACK SEALING WORK SHALL BE COMPLETED PRIOR TO SURFACE SEAL WORK.
  - ALL C&G IS TYPE "A" UNLESS OTHERWISE NOTED. SEE DETAIL 2/D1.

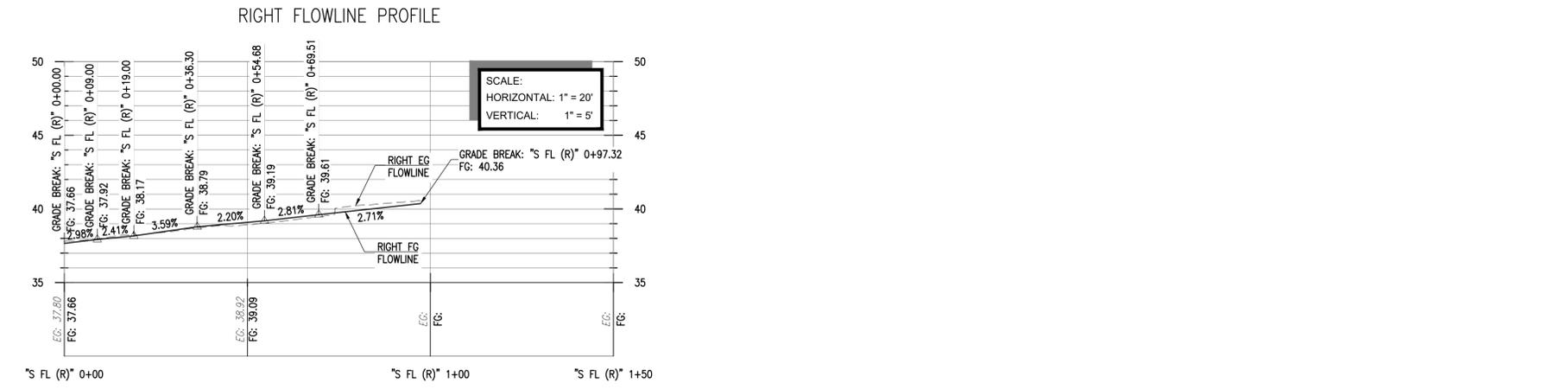
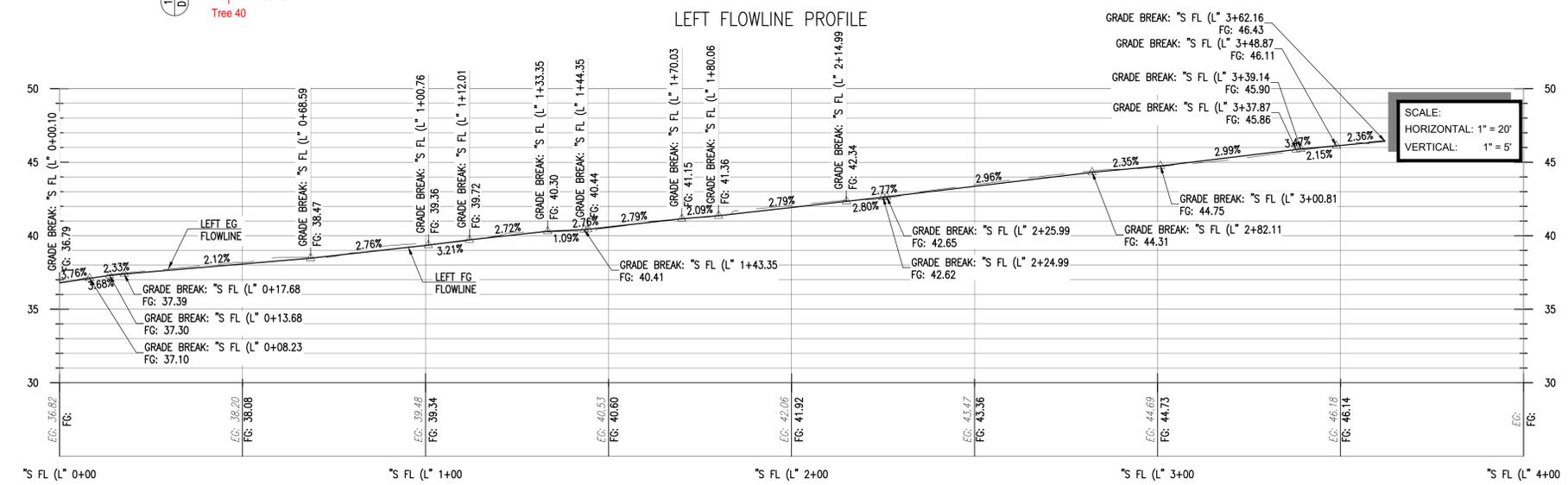
- STRIPING KEYNOTES:**
- INSTALL CALTRANS PAVEMENT MARKING "STOP"; SEE DETAIL 2/D3.
  - INSTALL PAVEMENT MARKING BIKE BLVD; SEE DETAIL 1/D3.
  - INSTALL CALTRANS TYPE D TWO-WAY BLUE MARKER; SEE DETAIL 3/D3.

**BASE REPAIRS (3-INCH DEPTH)** (5/D1)

STREET NAME	BASE REPAIR ID	DIRECTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
SANTA MARIA AVENUE (PALMETTO AVENUE TO FRANCISCO BOULEVARD)	B1*	WB	128	13	1,664
SANTA MARIA AVENUE, STREET TOTAL AREA (SF)					1,664

**SPOT REPAIRS** (6/D1)

STREET NAME	SPOT REPAIR ID	DIRECTION	LENGTH (FT)	WIDTH (FT)	AREA (SF)
SANTA MARIA AVENUE (PALMETTO AVENUE TO FRANCISCO BOULEVARD)	1	EB	10	12	120
	2	EB	27	11	297
	3	EB	93	16	1,488
	4*	WB	99	13	1,287
SANTA MARIA AVENUE, STREET TOTAL AREA (SF)					3,192



**65% SUBMITTAL  
PRELIMINARY  
FOR REVIEW  
NOT FOR CONSTRUCTION  
DATE: 08/31/2023**



File: P:\Active Projects\Pacificas - 1004.19.55 - Sharp Park Improvement\CAD\Sheet\C9\_C7 - Santa Maria Avenue.dwg | Layout: C9 | Printed: Aug 31, 2023 @ 4:55pm | 10.0, 24.15 (MPL, Text)

# ISA Basic Tree Risk Assessment Form

Client City of Pacifica Date 7/3/23 Time 1 PM  
 Address/Tree location 1709 Palmetto (Carmel frontage) Tree no. n/a Sheet 1 of 1  
 Tree species Hesperocyparis macrocarpa dbh 42.2" Height 50' Crown spread dia. 30'  
 Assessor(s) Roy Leggitt Tools used d-tape, visual Time frame 1 year

## Target Assessment

Target number	Target description	Target protection	Target zone			Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
			Target within drip line	Target within 1x Ht.	Target within 1.5x Ht.			
1	Cars / street	None	X			4	No	No
2	High voltage	None	X			4	No	No
3	Building	None	X			4	No	No
4								

## Site Factors

History of failures Branches: (2) 12" diameter, (6) 6" diameter (recent) Topography Flat  Slope  % Aspect \_\_\_\_\_  
 Site changes None  Grade change  Site clearing  Changed soil hydrology  Root cuts  Describe road, sidewalk, utilities  
 Soil conditions Limited volume  Saturated  Shallow  Compacted  Pavement over roots  100 % Describe street, sidewalk  
 Prevailing wind direction NW Common weather Strong winds  Ice  Snow  Heavy rain  Describe Constant wind, seasonal storms

## Tree Health and Species Profile

Vigor Low  Normal  High  Foliage None (seasonal)  None (dead)  Normal 70 % Chlorotic \_\_\_\_\_ % Necrotic 30 %  
 Pests/Biotic \_\_\_\_\_ Abiotic \_\_\_\_\_  
 Species failure profile Branches  Trunk  Roots  Describe branch failures very common, trunk and root failures common

## Load Factors

Wind exposure Protected  Partial  Full  Wind funneling  Relative crown size Small  Medium  Large   
 Crown density Sparse  Normal  Dense  Interior branches Few  Normal  Dense  Vines/Mistletoe/Moss  3 large shrubs in lower 10 feet of trunk  
 Recent or expected change in load factors No

## Tree Defects and Conditions Affecting the Likelihood of Failure

### — Crown and Branches —

Unbalanced crown  LCR 50 % Cracks  Lightning damage   
 Dead twigs/branches  \_\_\_\_\_ % overall Max. dia. \_\_\_\_\_ Included bark   
 Broken/Hangers Number \_\_\_\_\_ Max. dia. \_\_\_\_\_ Weak attachments  Cavity/Nest hole \_\_\_\_\_ % circ.  
 Over-extended branches  Previous branch failures  12", 6" Similar branches present   
 Pruning history Dead/Missing bark  Cankers/Galls/Burls  Sapwood damage/decay   
 Crown cleaned  Thinned  Raised  Conks  Heartwood decay  Likely  
 Reduced  Topped  Lion-tailed  Response growth Poor  
 Flush cuts  Other \_\_\_\_\_

### End-heavy branches

Condition(s) of concern \_\_\_\_\_

Part Size 6" Fall Distance 45'  
 Load on defect N/A  Minor  Moderate  Significant   
 Likelihood of failure Improbable  Possible  Probable  Imminent

Part Size \_\_\_\_\_ Fall Distance \_\_\_\_\_  
 Load on defect N/A  Minor  Moderate  Significant   
 Likelihood of failure Improbable  Possible  Probable  Imminent

### — Trunk —

Dead/Missing bark  Abnormal bark texture/color   
 Codominant stems  Included bark  Cracks   
 Sapwood damage/decay  Cankers/Galls/Burls  Sap ooze   
 Lightning damage  Heartwood decay  Conks/Mushrooms   
 Cavity/Nest hole \_\_\_\_\_ % circ. Depth \_\_\_\_\_ Poor taper   
 Lean 17 ° Corrected? No  
 Response growth Very poor  
 Condition(s) of concern Trunk failure  
 Part Size 42.2" Fall Distance 50'  
 Load on defect N/A  Minor  Moderate  Significant   
 Likelihood of failure Improbable  Possible  Probable  Imminent

### — Roots and Root Collar —

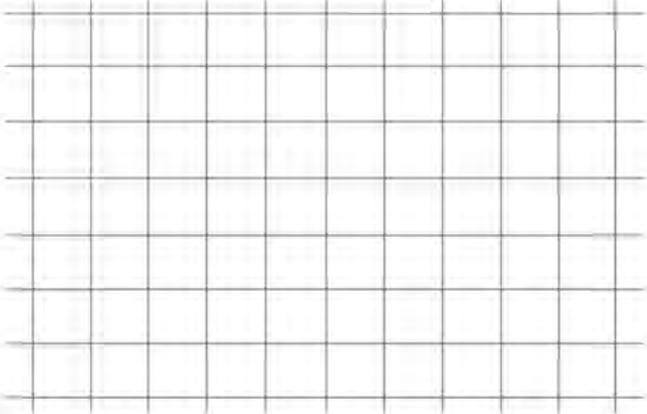
Collar buried/Not visible  Depth 12" (est) Stem girdling   
 Dead  Decay  Likely Conks/Mushrooms   
 Ooze  Cavity  15 % circ.  
 Cracks  Cut/Damaged roots  Distance from trunk 0"  
 Root plate lifting  Probably Soil weakness   
 Response growth Very poor  
 Condition(s) of concern Uprooting  
 Part Size 42.2" Fall Distance 50'  
 Load on defect N/A  Minor  Moderate  Significant   
 Likelihood of failure Improbable  Possible  Probable  Imminent

**Risk Categorization**

Target <i>(Target number or description)</i>	Tree part	Condition(s) of concern	Likelihood											Consequences				Risk rating <i>(from Matrix 2)</i>	
			Failure				Impact				Failure & Impact <i>(from Matrix 1)</i>			Negligible	Minor	Significant	Severe		
			Improbable	Possible	Probable	Imminent	Very low	Low	Medium	High	Unlikely	Somewhat	Likely						Very likely
Cars/Street	Branch	End-heavy branches				X					X				X			X	
High voltage						X	X				X							X	
Building						X	X				X							X	
Cars/Street	Trunk / Stem	Stem Failure		X						X			X				X		
High voltage				X						X			X					X	
Building				X							X			X					X
Cars/Street	Whole Tree	Uprooting		X						X			X				X		
High voltage				X						X			X					X	
Building				X				X				X							X

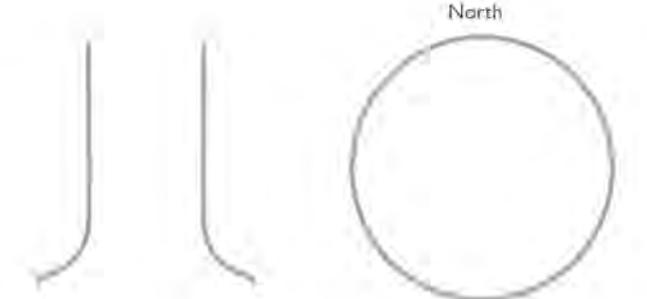
Matrix 1. Likelihood matrix.

Likelihood of Failure	Likelihood of Impact			
	Very low	Low	Medium	High
Imminent	Unlikely	Somewhat likely	Likely	Very likely
Probable	Unlikely	Unlikely	Somewhat likely	Likely
Possible	Unlikely	Unlikely	Unlikely	Somewhat likely
Improbable	Unlikely	Unlikely	Unlikely	Unlikely



Matrix 2. Risk rating matrix.

Likelihood of Failure & Impact	Consequences of Failure			
	Negligible	Minor	Significant	Severe
Very likely	Low	Moderate	High	Extreme
Likely	Low	Moderate	High	High
Somewhat likely	Low	Low	Moderate	Moderate
Unlikely	Low	Low	Low	Low



Notes, explanations, descriptions

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**Mitigation options**

1. Remove tree. Residual risk None
2. \_\_\_\_\_ Residual risk \_\_\_\_\_
3. \_\_\_\_\_ Residual risk \_\_\_\_\_
4. \_\_\_\_\_ Residual risk \_\_\_\_\_

Overall tree risk rating      Low     Moderate     High     Extreme

Overall residual risk    None     Low     Moderate     High     Extreme     Recommended inspection interval    N/A

Data  Final     Preliminary    Advanced assessment needed  No     Yes-Type/Reason \_\_\_\_\_

Inspection limitations  None     Visibility     Access     Vines     Root collar buried    Describe None relevant to determination



137 Paloma



137 Paloma



137 Paloma



137 Paloma



137 Paloma



137 Paloma

# ISA Basic Tree Risk Assessment Form

Client City of Pacifica Date 7/3/23 Time 1 PM  
 Address/Tree location 137 Paloma Tree no. n/a Sheet 1 of 1  
 Tree species Hesperocyparis macrocarpa dbh 49.1" Height 45' Crown spread dia. 50'  
 Assessor(s) Roy Leggitt Tools used d-tape, visual Time frame 1 year

## Target Assessment

Target number	Target description	Target protection	Target zone			Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
			Target within drip line	Target within 1x Ht.	Target within 1.5x Ht.			
1	Cars / street	None	X			4	No	No
2	High voltage	None	X			4	No	No
3	House	None	X			4	No	No
4								

## Site Factors

History of failures Several 6" diameter and many smaller branches Topography Flat  Slope  % Aspect       
 Site changes None  Grade change  Site clearing  Changed soil hydrology  Root cuts  Describe road, driveway, utilities  
 Soil conditions Limited volume  Saturated  Shallow  Compacted  Pavement over roots  75 % Describe street, driveway, sidewalk  
 Prevailing wind direction NW Common weather Strong winds  Ice  Snow  Heavy rain  Describe Constant wind, seasonal storms

## Tree Health and Species Profile

Vigor Low  Normal  High  Foliage None (seasonal)  None (dead)  Normal 95 % Chlorotic      % Necrotic 5 %  
 Pests/Biotic      Abiotic       
 Species failure profile Branches  Trunk  Roots  Describe branch failures very common, trunk and root failures common

## Load Factors

Wind exposure Protected  Partial  Full  Wind funneling  Relative crown size Small  Medium  Large   
 Crown density Sparse  Normal  Dense  Interior branches Few  Normal  Dense  Vines/Mistletoe/Moss  No  
 Recent or expected change in load factors No

## Tree Defects and Conditions Affecting the Likelihood of Failure

### — Crown and Branches —

Unbalanced crown  LCR 50 % Cracks  Lightning damage   
 Dead twigs/branches  % overall Max. dia.      Codominant  Included bark   
 Broken/Hangers Number      Max. dia.      Weak attachments  Cavity/Nest hole      % circ.  
 Over-extended branches  Previous branch failures  6" Similar branches present   
 Pruning history Dead/Missing bark  Cankers/Galls/Burls  Sapwood damage/decay   
 Crown cleaned  Thinned  Raised  Conks  Heartwood decay  Likely  
 Reduced  Topped  Lion-tailed  Response growth Poor  
 Flush cuts  Other     

### End-heavy branches

Condition(s) of concern     

Part Size 6" Fall Distance 45'  
 Load on defect N/A  Minor  Moderate  Significant   
 Likelihood of failure Improbable  Possible  Probable  Imminent

Part Size      Fall Distance       
 Load on defect N/A  Minor  Moderate  Significant   
 Likelihood of failure Improbable  Possible  Probable  Imminent

### — Trunk —

Dead/Missing bark  Abnormal bark texture/color   
 Codominant stems  Included bark  Cracks   
 Sapwood damage/decay  Cankers/Galls/Burls  Sap ooze   
 Lightning damage  Heartwood decay  Conks/Mushrooms   
 Cavity/Nest hole      % circ. Depth      Poor taper   
 Lean 12 ° Corrected? No. Bowed       
 Response growth Very poor  
 Condition(s) of concern Stem failure  
 Part Size 49.1" Fall Distance 45'  
 Load on defect N/A  Minor  Moderate  Significant   
 Likelihood of failure Improbable  Possible  Probable  Imminent

### — Roots and Root Collar —

Collar buried/Not visible  Depth 6-12" Stem girdling   
 Dead  Decay  Conks/Mushrooms   
 Ooze  Cavity  % circ.       
 Cracks  Cut/Damaged roots  Distance from trunk 0"  
 Root plate lifting  possibly Soil weakness   
 Response growth Very poor  
 Condition(s) of concern Uprooting  
 Part Size 49.1" Fall Distance 45'  
 Load on defect N/A  Minor  Moderate  Significant   
 Likelihood of failure Improbable  Possible  Probable  Imminent

**Risk Categorization**

Target (Target number or description)	Tree part	Condition(s) of concern	Likelihood											Consequences				Risk rating (from Matrix 2)								
			Failure				Impact				Failure & Impact <i>(from Matrix 1)</i>			Negligible	Minor	Significant	Severe									
			Improbable	Possible	Probable	Imminent	Very low	Low	Medium	High	Unlikely	Somewhat	Likely						Very likely							
Cars	Branch	End-heavy branches				X				X								X					High			
High voltage						X	X				X											X		Low		
Building						X			X					X									X		Mod	
Cars	Trunk / Stem	Stem Failure			X					X			X									X		High		
High voltage					X					X			X										X	High		
Building					X						X			X										X	High	
Cars	Whole Tree	Uprooting			X					X			X										X	High		
High voltage					X					X			X											X	High	
Building					X						X			X											X	High
Cars	Scaffold Branch	End-heavy branch			X					X			X											X	High	
High voltage					X			X				X													X	Low
Building					X						X			X												X

Matrix 1. Likelihood matrix.

Likelihood of Failure	Likelihood of Impact			
	Very low	Low	Medium	High
Imminent	Unlikely	Somewhat likely	Likely	Very likely
Probable	Unlikely	Unlikely	Somewhat likely	Likely
Possible	Unlikely	Unlikely	Unlikely	Somewhat likely
Improbable	Unlikely	Unlikely	Unlikely	Unlikely

Matrix 2. Risk rating matrix.

Likelihood of Failure & Impact	Consequences of Failure			
	Negligible	Minor	Significant	Severe
Very likely	Low	Moderate	High	Extreme
Likely	Low	Moderate	High	High
Somewhat likely	Low	Low	Moderate	Moderate
Unlikely	Low	Low	Low	Low

**Notes, explanations, descriptions**

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**Mitigation options**

1. Remove tree. Residual risk None

2. \_\_\_\_\_ Residual risk \_\_\_\_\_

3. \_\_\_\_\_ Residual risk \_\_\_\_\_

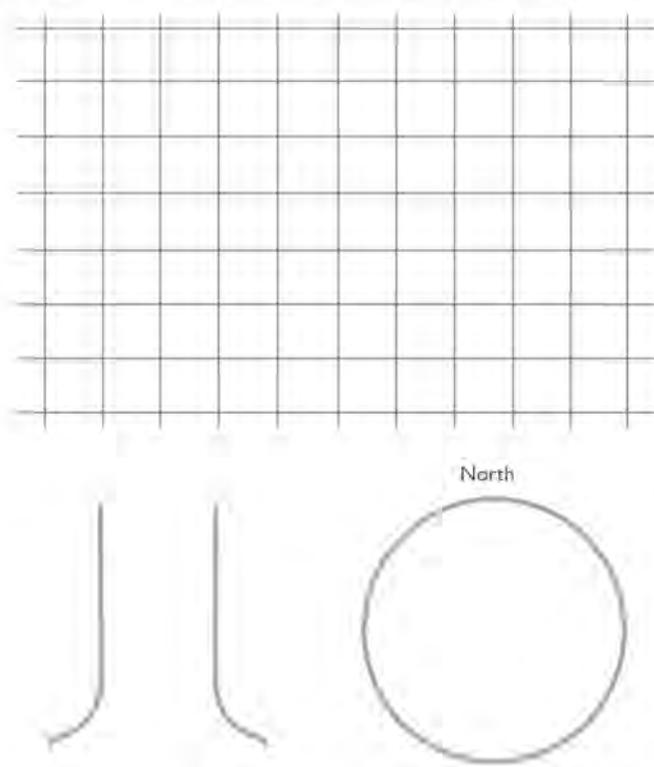
4. \_\_\_\_\_ Residual risk \_\_\_\_\_

**Overall tree risk rating**      Low     Moderate     High     Extreme

**Overall residual risk**    None     Low     Moderate     High     Extreme       **Recommended inspection interval**    N/A

**Data**  Final     Preliminary    **Advanced assessment needed**  No     Yes-Type/Reason \_\_\_\_\_

**Inspection limitations**  None     Visibility     Access     Vines     Root collar buried    Describe None relevant to determination





1709 Palmetto



1709 Palmetto



1709 Palmetto



1709 Palmetto



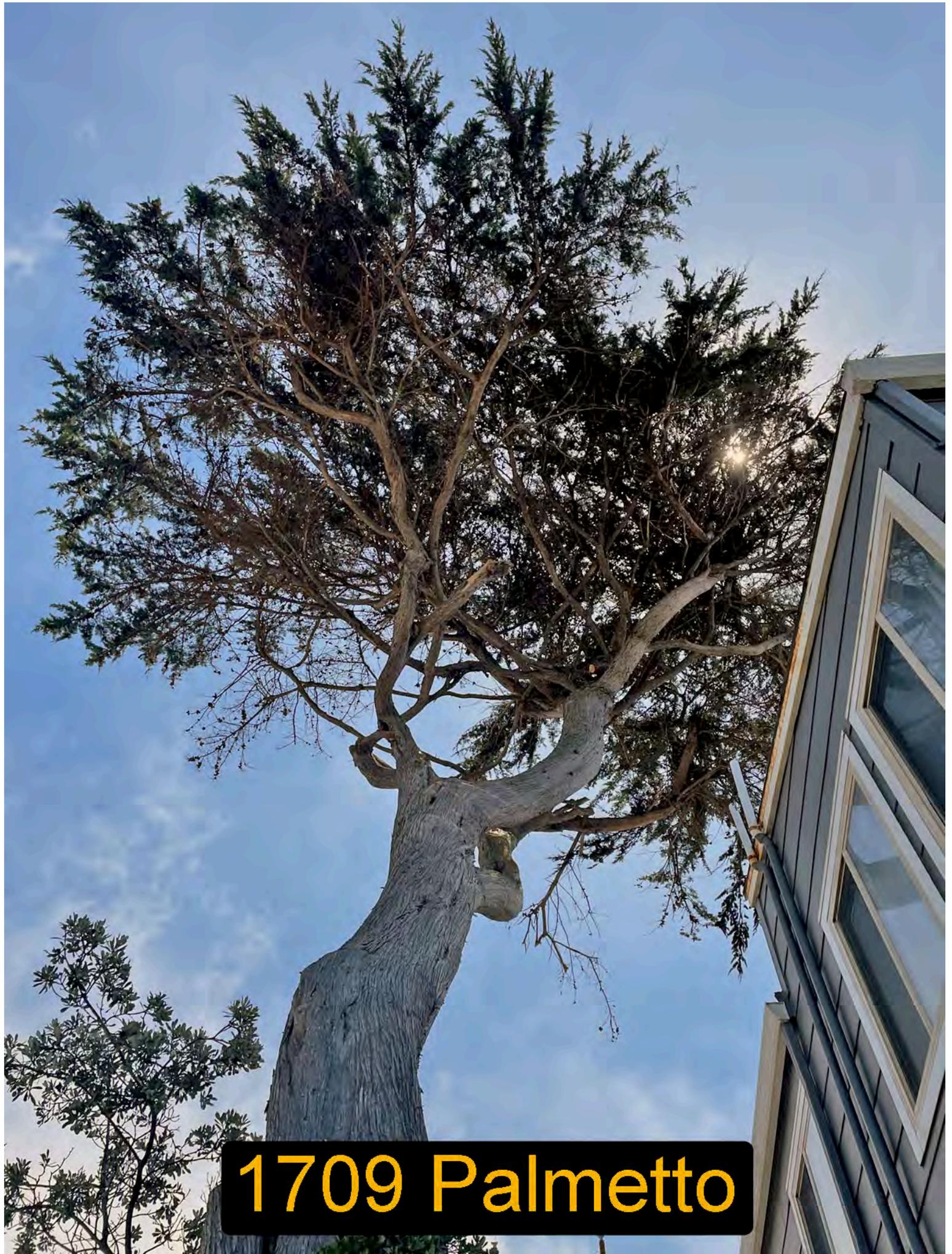
1709 Palmetto



**1709 Palmetto**



1709 Palmetto



**1709 Palmetto**

# ISA Basic Tree Risk Assessment Form

Client City of Pacifica Date 7/3/23 Time 1 PM  
 Address/Tree location 1710 Francisco (Carmel frontage) Tree no. n/a Sheet 1 of 1  
 Tree species Hesperocyparis macrocarpa dbh 42.0" Height 45' Crown spread dia. 50'  
 Assessor(s) Roy Leggitt Tools used d-tape, visual Time frame 1 year

## Target Assessment

Target number	Target description	Target protection	Target zone			Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
			Target within drip line	Target within 1x Ht.	Target within 1.5x Ht.			
1	Cars / street	None	X			4	No	No
2	High voltage	None	X			4	No	No
3	Buildings	None	X			4	No	No
4	Pedestrians	None	X			3	No	No

## Site Factors

History of failures Several 6" diameter and many smaller branches Topography Flat  Slope  % Aspect \_\_\_\_\_  
 Site changes None  Grade change  Site clearing  Changed soil hydrology  Root cuts  Describe road, sidewalk, utilities  
 Soil conditions Limited volume  Saturated  Shallow  Compacted  Pavement over roots  100 % Describe street, sidewalk  
 Prevailing wind direction NW Common weather Strong winds  Ice  Snow  Heavy rain  Describe Constant wind, seasonal storms

## Tree Health and Species Profile

Vigor Low  Normal  High  Foliage None (seasonal)  None (dead)  Normal 95 % Chlorotic \_\_\_\_\_ % Necrotic 5 %  
 Pests/Biotic \_\_\_\_\_ Abiotic \_\_\_\_\_  
 Species failure profile Branches  Trunk  Roots  Describe branch failures very common, trunk and root failures common

## Load Factors

Wind exposure Protected  Partial  Full  Wind funneling  Relative crown size Small  Medium  Large   
 Crown density Sparse  Normal  Dense  Interior branches Few  Normal  Dense  Vines/Mistletoe/Moss  No  
 Recent or expected change in load factors No

## Tree Defects and Conditions Affecting the Likelihood of Failure

### — Crown and Branches —

Unbalanced crown  LCR 50 % Cracks  Lightning damage   
 Dead twigs/branches  \_\_\_\_\_ % overall Max. dia. \_\_\_\_\_ Included bark   
 Broken/Hangers Number \_\_\_\_\_ Max. dia. \_\_\_\_\_ Weak attachments  Cavity/Nest hole \_\_\_\_\_ % circ.  
 Over-extended branches  Previous branch failures  6" Similar branches present   
 Pruning history Dead/Missing bark  Cankers/Galls/Burls  Sapwood damage/decay   
 Crown cleaned  Thinned  Raised  Conks  Heartwood decay  Likely  
 Reduced  Topped  Lion-tailed  Response growth Poor  
 Flush cuts  Other \_\_\_\_\_  
 End-heavy scaffold (E) \_\_\_\_\_ Condition(s) of concern End-heavy branches

Part Size 24" Fall Distance 45' Part Size 6" Fall Distance 45'  
 Load on defect N/A  Minor  Moderate  Significant  Load on defect N/A  Minor  Moderate  Significant   
 Likelihood of failure Improbable  Possible  Probable  Imminent  Likelihood of failure Improbable  Possible  Probable  Imminent

### — Trunk —

Dead/Missing bark  Abnormal bark texture/color   
 Codominant stems  Included bark  Cracks   
 Sapwood damage/decay  Cankers/Galls/Burls  Sap ooze   
 Lightning damage  Heartwood decay  Conks/Mushrooms   
 Cavity/Nest hole \_\_\_\_\_ % circ. Depth \_\_\_\_\_ Poor taper   
 Lean 12 ° Corrected? No Bowed \_\_\_\_\_  
 Response growth Very poor  
 Condition(s) of concern Stem failure  
 Part Size 42.0" Fall Distance 50'  
 Load on defect N/A  Minor  Moderate  Significant   
 Likelihood of failure Improbable  Possible  Probable  Imminent

### — Roots and Root Collar —

Collar buried/Not visible  Depth 6"+ Stem girdling   
 Dead  Decay  Conks/Mushrooms   
 Ooze  Cavity  \_\_\_\_\_ % circ.  
 Cracks  Cut/Damaged roots  Distance from trunk 6"  
 Root plate lifting  Probably Soil weakness   
 Response growth Very poor  
 Condition(s) of concern Uprooting  
 Part Size 42.0" Fall Distance 50'  
 Load on defect N/A  Minor  Moderate  Significant   
 Likelihood of failure Improbable  Possible  Probable  Imminent

**Risk Categorization**

Target (Target number or description)	Tree part	Condition(s) of concern	Likelihood										Consequences				Risk rating (from Matrix 2)		
			Failure				Impact				Failure & Impact (from Matrix 1)		Negligible	Minor	Significant	Severe			
			Improbable	Possible	Probable	Imminent	Very low	Low	Medium	High	Unlikely	Somewhat						Likely	Very likely
Cars/Street/Peds	Branch	End-heavy branches				X				X								X	Extreme
High voltage						X	X			X								X	Low
Buildings						X			X				X					X	High
Cars/Street/Peds	Branch	End-heavy scaffold		X					X			X						X	High
High voltage				X		X			X									X	Low
Buildings				X					X				X						X
Cars/Street/Peds	Trunk / Stem	Stem Failure		X					X			X						X	High
High voltage				X					X			X						X	High
Buildings				X					X			X							X
Cars/Street/Peds	Whole Tree	Uprooting				X			X					X				X	Extreme
High voltage						X			X					X				X	Extreme
Buildings						X			X					X					X

Matrix 1. Likelihood matrix.

Likelihood of Failure	Likelihood of Impact			
	Very low	Low	Medium	High
Imminent	Unlikely	Somewhat likely	Likely	Very likely
Probable	Unlikely	Unlikely	Somewhat likely	Likely
Possible	Unlikely	Unlikely	Unlikely	Somewhat likely
Improbable	Unlikely	Unlikely	Unlikely	Unlikely

Matrix 2. Risk rating matrix.

Likelihood of Failure & Impact	Consequences of Failure			
	Negligible	Minor	Significant	Severe
Very likely	Low	Moderate	High	Extreme
Likely	Low	Moderate	High	High
Somewhat likely	Low	Low	Moderate	Moderate
Unlikely	Low	Low	Low	Low

**Notes, explanations, descriptions**

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**Mitigation options**

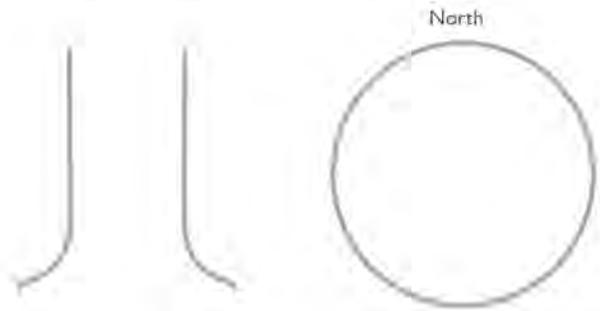
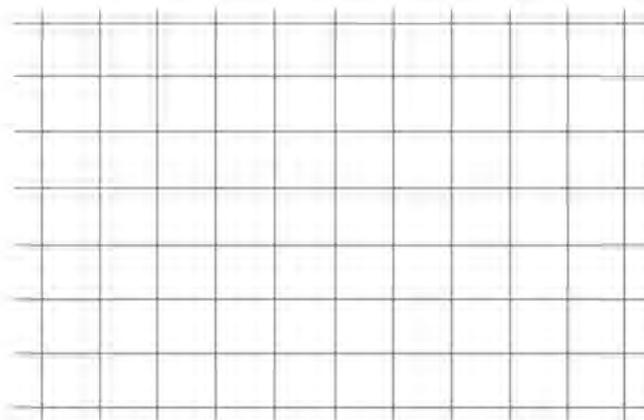
1. Remove tree Residual risk None
2. \_\_\_\_\_ Residual risk \_\_\_\_\_
3. \_\_\_\_\_ Residual risk \_\_\_\_\_
4. \_\_\_\_\_ Residual risk \_\_\_\_\_

**Overall tree risk rating**      Low     Moderate     High     Extreme

**Overall residual risk**    None     Low     Moderate     High     Extreme     **Recommended inspection interval**    N/A

**Data**  Final     Preliminary    **Advanced assessment needed**  No     Yes-Type/Reason \_\_\_\_\_

**Inspection limitations**  None     Visibility     Access     Vines     Root collar buried    Describe None relevant to determination





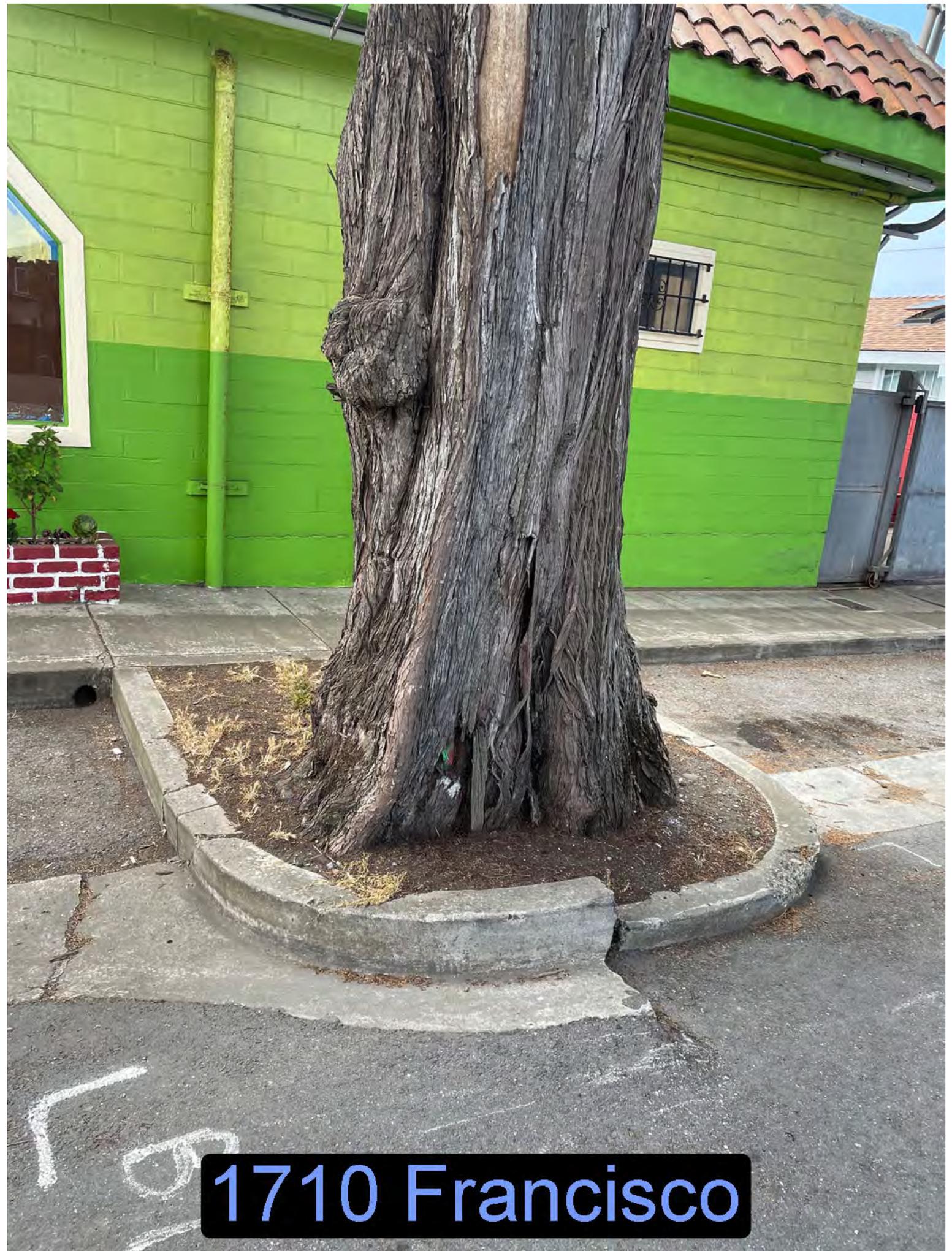
1710 Francisco



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A photograph of a large, mature tree with a thick, gnarled trunk and dense, dark green foliage. The tree is set against a clear blue sky. The trunk is highly textured and shows signs of age. The branches are numerous and spread out, creating a thick canopy of leaves. The overall appearance is that of a well-established, old tree.

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