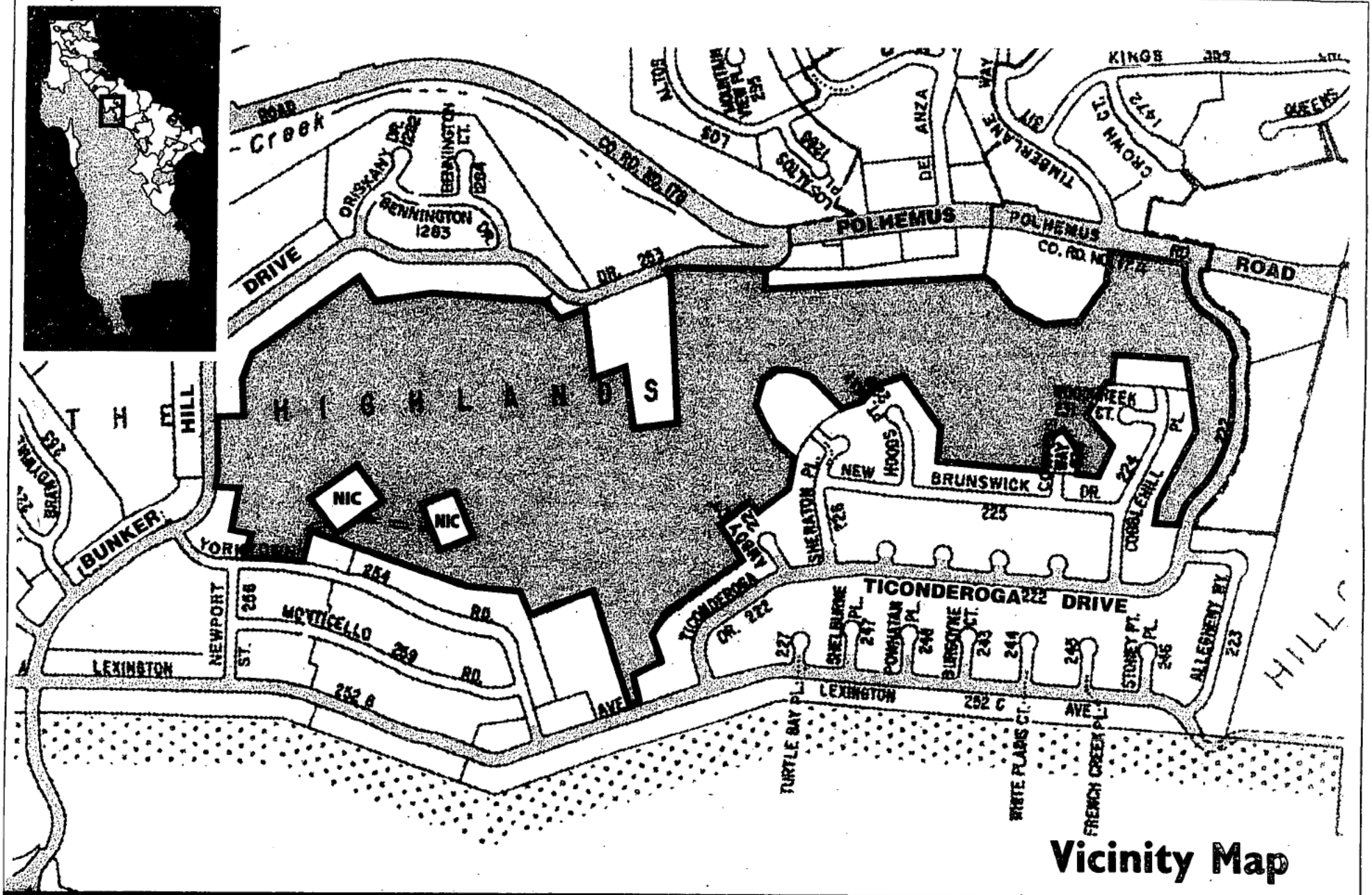


Vicinity Map

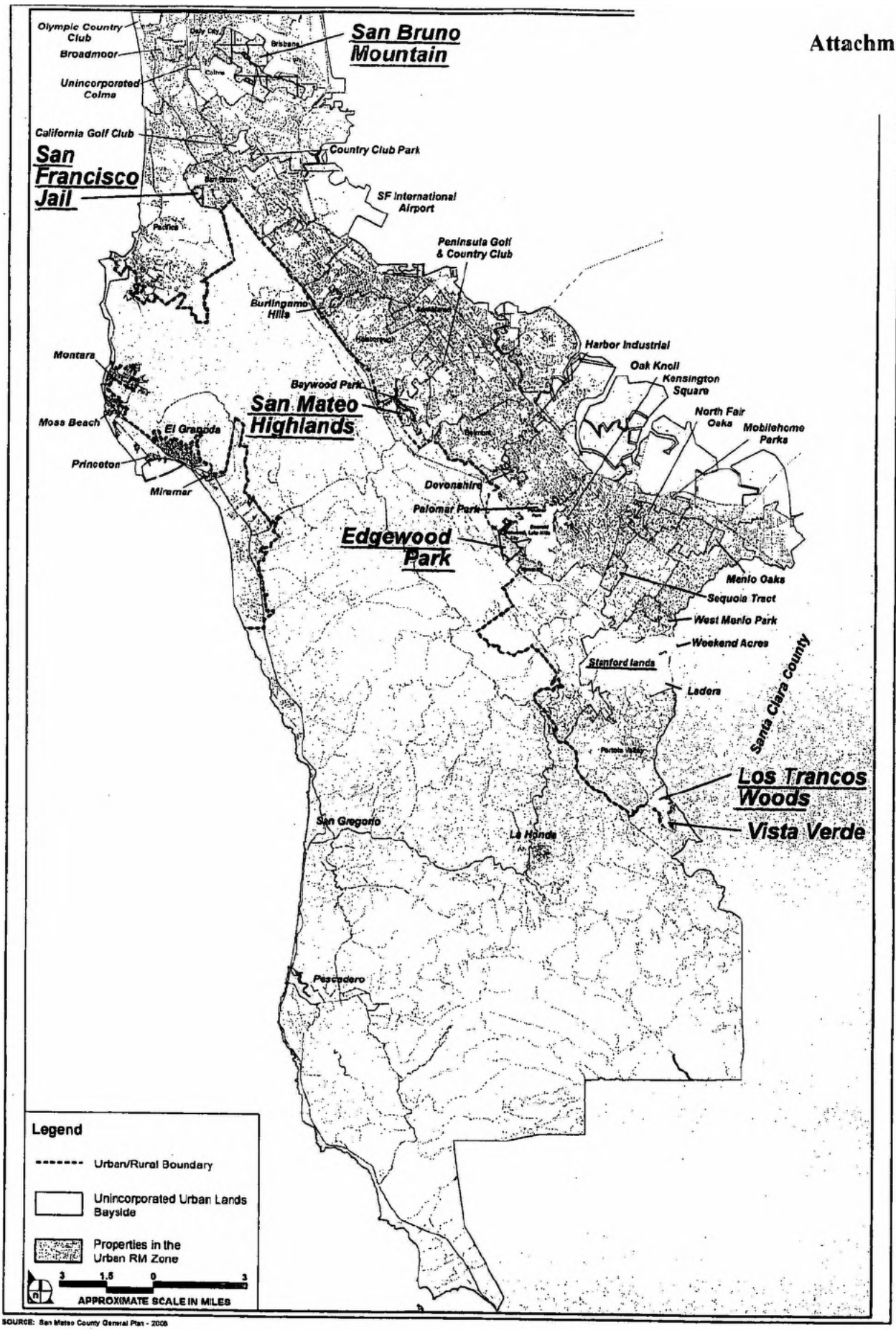
San Mateo County Planning Commission's Meeting

Applicant: **Jack Chamberlain**

Attachment C

File Numbers: **PLN 2006-00357**

Attachment D



SOURCE: San Mateo County General Plan - 2008

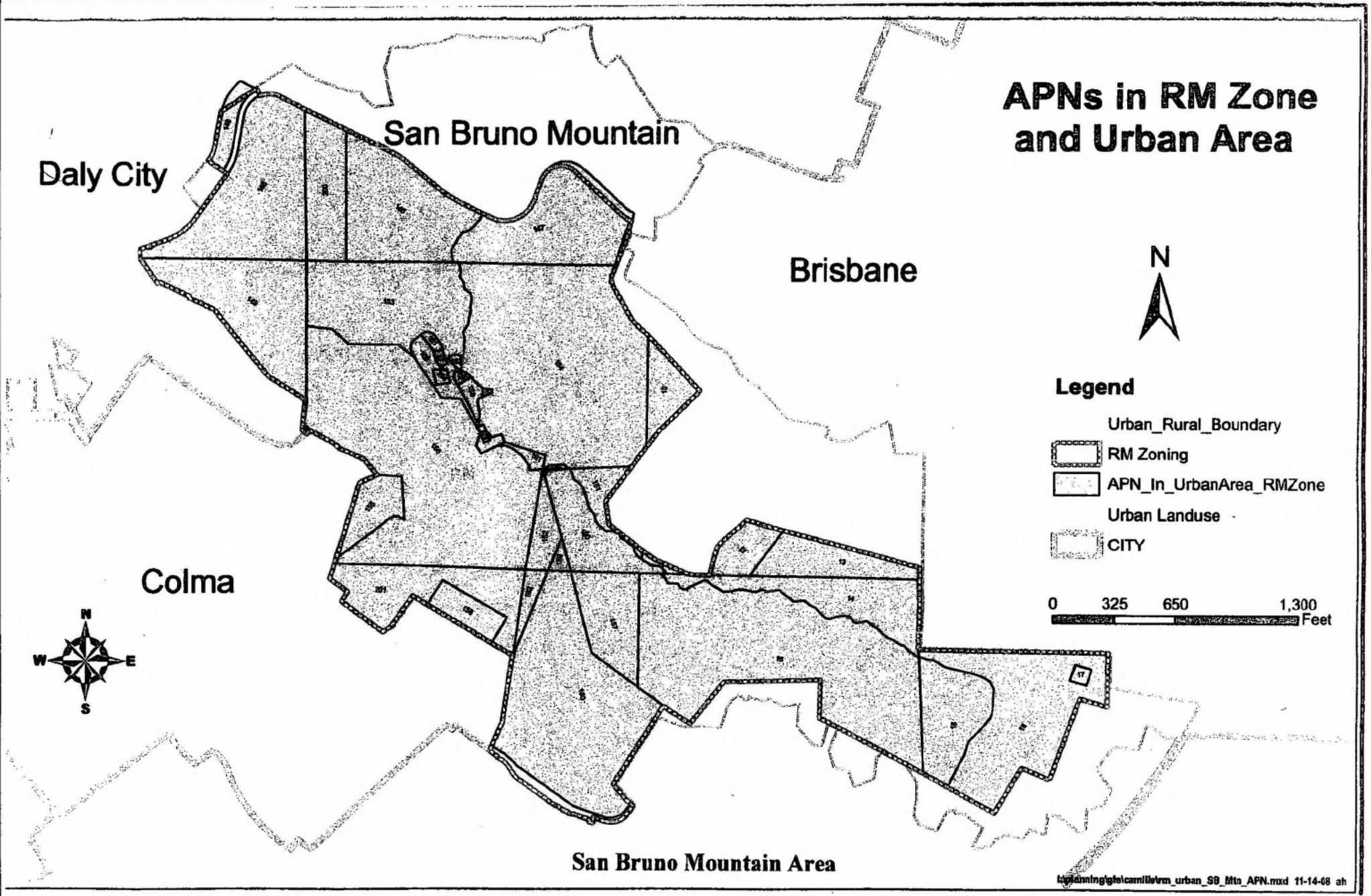
FIGURE 4.5-1

Properties Affected by the RM Zoning Text Amendment

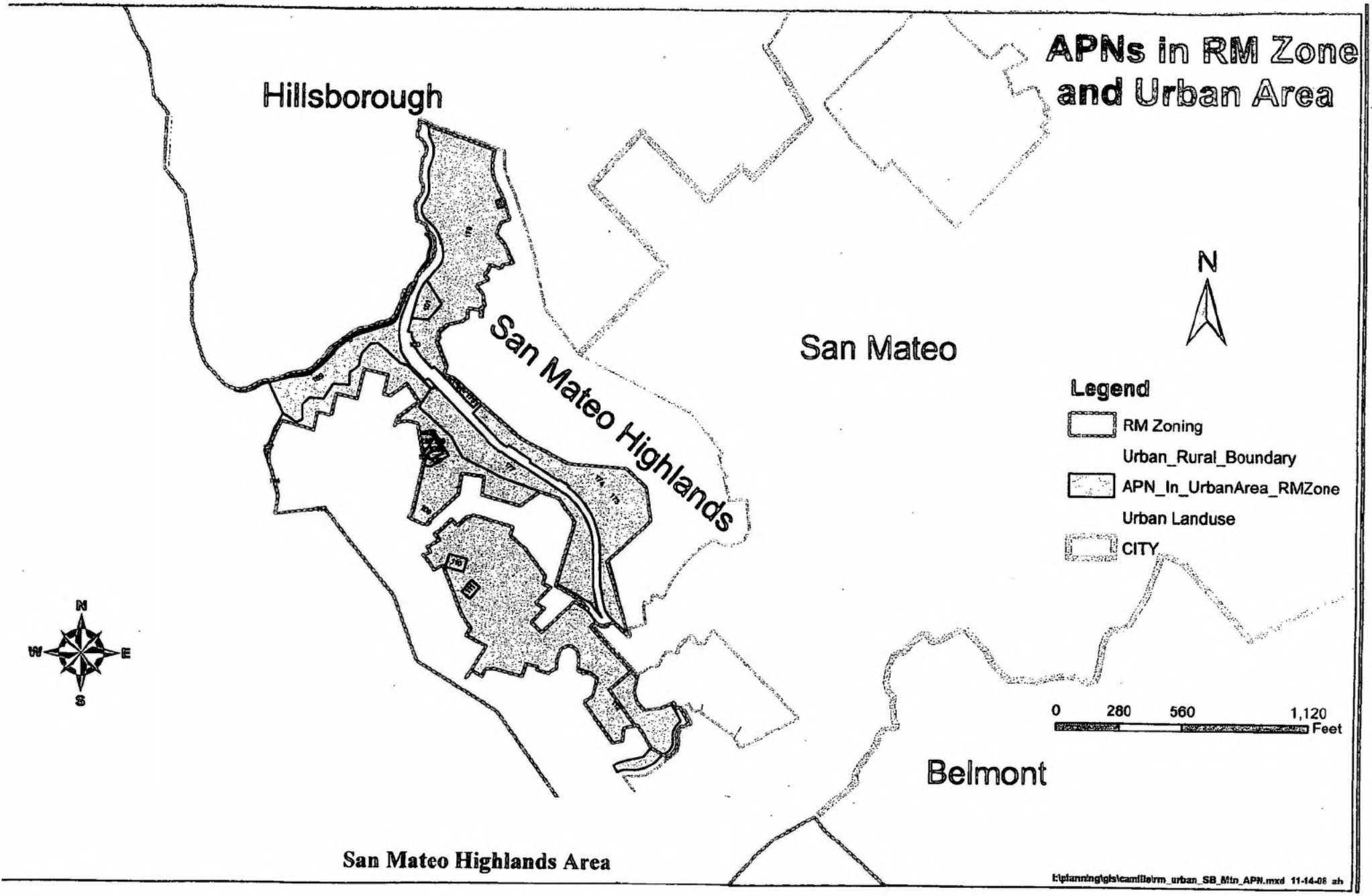
(Six Areas, as underlined)

902-001-12/08

urban rural boundary cdr 6/4/03 ss (unincorpor



Attachment E



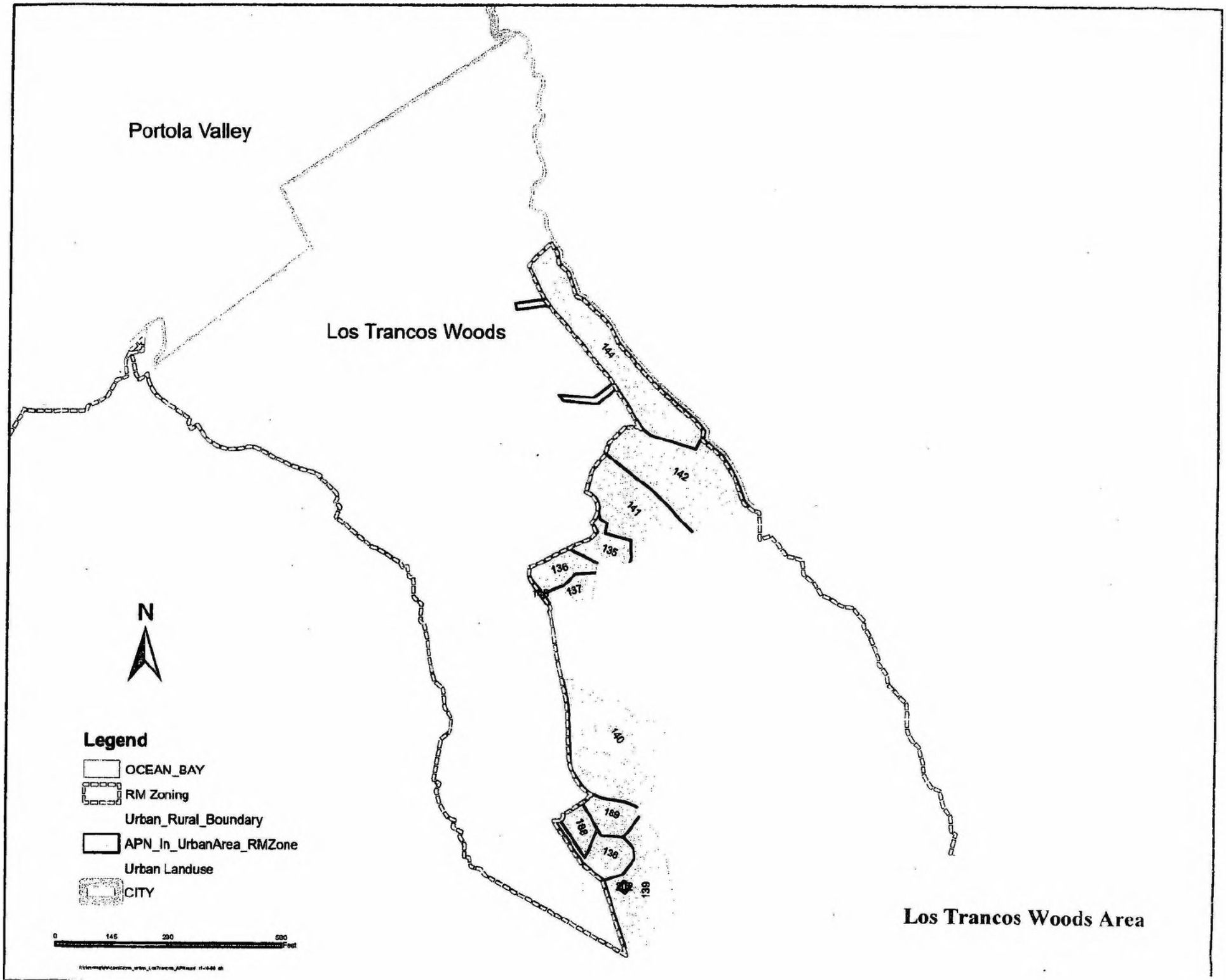
San Mateo Highlands Area

APNs that in RM and Urban Area of San Mateo County

Parcel_ID	APN	Owner	Area	
9	005260420	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	1
10	005270120	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	2
11	005270130	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	3
12	005270150	The State Of California	SAN BRUNO MTN PARK (UNINC)	4
13	005270160	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	5
14	007180010	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	6
15	007180050	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	7
16	007180060	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	8
17	007180110	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	9
18	007180120	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	10
19	017480040	San Mateo Community College	SAN FRANCISCO JAIL	11
20	017480050	United States Of America	SAN FRANCISCO JAIL	12
21	017480060	United States Of America	SAN FRANCISCO JAIL	13
22	017530010	City & Co Of San Francisco	SAN FRANCISCO JAIL	14
100	038131010	California Water Service Co	SAN MATEO HIGHLANDS (UNINC)	15
101	038131020	Odyssey School The	SAN MATEO HIGHLANDS (UNINC)	16
102	038131060	Beck Ruth K Tr	SAN MATEO HIGHLANDS (UNINC)	17
103	038301450	Town Of Hillsborough	SAN MATEO HIGHLANDS (UNINC)	18
103	038301450	Town Of Hillsborough	SAN MATEO HIGHLANDS (UNINC)	19
103	038301450	Town Of Hillsborough	HILLSBOROUGH	20
104	041090100	Johnson Robert C & B E Trs	SAN MATEO HIGHLANDS (UNINC)	21
105	041090110	Mottern Christopher P & S L Trs	SAN MATEO HIGHLANDS (UNINC)	22
106	041090120	Mottern Christopher P & S L Trs	SAN MATEO HIGHLANDS (UNINC)	23
107	041090130	Gomberg Evan I	SAN MATEO HIGHLANDS (UNINC)	24
108	041090140	Gomberg Evan I	SAN MATEO HIGHLANDS (UNINC)	25
109	041090160	Highlands Recreation District	SAN MATEO HIGHLANDS (UNINC)	26
109	041090160	Highlands Recreation District	SAN MATEO HIGHLANDS (UNINC)	27
110	041101010	California Water Service Co	SAN MATEO HIGHLANDS (UNINC)	28
111	041101020	California Water Service Co	SAN MATEO HIGHLANDS (UNINC)	29
112	041101290	Ticonderoga Partner Llc	SAN MATEO HIGHLANDS (UNINC)	30
113	041243120	Highlands Recreation Dist	SAN MATEO HIGHLANDS (UNINC)	31
131	050470050	County Of San Mateo	EDGEWOOD PARK	32
132	057460140	County Of San Mateo	EDGEWOOD PARK	33
133	074480320	Leland Stanford Jr University	STANFORD LANDS (UNINC)	34
134	074480340	Leland Stanford Jr University	STANFORD LANDS (UNINC)	35
135	080190140	Thysen David P Tr	LOS TRANCOS WOODS (UNINC)	36
136	080190200	Ward T Michael & Sharon G Trs	LOS TRANCOS WOODS (UNINC)	37
137	080190210	Gage Stanley R	LOS TRANCOS WOODS (UNINC)	38
138	080190310	Bunker William Whithorne	LOS TRANCOS WOODS (UNINC)	39
139	080190390	Littlefield Jacques M Tr	LOS TRANCOS WOODS (UNINC)	40
140	080190410	Littlefield Jacques M	LOS TRANCOS WOODS (UNINC)	41
141	080190430	Montenegro Sandy Judith	LOS TRANCOS WOODS (UNINC)	42
142	080190440	Montenegro Sandy Judith	LOS TRANCOS WOODS (UNINC)	43
144	080231020	Dempsey Patrick	LOS TRANCOS WOODS (UNINC)	44
145	090090050	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	45
146	090090070	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	46
147	090090260	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	47
148	090090290	County Of San Mateo	DALY CITY	48
148	090090290	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	49
149	090100010	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	50

150	090100100	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	51
151	090100280	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	52
152	090100290	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	53
153	090100320	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	54
154	090100330	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	55
155	090100390	Amloc Companies Inc	SAN BRUNO MTN PARK (UNINC)	56
156	090100400	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	57
157	090110030	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	58
158	090110060	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	59
159	090110070	Terrabay Partners Llc	SAN BRUNO MTN PARK (UNINC)	60
160	090110080	Terrabay Partners Llc	SAN BRUNO MTN PARK (UNINC)	61
161	090120010	American Towers Inc	SAN BRUNO MTN PARK (UNINC)	62
162	090120020	American Towers Inc	SAN BRUNO MTN PARK (UNINC)	63
163	090120030	American Towers Inc	SAN BRUNO MTN PARK (UNINC)	64
164	090120040	American Towers Inc	SAN BRUNO MTN PARK (UNINC)	65
165	090120050	American Towers Inc	SAN BRUNO MTN PARK (UNINC)	66
166	090120060	American Towers Inc	SAN BRUNO MTN PARK (UNINC)	67
167	090120080	American Towers Inc	SAN BRUNO MTN PARK (UNINC)	68
168	090120110	American Towers Inc	SAN BRUNO MTN PARK (UNINC)	69
169	093070050	City & Co Of S F Water Dept	SAN MATEO HIGHLANDS (UNINC)	70
169	093070050	City & Co Of S F Water Dept	SAN MATEO HIGHLANDS (UNINC)	71
169	093070050	City & Co Of S F Water Dept	HILLSBOROUGH	72
170	093102120	City & Co Of S F Water Dept	EDGEWOOD PARK	73
171	093102120	City & Co Of S F Water Dept	EDGEWOOD PARK	74
172	093141020	Pedro Michael & Esther	SAN MATEO HIGHLANDS (UNINC)	75
173	093141030	City & Co Of S. F. Water Dept	SAN MATEO HIGHLANDS (UNINC)	76
174	093141030	City & Co Of S. F. Water Dept	SAN MATEO HIGHLANDS (UNINC)	77
175	093141030	City & Co Of S. F. Water Dept	SAN MATEO HIGHLANDS (UNINC)	78
176	093141030	City & Co Of S. F. Water Dept	SAN MATEO HIGHLANDS (UNINC)	79
177	093142010	City & Co Of S F Water Dept	SAN MATEO HIGHLANDS (UNINC)	80
179	038131110	Beeson Ron	SAN MATEO HIGHLANDS (UNINC)	81
180	017480030	City Of San Bruno	SAN MATEO HIGHLANDS (UNINC)	82
186	041090090	Johnson Robert C & B E Trs	SAN MATEO HIGHLANDS (UNINC)	83
188	080190300	Montenegro Sandy Judith	LOS TRANCOS WOODS (UNINC)	84
189	080190420	Littlefield Jacques M	LOS TRANCOS WOODS (UNINC)	85
190	090100070	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	86
191	090100340	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	87
192	090110090	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	88
193	090120100	American Towers Inc	SAN BRUNO MTN PARK (UNINC)	89
200	090090060	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	90
201	090110050	County Of San Mateo	SAN BRUNO MTN PARK (UNINC)	91
202	080190061	Los Trancos Co Water Dist	LOS TRANCOS WOODS (UNINC)	92
203	080190062	California Water Service Co	LOS TRANCOS WOODS (UNINC)	93

APNs in RM Zone and Urban Area



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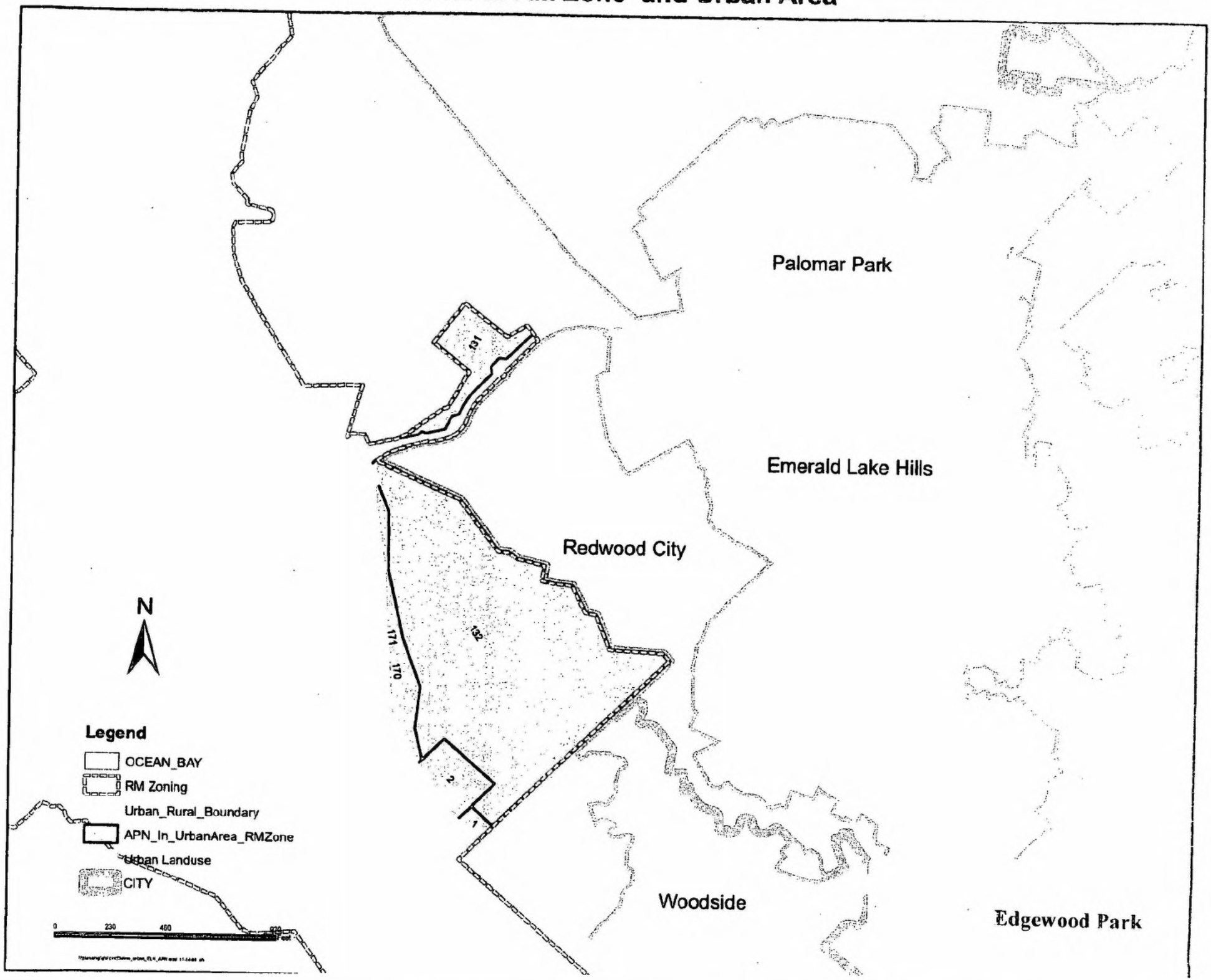

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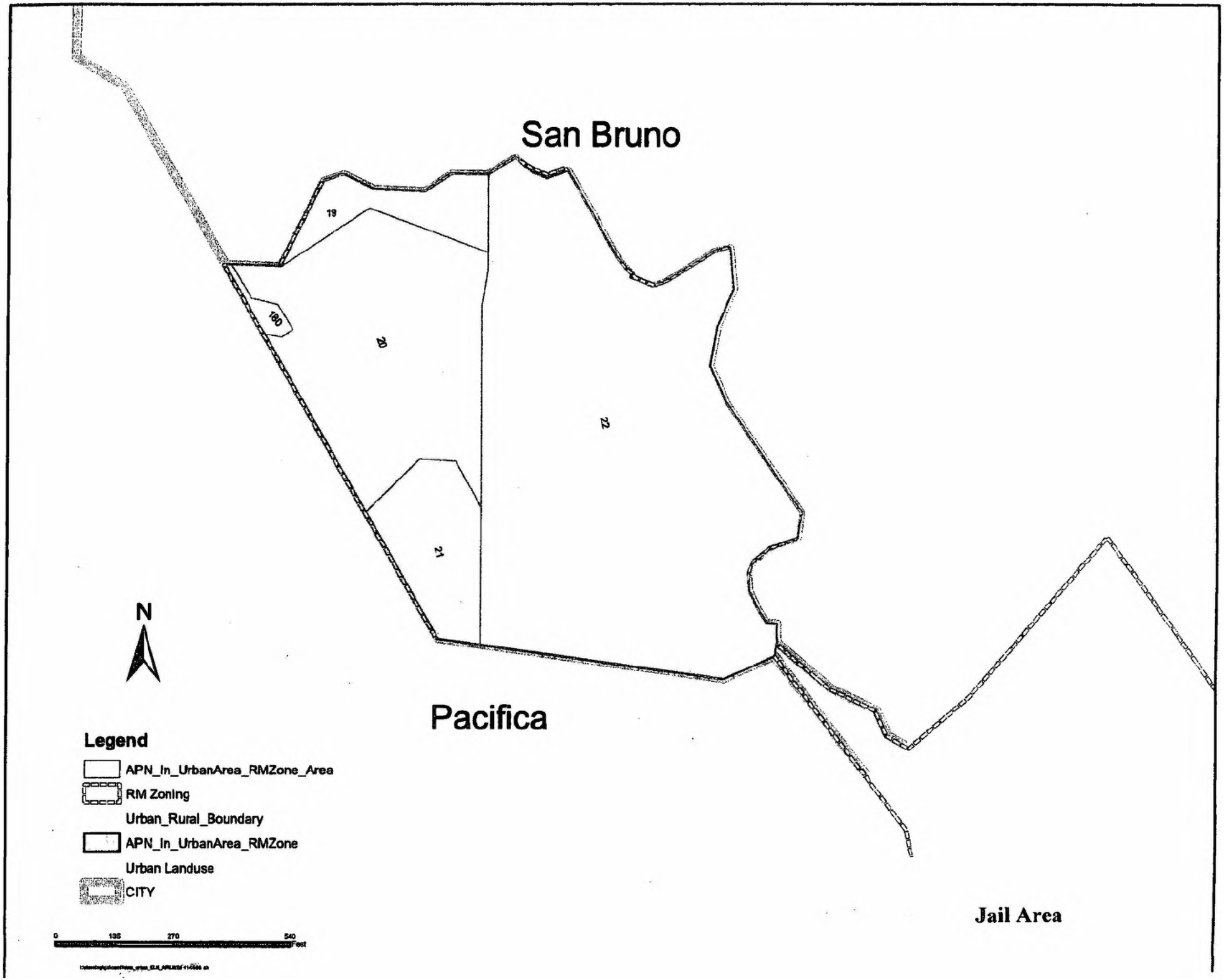
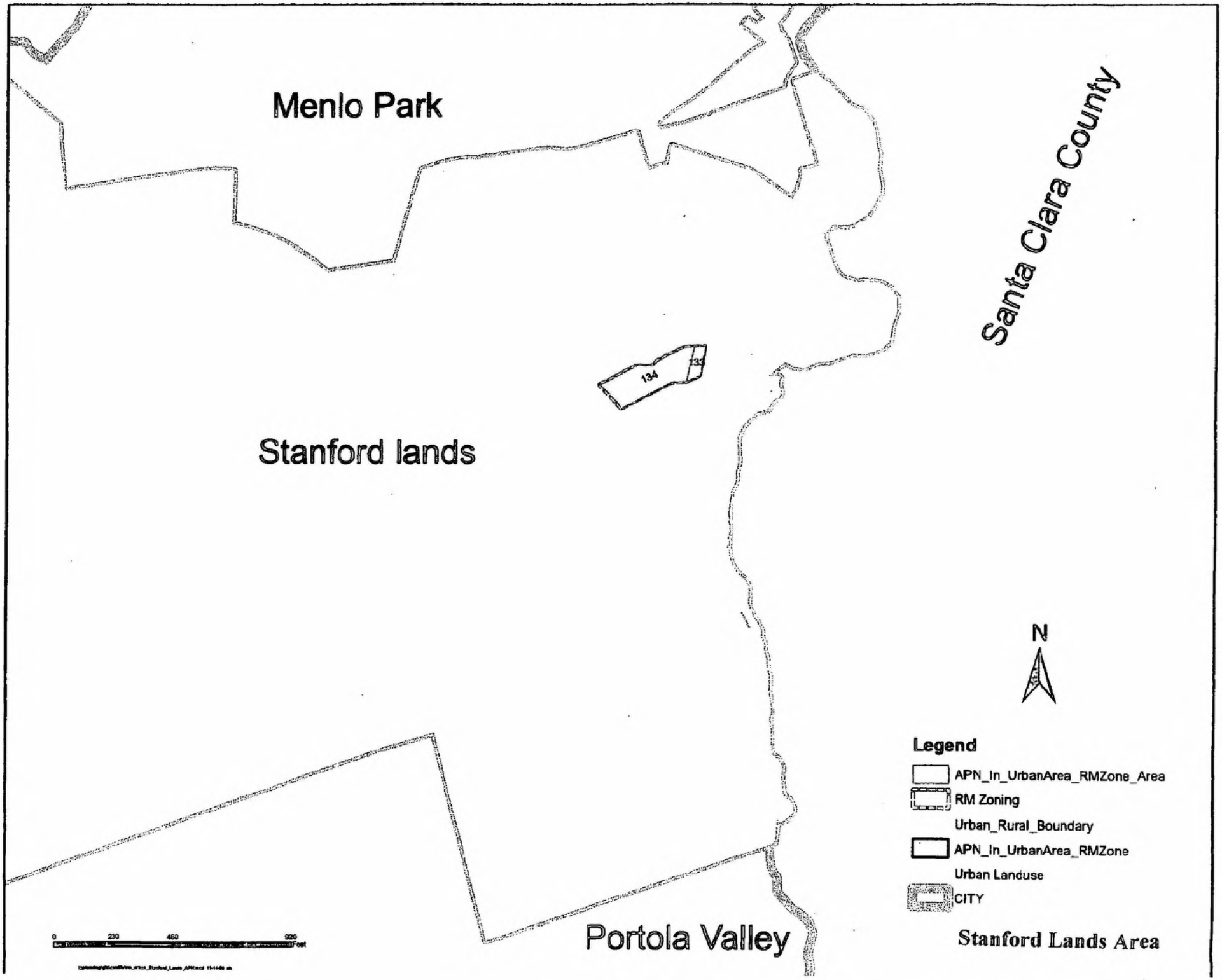


APNs in RM Zone and Urban Area



County of San Mateo

HIGHLAND ESTATES
Final EIR
SCH# 2007052068

Prepared for:

County of San Mateo
Planning and Building Department
455 County Center, 2nd Floor
Redwood City, CA 94063

Prepared by:

IMPACT SCIENCES, INC.
555 12th. Street, Suite 1650
Oakland, California 94607
(510) 267-0494 FAX (510) 267-0490

Attachment G

December 2009

Highland Estates
Final Environmental Impact Report

SCH # 2007052068

Prepared for:

County of San Mateo
455 County Center, 2nd Floor
Redwood City, California 94063
(650) 363-1829

Prepared by:

Impact Sciences, Inc.
555 12th Street, Suite 1650
Oakland, California 94607
(510) 267-0494

December 2009

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LIST OF TABLES

1.0 INTRODUCTION

This document, together with the Highland Estates Recirculated Draft Environmental Impact Report (recirculated draft EIR) which is incorporated by reference, constitutes the Highland Estates Final Environmental Impact Report (final EIR).

A draft EIR for this project was circulated in December 2008 (SCH #2007052068). To address concerns raised by interested parties and public agencies especially related to site geology, the County decided to revise and recirculate the December 2008 draft EIR. In addition, text was added in the recirculated draft EIR as appropriate in order to respond to the comments received on the December 2008 draft EIR. The draft EIR was recirculated in its entirety. Given this, pursuant to Section 15088.5(f)(1), the County of San Mateo as the lead agency requested that reviewers of the recirculated draft EIR document submit new comments based on the revised project description and impact analyses.

The final EIR is an informational document prepared by the County of San Mateo that must be considered by decision makers before approving or denying the Highland Estates project (proposed project). Pursuant to Section 15132 of the *California Environmental Quality Act (CEQA) Guidelines*, this final EIR consists of (a) revisions to the recirculated draft EIR, (b) a list of persons and organizations that commented on the recirculated draft EIR, (c) comments received on the recirculated draft EIR, (d) the County's responses to significant environmental points raised in the review and consultation process, and (e) any other information added by the County. The final EIR will be used for review and consideration for certification by the County.

This Introduction section provides a description of the organization of this document, a summary of the EIR certification and project approval procedure, a summary of public involvement, and an overview of the response to comment process.

The final EIR is available on the County's website at: http://www.co.sanmateo.ca.us/portal/site/planning/menuitem.2ca7e1985b6c8f5565d293e5d17332a0/?vgnextoid=c5744f7978575210VgnVCM1000001937230aRCRD&cpsextcurrchannel=1. A copy of the final EIR can also be obtained at the following address:

County of San Mateo Planning Department

455 County Center, 2nd Floor

Redwood City, CA 94063

1.1 Organization of this Final EIR

This document is organized into five sections. Following this introduction (**Section 1.0**), **Section 2.0, Project Refinements & Recirculated Draft EIR Text Changes**, presents minor changes to the project description since the publication of the recirculated draft EIR and revisions that have been made to the recirculated draft EIR as a result of comments received from organizations and individuals on the document. **Section 3.0, Response to Comments,** contains a list of persons and organizations that submitted written comments on the recirculated draft EIR, the comments letters, and responses to those comments. **Section 4.0, Mitigation Monitoring and Reporting Program**, contains the Mitigation Monitoring and Reporting Program for the proposed project, and **Section 5.0, List of EIR Preparers**, lists persons involved in the preparation of this final EIR.

1.2 EIR Certification - Project Approval Process

Prior to approving the proposed project, the County must certify that (1) the final EIR has been completed in compliance with CEQA; (2) the County has reviewed and considered the information in the final EIR; and (3) the final EIR reflects the County's independent judgment and analysis (*State CEQA Guidelines*, Section 15090).

Once the final EIR is certified, the County can approve the project as proposed, approve one of the alternatives evaluated in the EIR, or choose to take no action on the project. As part of the approval of either the project or an alternative, the County must make written findings for each significant effect identified in the EIR. These findings will state whether the identified significant effect can be avoided or substantially reduced through feasible mitigation measures or a feasible alternative, whether the effect can only be mitigated by the action of some agency other than the County, or whether the identified mitigation measures or alternatives are infeasible and cannot be implemented (*State CEQA Guidelines*, Section 15091). To ensure implementation of all adopted mitigation measures, the County must adopt a mitigation monitoring and reporting plan (*State CEQA Guidelines*, Section 15097). In addition, after all feasible mitigation measures are adopted, if some effects are still considered significant and unavoidable, the County must adopt a Statement of Overriding Considerations that identifies the specific economic, social, technical, or other considerations that, in the County's judgment, outweigh the significant environmental effects of the proposed project (*State CEQA Guidelines*, Section 15091).

Once it is certified, the final EIR may also be used by responsible agencies in deciding whether, or under what conditions, to approve the required entitlements.

1.3 Public Involvement

The County released the recirculated draft EIR for public review and comment on September 14, 2009, for a 45-day public review period. The Notice of Completion for the recirculated draft EIR identified the 45-day public review period to end on October 28, 2009. However, the County of San Mateo extended the public review period 12 days, ending on November 9, 2009. Copies of the recirculated draft EIR were distributed to agencies, local governments, and interested parties. Hard copies of the recirculated draft EIR and appendices were available to the public at the County of San Mateo Planning Department counter (455 County Center, 2nd Floor, Redwood City, CA 94063). The recirculated draft EIR was also available online at: http://www.co.sanmateo.ca.us/portal/site/planning/menuitem.2ca7e1985b6c8f5565d293e5d17332a0/?vgnextoid=be13db7f3bab3210VgnVCM1000001937230aRCRD&cpsextcurrchannel=1.

1.4 Responses to Comments

Pursuant to CEQA, the lead agency must respond to all substantive environmental issues raised in comments on the recirculated draft EIR. Responses to all written and verbal comments received within the comment period are contained in this final EIR. Responses in this final EIR include factual corrections and explanation of recirculated draft EIR analyses. Any changes to the text of the recirculated draft EIR that resulted from the comments is presented in **Section 2.0** of this final EIR.

2.0 PROJECT REFINEMENTS & RECIRCULATED DRAFT EIR TEXT CHANGES

2.1 INTRODUCTION

This chapter presents minor changes to the project description since the publication of the recirculated draft EIR and revisions that have been made to the recirculated draft EIR as a result of comments received from organizations and individuals on the document. Staff-initiated changes include minor corrections and clarification to the text to correct typographical errors and clarify the project description. None of the changes affect the analysis or conclusions of the recirculated draft EIR.

The changes to the project description do not require recirculation of the EIR because they would not result in new significant impacts or a substantial increase in the severity of environmental impacts, and, therefore, would not require additional mitigation measures or alternatives to the proposed project. Recirculation of an EIR is not required when new information makes insignificant changes to an adequate EIR (CEQA Guidelines Section 15088.5(b)).

2.2 CHANGES TO THE PROJECT DESCRIPTION

The amount of cut and fill (grading) quantities were presented in Section 3.0, Project Description, of the recirculated draft EIR in Table 3.0-3 and in the description of each home site on pages 3.0-28 to 3.0-29. The quantities reported in the recirculated draft EIR accounted for the amount of cut and fill required for the development of driveways and other subdivision improvements but did not include the amount of grading required to construct the building pads to the subfloor elevations shown on the Vesting Tentative Map prepared by BKF Engineers dated December 11, 2009. The applicant has made corrections to the cut and fill quantities to include grading for the building pads, with grading necessary for the driveways, and other subdivision improvements. These are reflected below in **Table 2.0-1, Changes to Proposed Earthwork.** While grading quantities have changed, there is no change to the grading plans presented in the recirculated draft EIR, as these included all grading associated with the subdivision and construction of residences.

As the table shows, the total amount of grading necessary for the project has increased by about 3,000 cubic yards of cut associated mainly with landslide mitigation for lots 5 through 8 and 2,100 cubic yards of fill associated with constructing building pads for lots 1 through 4. The additional cut is necessary in order to remove the existing unconsolidated landslide material on these lots. While the proposed homes will be founded on pier and grade beam foundations, the additional fill will be necessary for the creation of flat areas on the lots for access, play, landscaping, etc. It should be noted that the proposed import for

the project under this design has decreased from 2,200 cubic yards to 700 cubic yards (not including 200 cubic yards of drain rock).

None of the other attributes of the project, including project footprint, locations of the home sites, and staging, have changed.

Table 2.0-1
Changes to Proposed Earthwork

Area	Originally Proposed Cut (cy)	Revised Cut (cy)	Change	Originally Proposed Fill (cy)	Revised Fill (cy)	Change
Lots 1–4	500	500	0	200	2,300	+2,100
Lots 5–8	1,000	4,700	+3,700	1,000	700[1]	-300
Lots 9 and 10	900	300	-600	2,900	2,900	0
Lot 11	1,300	1,200	-100	1,300	1,000	-300
TOTAL	*3,700*	*6,700*	*+3,000*	*5,900*	*7,600*	*+1,700*
Import	**2,200**	**900**	**-1,300**			

[1]Includes 200 cubic yards of drain rock.

2.3 ENVIRONMENTAL ANALYSIS

The changes to the proposed development project described above are evaluated below to determine whether they would result in a new significant impact or increase the severity of previously disclosed impacts of the project. As the analysis shows, the changes to the grading quantities would not result in additional significant environmental impacts not addressed in the recirculated draft EIR or increase the severity of previously identified environmental impacts. No new mitigation measures are required.

Aesthetics

Although the cut and fill quantities provided in the recirculated draft EIR have been revised, the base elevations and locations of the home sites and all other subdivision improvements discussed and evaluated in the recirculated draft EIR remain unchanged. Therefore, Impacts AES-1 through AES-4, which are based on home elevations and locations, remain unchanged and the same mitigation and improvement measures apply to the proposed project.

Biological Resources

The changes to the cut and fill quantities do not alter the project footprint as presented in the recirculated draft EIR. Therefore, Impacts BIO-1 through BIO-11 remain unchanged and the same mitigation measures still apply to the proposed project.

Geology and Soils

The analysis of impacts related to geology and soils provided in the recirculated draft EIR focuses on the locations of the proposed homes and subdivision improvements relative to landslides, unstable geologic units, and other potential geologic hazards. As the locations of the proposed homes and subdivision improvements remain unchanged, Impacts GEO-1 through GEO-6 remain unchanged and the same mitigation measures apply to the proposed project.

Other Resource Topics

Global Climate Change

The changes in grading quantities do not affect the project's estimated construction greenhouse gas emissions as the emissions that were estimated using URBEMIS2007 are based on the amount of total disturbed acreage which has not changed. Therefore, Impact GCC-1 remains unchanged.

Air Quality

The changes in grading quantities do not affect the project's estimated construction emissions as the emissions that were estimated using URBEMIS2007 are based on the amount of total disturbed acreage which has not changed. Therefore, Impact AQ-1 remains unchanged.

Noise

If all the proposed homes are constructed concurrently, the change in grading quantities would reduce project noise impacts as less imported fill would be required than previously analyzed (about 1,300 cubic yards less than before of fill would be imported). Approximately 75 truck trips would be involved in the transport of 900 cubic yards of imported fill compared to 183 truck trips for the transport of 2,200 cubic yards of imported fill analyzed in the recirculated draft EIR. Assuming that five truck trips to import fill could be completed daily, the total site import process could be completed within three weeks rather than four to five weeks as previously analyzed. Therefore, the noise impacts from truck traffic associated with site grading would be less than previously analyzed.

If the proposed home sites are constructed one at a time, the homes on lots 9 and 10 would require a net import of 2,600 cubic yards of fill, which exceeds the 2,200 cubic yards previously analyzed in the recirculated draft EIR by approximately 18 percent, and would result in 217 truck trips compared to 183 truck trips analyzed in the recirculated draft EIR. However, this small increase in truck traffic (34 truck trips) would not substantially increase the noise impact because typically it takes a substantial increase in traffic to increase noise levels by a perceptible amount (such as a doubling of traffic volumes for a 3 decibel increase). Furthermore, the additional 34 truck trips would occur over the course of several weeks during grading activities. Mitigation Measure NOI-1 would still apply to the proposed project, which would reduce Impact NOI-1 to a less than significant level with mitigation.

Hazards and Hazardous Materials

The changes in cut and fill quantities do not alter the project footprint as presented in the recirculated draft EIR or increase the risk of exposure to hazardous materials. Therefore, Impacts HAZMAT-1 and HAZMAT-2 remain unchanged and the same mitigation measures apply to the proposed project.

Transportation

If all of the homes are constructed concurrently, the change in grading quantities would reduce construction-related traffic impacts as less imported fill would be required than previously analyzed. Approximately 75 truck trips would be involved in the transport of 900 cubic yards of imported fill compared to 183 truck trips for the transport of 2,200 cubic yards of imported fill. Assuming that five truck trips to import fill could be completed daily, the total site import process could be completed within three weeks rather than four to five weeks as previously analyzed. Therefore, the number of daily truck trips would remain the same but the duration of truck activity would be shorter and the less than significant traffic impacts from truck traffic associated with site grading would be experienced over a shorter period of time than previously analyzed.

If the homes were constructed one at a time, lots 9 and 10 would require a net import of 2,600 cubic yards of fill, which exceeds the 2,200 cubic yards previously analyzed by approximately 18 percent and would result in 217 truck trips compared to 183 truck trips analyzed in the recirculated draft EIR. However, this small increase in truck traffic (34 truck trips) does not present a substantial increase in the traffic impact from what was previously analyzed. Even with this increase, the project's daily construction truck trips would be substantially less than the daily vehicle trips from project operation, and as the analysis in the recirculated draft EIR shows, project operations would not result in a significant traffic impact. Improvement Measure TRANS-1 would still apply to the proposed project such that truck trips would not occur during peak traffic hours and Impact TRANS-1 would still be less than significant.

Utilities and Service Systems

The changes to the cut and fill quantities would not change the project's demand for utilities and service systems. Impacts UTIL-1 through UTIL-3 remain unchanged and the same mitigation measures still apply to the proposed project.

Hydrology and Water Quality

The changes to the cut and fill quantities do not change the grading plans as presented in the recirculated draft EIR nor the locations of undeveloped land that would be converted to impervious surfaces with implementation of the proposed project from what was previously analyzed. Grading activities would still be required to comply with the NPDES permit requirements and the County's Municipal Code requirements that regulate water quality during construction of the proposed project. The project's impacts remain unchanged.

Land Use and Planning

The revised cut and fill quantities do not change the project's consistency with local land use plans, policies, or regulations from what was previously analyzed. The project's impacts remain unchanged.

Public Services

The changes to the cut and fill quantities do not change the project's demand for public services including public transit, schools, parks, police protection, fire services, hospitals, or public utilities. The project's impacts remain unchanged.

Cultural Resources

The locations of areas to be graded as presented in the recirculated draft EIR remain unchanged although cut and fill quantities have changed. Therefore, the project's potential impacts to cultural resources remain unchanged.

Resource Management District Zoning Text Amendment

The changes to the cut and fill quantities do not affect the analysis of the proposed Resource Management District zoning text amendment. The text of the proposed amendment as well as the project's compliance with the proposed amendment remain unchanged.

Growth Inducement

The changes to the cut and fill quantities do not affect the project's potential for growth inducement as the total amount of development and population associated with the project remains unchanged.

Alternatives

The analysis of alternatives to the proposed project is not affected because as explained above, the changes to the cut and fill quantities would not result in new environmental impacts or increase the severity of previously analyzed impacts. Therefore, there is no need for analysis of additional alternatives to the proposed project.

Other CEQA Considerations

The changes to the cut and fill quantities do not change the project's irreversible commitment to resources, irreversible environmental changes, or potential environmental damage from accidents from what was previously analyzed.

2.4 REVISIONS TO THE RECIRCULATED DRAFT EIR

This section contains the revised text of the recirculated draft EIR. Text added to the recirculated draft EIR is shown in underline format, and deleted text is shown in ~~strikethrough~~.

Due to the nature of the text changes that are presented below, the changes are cited individually rather than in a reproduction of the entire recirculated draft EIR. This presentation of revisions to the recirculated draft EIR is consistent with *State* CEQA *Guidelines* Section 15162 detailing required final EIR contents.

Section 1.0, Introduction, page 1.0-4

1.3.4 Individuals and Organizations

Adams Broadwell Joseph & Cardozo
Jay Beard
Jean-Pierre Bernard
Lila Lynn Bilmes
Mark Brennen
Deke and Corrin Brown
Cotton, Shires & Associates, Inc.
Richard Cole
Donald Coyne
James Goodman

Table 3.0-3
Proposed Earthwork

Area	Cut (cy)	Fill (cy)
Lots 1–4	500	~~200~~2,300
Lots 5–8	~~1,000~~4,700	~~1,000~~700[1]
Lots 9 and 10	~~900~~300	2,900
Lot 11	~~1,300~~1,200	~~1,300~~1,000
TOTAL	~~*3,700*~~*6,700*	~~*5,900*~~*7,600*
Import	~~2,200~~900	

Source: BKF Engineers, ~~2008~~2009. Treadwell &Rollo, Inc, 2009.
[1]Includes 200 cubic yards of drain rock.

3.5.2 Lots 1 through 4

Lots 1 through 4, along Bunker Hill Drive, would require approximately 500 cy of cut and ~~200~~ 2,300 cy of fill earthwork (see **Figure 3.0-14**). A series of stepped cuts would be created to provide the platform necessary to build the homes. No fill slopes or site retaining walls would be needed for these lots because the dwelling units will be fully supported by drilled pier foundations with integrated day-lighting basement retaining walls.

3.5.3 Lots 5 through 8

Lots 5 through 8, along Ticonderoga Drive, would require ~~1,000~~4,700 cy of cut and ~~800~~ 500 cy of fill earthwork (see **Figure 3.0-15**). Any previously identified landslide deposits[1] would be removed from this portion of the site to provide stable slopes for construction. After removal of the landslide materials, the slope in Lots 7 and 8 would be rebuilt using a buttress fill landslide repair keyed and benched into the underlying bedrock. Spoils generated from the excavation will be used as fill, and will not require additional import or export of material other than a minor amount of drainrock for the subdrains associated with the repair. Upon implementation of the landslide mitigation, retaining walls, designed to withstand high lateral earth pressure from adjoining natural materials and/or backfill, as well as from any surcharge loads, would be installed in the rear of lots 5 through 8. These retaining walls would be partially underground. Retaining walls would also be installed in the front of lots 5 and 6 to aide in maintaining the slopes behind the house and the more extensive cut required for lots 5 and 6. These retaining walls would be partially underground. The design of the retaining walls has not been finalized

1 See Section **4.3, Geology and Soils** for more detailed information on landslide deposits on the project site.

Trudie Huygen
Jack Kundin
Russ Levikew
Pamela Merkadeau
Chris Misner
Suzette Murphy
Sam Naifeh
Pacific Gas & Electric
Regional Open Space
San Mateo Highlands Community Association
Les Schlaegel
Shute, Mihaly & Weinberger
Alex Stanculesan
Melissa Wilson
Mark and Gail Wuotila

Section 3.0, Project Description, page 3.0-23

3.5.1 Grading

Grading activities include cut (earth removal) and fill of earthwork; creation of engineered slopes and stepped foundations; installation of retaining walls, and drilled piers. These activities would prepare the lots for the building pads and provide slope stability for the foundation of future homes on the lots.

The average slope of the areas proposed for development is 40 percent. In total, there would be ~~3,700~~6,700 cubic yards (cy) of cut and ~~5,700~~7,600 cy of fill (including a 10 percent allowance for shrinkage, or settling, of dirt). The Project Applicant would use the cut earthwork material as fill on the project site. However, approximately ~~2,000~~700 additional cy of earth and about 200 cy of drain rock would need to be imported on-site for the project. Piers drilled into the underlying bedrock would be installed for each lot to provide slope stability for the future homes that would be built on each lot. A description of the grading plans for lots 1 through 11 and **Table 3.0-3, Proposed Earthwork,** showing a breakdown of total proposed cut and fill amounts for each lot, are provided below.

apply only to the area of the roadway (right-of way) unlike a designated scenic corridor, where policies would apply to all properties within the area of the corridor. The project would not involve changes that would be visible from viewpoints along Polhemus Road nor would the project involve work within the Polhemus Road right-of-way. As shown in **Figure 4.1-13**, the proposed homes would not be visible from Polhemus Road near the intersection with Timberlane Way due to topography and intervening vegetation, nor would they be visible along Polhemus Road between Bunker Hill Drive and Tower Road for the same reasons. The rooflines of the proposed homes on ~~Ticonderoga Drive and~~ Cobblehill Place would be partially visible from Ralston Avenue (which becomes Polhemus Road north of Tower Road and is designated as a scenic road within the City of Belmont), but the homes would be adjacent to existing homes that are currently visible from this viewpoint. In summary, the project's impact to ~~this~~ the Polhemus Road and Ralston Avenue scenic roadways would be less than significant.

Section 4.2, Biological Resources, page 4.2-31

Impact BIO-6: **The implementation of the proposed project would result in the loss of stands of purple needlegrass, which is a sensitive plant community. (*Potentially Significant; Less than Significant with Mitigation*)**

As previously discussed, isolated areas with a high percent cover (greater than 50 percent) of purple needlegrass are present on portions of lots 1 and 8. The stand of purple needlegrass on lot 1 is small (approximately 10 feet by 10 feet) and is surrounded by non-native grass species. The stand of purple needlegrass on lot 8 is approximately 0.03 acre in size and is located in the ~~southeastern~~ southwestern portion of the site, between the oak woodland and areas invaded by iceplant. While pockets of native grasses (such as the small area on lot 1) often occur within non-native grasslands, the stand of purple needlegrass on lot 8 is notable as it is relatively large and has a high percent cover of needlegrass. However, the biological function and value of this stand of native grasses is compromised by the fact that the majority of lots 5–8 were disturbed by grading activities that occurred in the 1950s when the Highlands subdivision was built, that the stand of native grasses is generally bordered by disturbed habitats dominated by non-native plant species (excluding the nearby oak woodland), and that iceplant borders portions of the stand of native grasses and may be encroaching. Nonetheless, the loss of this stand of purple needlegrass would be considered a potentially significant impact. **Mitigation Measure BIO-6** would reduce this impact to a less-than-significant level.

Section 4.4, Other Resource Topics, page 4.4-31

- Generate noise levels in excess of levels determined appropriate according to the County Noise Ordinance standard.

at this time, but would most likely be a solid masonry wall. Cut slopes at a ratio of approximately 4:1 (horizontal to vertical) would be required for lots 5 and 6.

3.5.4 Lots 9 and 10

Lots 9 and 10, at the eastern end of Cobblehill Place, would require ~~900~~ 300 cy of cut and 2,900 cy of fill earthwork (see **Figure 3.0-16**). This site is relatively level, with the existing topography sloping slightly to the northeast. Minor cuts of up to 5 feet and fills of up to 8 feet would be made to create the building pads and the driveways and to remove and replace existing undocumented fill under buildings or flatwork. Retaining walls up to 8 feet in height would be used along the front of the property to retain the fill in the residence and driveway areas. Pier-supported, stepped foundations would support the dwelling units.

3.5.5 Lot 11

Lot 11, at the northeastern end of Cowpens Way, would require ~~1,300~~1,200 cy of cut and ~~1,300~~1,000 cy of fill earthwork (see **Figure 3.0-17**). This site has an existing slope of approximately 2:1 (horizontal to vertical). The site already contains fill that was placed during grading from the existing subdivision development in the surrounding area. Cuts of up to 10 feet below the existing grade would be made to create a stepped building pad and the driveway area and to remove and replace existing undocumented fill under buildings or flatwork. Retaining walls of up to 10 feet in height would be built through the middle of the house lengthwise, as part of the foundation, to retain the cuts for the proposed residence. Pier-supported stepped foundations would support the dwelling units.

3.5.6 Haul Trucks and Routes

The earth materials would be imported from nearby projects in the San Francisco Peninsula. The County does not have weight restrictions for roads, so the haul routes may differ slightly from what is presented below. To Ticonderoga Drive, the haul routes would likely be from Highway 92 to Polhemus Drive north. To Bunker Hill Drive, the haul routes would likely be from Highway 92 and then west to Skyline Boulevard. Given that a typical haul truck can carry approximately 12 cy of earth materials, approximately ~~183~~ 75 trips would be associated with the import of additional earth materials needed for the proposed project.

Section 4.1, Aesthetics, page 4.1-30

View from Polhemus Road – Facing Southwest

Polhemus Road, located ~~to the~~ northeast of the project site is considered a County Scenic Road, per the County General Plan. Visual Quality policies of the General Plan pertaining to scenic roads and corridors

Construction activities would result in short-term noise impacts that would affect the surrounding area. As discussed in **Section 3.0, Project Description** of the EIR, approximately ~~2,200~~900 cubic yards (cy) of earth materials would need to be imported to the project site. Approximately ~~183~~ 75 truck trips would be involved in the transport of this material. The haul routes would take large, heavy-duty dump trucks past residential uses, which are considered sensitive receptors. Trucks associated with grading activities occurring on Bunker Hill Drive would travel to the site on I-280 and enter the site from the west and trucks associated with grading activities along Ticonderoga Drive would travel to the site along Polhemus Road and enter the site from the east. It is anticipated that up to five truck trips to import fill could be completed daily. Therefore, the total site import process could be completed within a timeframe of ~~four to five~~three weeks, depending on the construction schedule, weather, and equipment availability. As a result, associated truck trips could generate short-term noise that would be considered a nuisance to the surrounding community or that may temporarily exceed County noise standards.

Section 4.4, Other Resource Topics, page 4.4-37

Project construction would occur over a period of one year. Construction vehicles would be expected to travel to and from the Ticonderoga Drive sites via Polhemus Road and Highway 92, whereas construction vehicles traveling to and from the Bunker Hill sites would use Highway 92 and Skyline Boulevard. Due to the hillside location of the project, preparation of the building sites would involve cut and fill. As discussed in **Subsection 3.5.1**, cut earthwork materials would be used on site as fill and would not have to be off-hauled. However, about ~~2,200~~900 cubic yard (cy) of fill materials would need to be imported. Given that a typical haul truck can carry approximately 12 cy of earth materials, approximately ~~183~~ 75 truck trips would be associated with the in-haul of fill and drain rock. It is anticipated that up to five truck trips to import fill could be completed daily and the total site import process could be completed within a timeframe of ~~four to five~~three weeks, depending on the construction schedule, weather, and equipment availability. This small number of daily truck trips would not adversely affect the operation of intersections between the worksites and the nearest freeways. Following completion of grading, additional truck movement would be involved with the delivery of construction materials to the project site. However, given the small number of homes proposed, the number of daily truck trips to the site during construction is expected to be small. The impact from construction truck traffic would therefore be less than significant. To further reduce this impact, the following improvement measure is proposed.

Section 4.4, Other Resource Topics, page 4.4-39

The District currently is working toward paying the fee to contribute to the upgrade of the sewer line. ~~Consequently,~~ County Planning staff will inform the Project Applicant that no new connections to the

District would be issued until all fees owed to ~~by~~ the City of San Mateo and the County General Fund ~~until the County fee is~~ are paid.

Section 4.4, Other Resource Topics, page 4.4-50

- Result in or increase traffic hazards or substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

As discussed above, the addition of the proposed project would not generate a substantial amount of motor vehicle trips in the project vicinity. Accordingly, the project would not result in a traffic hazard or an increase in traffic hazards. The project design would add driveways for the proposed homes. The driveways for the proposed homes along Ticonderoga Drive would be adjacent to curved sections of the existing roadway and steep grades. The sight distance from the easternmost property line on the north side of Ticonderoga Drive (lot 8) is approximately 230 feet. According to *A Policy on Geometric Design of Highways and Streets*[2], this is adequate for a design speed of 35 MPH. The posted speed limit on Ticonderoga Drive is 25 MPH. This is not an anticipated safety concern. However, implementation of **Mitigation Measure TRANS-2** would further reduce this impact to a less than significant level. ~~These design features are not expected to create traffic-related hazards. Therefore, the impact is considered less than significant.~~

Mitigation Measure TRANS-2: The Project Applicant shall be required to pay for the installation of advisory traffic signs on Ticonderoga Drive in the vicinity of the proposed homes as determined necessary by the County of San Mateo Department of Public Works.

Section 4.4, Other Resource Topics, page 4.4-56

As discussed above, the project would require approximately ~~2,200~~900 cy of additional fill material that would be imported into the project site, and would potentially include small quantities of unusable fill that could require off-site disposal. The maximum amount of materials would be diverted in all project phases per San Mateo County's Construction and Demolition Ordinance No. 04099, which requires that 100 percent of inert solids (i.e., asphalt, brick, concrete, dirt, etc.) and 50 percent of all other construction and demolition debris be salvaged, reused, or recycled. The solid waste associated with construction would be a one-time disposal and would not significantly affect landfill capacity. Therefore, the project during construction and occupancy is not expected to generate significant amounts of solid waste and

[2] American Association of State Highway and Transportation Officials (AASHTO). 2004. *A Policy on Geometric Design of Highways and Streets*. Exhibit 3-1, page 112.

any associated waste would be sufficiently accommodated by the Ox Mountain landfill.[3] Given this, impacts are not considered significant.

3 Ox Mountain Landfill, 2008.

3.0 COMMENTS ON THE RECIRCULATED DRAFT EIR AND RESPONSES TO COMMENTS

3.1 INDEX TO COMMENTS

As described in **Section 1.0, Introduction,** all comments on the recirculated draft environmental impact report (EIR) received have been coded, and the codes assigned to each comment are indicated on the written communications that follow. All organizations and individuals who commented on the recirculated draft EIR are listed in **Table 3.0-1, Index to Comments,** below.

Table 3.0-1
Index to Comments

Commenter Code	Organization/Individual – Name
SA-1	State Clearinghouse
LA-1	County of San Mateo Department of Public Works
ORG-1	Adams Broadwell Joseph & Cardozo
ORG-2	Committee for Green Foothills
ORG-3	McCracken & Byers LLP
ORG-4	Pacific Gas & Electric
ORG-5	San Mateo Highlands Community Association
I-1	Richard Cole
I-2	Donald Coyne
I-3	James Goodman
I-4	Sam Naifeh

SA: State Agency; LA: Local Agency; ORG: Organization; I: Individual

3.2 RESPONSES TO INDIVIDUAL COMMENTS

This section presents all written and oral comments received on the recirculated draft EIR and responses to individual comments. It is recommended that reviewers use the index to comments on page 3.0-1 to locate comments from specific organizations or persons and the responses to those comments.

The three speakers at the Planning Commission meeting on October 28, 2009 (James Goodman, Lennie Roberts, and Cary Wiest) also submitted written comments. Mr. Goodman's oral comments have been transcribed and included under Comment Letter I-3 as they differ from his written comments. Ms. Roberts and Mr. Wiest's oral comments are the same as their written comments (Comment Letters ORG-2 and ORG-5, respectively). Therefore, their oral comments have not been transcribed.

Insert Comment Letter SA-1

Response to Comment Letter SA-1

Response to Comment SA-1-1

The comment is noted.

Insert Comment Letter LA-1

Response to Comment Letter LA-1

Response to Comment LA-1-1

The comment is noted. Property owners shall own and be responsible for maintenance of all private sanitary sewer laterals and lift pumps in accordance with the County Ordinance Code.

Response to Comment LA-1-2

The comment is noted. The County Planning staff will inform the applicant that no new connections to the Crystal Springs County Sanitation District sewer facilities will be allowed until all fees owed to the City of San Mateo and the County General Fund are paid. The text of the recirculated draft EIR has been revised to reflect this, as shown in **Section 2.0, Project Refinements & Recirculated Draft EIR Text Changes**.

Response to Comment LA-1-3

As discussed below under **Response to Comment ORG-1-33**, the proposed project would not result in a significant traffic hazard along Ticonderoga Drive. However, a mitigation measure has been added to the recirculated draft EIR to require the installation of appropriate signage (see **Section 2.0, Project Refinements & Recirculated Draft EIR Text Changes**).

Insert Comment Letter ORG-1

Response to Comment Letter ORG-1

Response to Comment ORG-1-1

The recent history (last 20 years) describing the various land development proposals put forth by the applicant are presented in Section 1.0, Introduction, of the recirculated draft EIR in order to inform the decision makers and the public regarding previous environmental documentation and review that occurred in conjunction with those applications. While the history of the planning actions for the project parcels is not required to be included in the Draft EIR, the County provides the following to add to the background information for the property:

Prior to 1958: The entire property and adjacent 3-acre site on Polhemus Road, ultimately developed as Hillsborough West Apartments, were zoned R-1, allowing single-family residences with a minimum parcel size of 7,500 square feet (sf) or approximately six parcels per acre.

January 1958: The Board of Supervisors rezoned the adjacent 3-acre parcel (Hillsborough West Apartments) from R-1 to R-3, allowing multiple-family development.

June 1958: The Board of Supervisors rezoned the entire 99-acre parcel to R-E/BD, a residential estates zoning designation allowing for one unit per five acres. The "BD" zoning overlay district was later changed to "SS-107," but it did not change the minimum 5-acre parcel size.

1976: The Board of Supervisors rezoned the property, with the exception of the 11.78-acre area to the RM District. The 11.78-acre portion was retained in the R-E/SS-107 zoning district.

2005: County approves a Certificate of Compliance (Type A) for APN 041-072-030, making the parcel legal.

September 2007: The San Mateo County Board of Supervisors approved a County-initiated rezoning of the 11.78-acre portion of the parcel from a R-E/SS-107 zoning to a R-1/S-81 zoning over a 9,000 sf portion and a RM zoning over an 11.57 acre portion. The County also amended, by Ordinance, the RM District regulations to add a provision requiring, after any land division(s) that a permanent conservation easement be granted to the County that limits the use of lands to uses consistent with open space.

With respect to the current land use designations and zoning of the parcels that make up the project site and its development potential, that information is provided under Subsection 3.3 of the Project Description in the recirculated draft EIR. As stated there, the vast majority of the project site,

approximately 96.71 acres, is currently zoned RM by the County's Zoning Map (the 2007 rezoning of the approximately 12-acre parcel is also discussed in that section). The RM zone allows different uses including single-family dwellings. The density of development allowed within the RM zone varies depending on the physical criteria evaluated specifically for each parcel. The maximum number of dwelling units allowable on the project site has been calculated according to criteria under Sections 6317 and 6318 of the San Mateo County Zoning Regulations (see pages 3.0-6 and 3.0-7 of the recirculated draft EIR). As stated in the recirculated draft EIR, the proposed project would involve a minor zoning change for consistency purposes. The portion of lots 9 and 10 under RM zoning would be rezoned from RM to R-1/S-81 and, after a proposed lot line adjustment, the approximately 2,200 sf portion of the larger parcel (APN 041-101-290) would be rezoned from R-1/S-8 to RM to make its zoning consistent with the remainder of the approximately 92.46-acre RM parcel. The majority of the site would remain zoned as RM and the project would be consistent with proposed zoning. Therefore, impacts related to zoning would be less than significant. The project as proposed is not inconsistent with the requirements of the RM zone.

One of the attachments to Comment Letter ORG-1 questions the density credit allowed for the 0.05-acre parcel 041-072-030. That issue is addressed in the recirculated draft EIR and in the response above.

Response to Comment ORG-1-2

Section 6317A of the County Resource Management (RM) Regulations require the applicant to grant to the County (and the County to accept) a conservation easement limiting the use of the land which is not designated for development under a Master Land Division Plan to open space uses. The applicant proposes to comply with these regulations as a requirement of the requested RM permit for the proposed subdivision. The actual content of the proposed conservation easement will be provided to the County prior to the Planning Commission hearing tentatively scheduled for January 13, 2010, for review by the County for compliance with this regulation prior to the Planning Commission meeting. At this time, the details of the proposed conservation easement are not available. At the time of the granting of the conservation easement to the County, the property owner will still retain ownership of the remainder parcel. While the applicant has stated his wishes to donate the land to a non-profit organization, donation of the land is not a County requirement. Therefore, the decisions of whether to donate the land, when to donate the land, and who to donate the land to are the applicant's to make. No details regarding land donation are available at this time.

The absence of this information does not affect the evaluation of the environmental impacts of the proposed subdivision project because in compliance with the RM Regulations, the parcel designated as

open space will be put under a conservation easement and will not be developed. Therefore, no significant environmental impacts will result from the creation of the open space parcel.

Response to Comment ORG-1-3

Please see **Response to Comment ORG-1-2**. The recirculated draft EIR is consistent in its description of the 92.5 acre parcel which would remain as open space under a conservation easement.

Response to Comment ORG-1-4

As stated previously, Section 6317A of the Zoning Regulations does not require the donation of land to a separate entity, but only requires the property owner to grant a conservation easement to the County and for the County to accept the easement. At the time of the granting of the conservation easement to the County, the property owner will still retain ownership of the open space parcel. The Highlands Recreation District is a potential separate entity to which the land may be donated. While the applicant has stated his wishes to donate the land to a non-profit organization, donation of the land is not a County requirement. Therefore, the details of the potential land donation are not required for compliance with Section 6317A.

Response to Comment ORG-1-5

Please refer to Figure 6c in Appendix 4.3, Revised Geologic Evaluation, of the recirculated draft EIR, which shows a soil cross section for lot 8. As discussed on page 4.3-30 of the recirculated draft EIR, the proposed buttress fill landslide repair "should also remove sufficient driving forces and mitigate further movement of the remaining small piece of the landslide beneath Ticonderoga Drive [after grading], thereby reducing the potential for adverse off-site impacts from the proposed development." The Revised Geologic Evaluation included a quantitative slope stability evaluation of a schematic proposed buttress fill concept, with results indicating that a buttress fill landslide repair would be stable under static conditions and would only experience minor displacement (8 to 9 centimeters) during maximum earthquake loading conditions. A specific buttress fill plan was not provided, since it will be up to the project designer to develop the actual design (size and number of subsurface benches, depth of keyway, etc.) for the project. The schematic proposed buttress fill analyzed was based on current widely accepted methods and is within the standard of practice for Bay Area landslide repairs. Note that this discussion and analysis in the recirculated draft EIR is with respect to the landslide that underlies the western portion of lot 8 in the area where the proposed home would be located.

A second potential landslide or erosion hazard area is present on the eastern portion of lot 8, relating to the steep cut-slope above Ticonderoga Drive in this area. No actual landslides were identified in this area

during the Revised Geologic Evaluation. As stated in the recirculated draft EIR, lot 8 would be larger (than the other residential lots along Ticonderoga Drive) so as to contain this area of this potential landsliding or erosion to provide an access route to the top of the slope for mitigation or regrading of the cut-slope in the unlikely event that a landslide or erosion of the slope in this portion of the parcel occurs, as there is no other route for equipment to access this area. As a result, the property owner would be responsible for repairs rather than the public or non-profit entity to whom the open space parcel is dedicated (if it is dedicated). As no development or ground disturbance is proposed by the project on the eastern portion of the lot, there would be no impact related to this portion of the site.

Response to Comment ORG-1-6

During the March 16, 2009 meeting to develop the scope of the additional geotechnical analysis, all parties agreed that additional subsurface investigation was required only for lots 5 through 8 and not for any of the other lots.

With respect to the other lots, it was agreed that new geologic maps and cross-sections would be prepared for these lots using an updated field-surveyed topographic map. The referenced statements from the meeting transcript refer to the extent of existing fill on these lots. It was agreed upon by all parties at the meeting that the limits of the fill should be identified on a site plan and the relationships of the fill limits to the proposed house footprints should be established. Figures 2c and 2d of the Revised Geologic Evaluation (see Appendix 4.3 of the recirculated draft EIR) provide graphically the extent of the fill and the house footprints, and Figures 6d and 6e show the approximate depth/thickness of the fill based on the existing subsurface information available. For lots 9 and 10, there are six prior test pits within the limits of the lots and three additional prior test pits just beyond the property boundaries that were reviewed. For lot 11, there is one prior test pit within the lot, one test pit outside the limit of the lot, and bedrock outcrops observed in the western portion of the lot. The locations of these test pits are also provided on Figures 2c and 2d.

Much of the concern of Cotton, Shires & Associates (CSA) (geotechnical consultants retained by interested neighbors) with respect to lots 9, 10, and 11 stemmed from the fact that CSA did not know where within each of these lots the proposed homes would be located, especially where the homes would be relative to the artificial fill that had previously been deposited on these lots. That information was provided to CSA and field verification was conducted by Treadwell & Rollo (T&R) (geotechnical firm retained by Impact Sciences, Inc.) and CSA, where it was confirmed that all three home sites were viable

as proposed and that development of these lots would be in general accordance with Bay Area residential hillside development[1].

The proposed residence on lot 9 is located entirely outside the limits of fill. A small portion of the proposed residence for lot 10, and the residence for lot 11 are located within areas of existing fill. As shown on Figures 6d and 6e, which were developed along an orientation of the steepest topography and thickest fill as identified during the surface field mapping, the anticipated depth to bedrock below ground surface at lot 10 is up to 10 feet, and at lot 11 is up to 6 feet. These depths are not beyond the design of ordinary pier and grade beam foundations for hillside residential development and such foundations would successfully mitigate soil creep and settlement of this fill.

The comments concerning "microzoning" reference the need to establish certain zones on the property that should not be developed due to geologic hazards. There was no commitment made to "microzone" these parcels at the meeting nor is "microzoning" required as areas of geologic hazard proposed for development would be mitigated to a less than significant level.

Response to Comment ORG-1-7

The recirculated draft EIR provides analysis of geologic conditions in Section 4.3, Geology and Soils. Geologic conditions at the site have been studied extensively through numerous geotechnical investigations conducted at the project site as discussed on page 4.3-11 of the recirculated draft EIR.

The scope for additional geotechnical investigation conducted for the recirculated draft EIR was approved based on a consensus reached at the March 16, 2009 meeting between T&R; CSA; Impact Sciences, Inc.; San Mateo County Staff, including the County Geologist; the project geotechnical consultant; representatives of the neighborhood associations; and the project applicant. That work was performed by T&R and field-verified by CSA, and information generated by that work was documented in the recirculated draft EIR and was used to describe the potential impacts of the project as well as develop mitigation measures for potentially significant impacts related to site geology. The recirculated draft EIR is detailed and reflects a good faith effort at full disclosure of all project impacts, including impacts related to geology and soils.

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1 There is no published standard for Bay Area residential hillside development, however there exists a standard of practice for geotechnical engineering, which is the standard that most engineers and geologists will design for in a given location (i.e. Bay Area) at a given time. This standard is partially controlled by the California Building Code (CBC), however local jurisdictions can require stricter standards than the CBC.

Response to Comment ORG-1-8

Adequate geotechnical data were generated prior to and during the preparation of the recirculated draft EIR that allowed for the impacts of the project to be fully characterized and disclosed in the recirculated draft EIR. None of the mitigation measures in the recirculated draft EIR are future studies that would be used to characterize the project's environmental impacts. Mitigation Measures GEO-1 and GEO-2b require a site-specific geotechnical investigation to be performed to help inform specific aspects of the homes such as the foundation design, slope configuration, retaining walls, and drainage design. Specific recommendations for these identified geologic hazards will also be provided, and will be based upon and consistent with the intent of the general recommendations provided in the Revised Geologic Evaluation.

While the conduct of a project-specific geotechnical investigation is a standard engineering practice, it is included in the EIR as a mitigation measure mainly to assure the decision makers and the public that this investigation will be completed under the oversight of the County and will ensure that the foundations of the homes and drainage systems are designed appropriately for the project site to minimize the potential for the underlying materials to become unstable and minimize the exposure of people and structures to landslide hazards. Note that the underlying landslide materials beneath two homes would be excavated and replaced with a fully drained conventional buttress fill that is founded in the underlying bedrock.

Response to Comment ORG-1-9

Please see **Response to Comment ORG-1-8** above. CSA confirmed during the field visit that the proposed homes could be built on the specific portions of lots 9, 10, and 11 that are proposed by the applicant. Given that qualified geotechnical consultants confirmed that the site plans as proposed were viable, the EIR's description and evaluation of site grading and tree removal is accurate. To the extent that subsequent design-level geotechnical investigation shows the need for modified grading or slight changes to the project footprint such that additional protected trees are affected, the County will require an amendment to the RM permit that is issued for the project and that amendment will require the applicant to replace protected trees at a 1:1 ratio.

The comment that "the Cobblehill and Cowpens houses are at the top of a ridge that has landslides beneath it" is not accurate. The house sites are at the top of the hillside, in an area underlain by a thin veneer of fill, native soil, and bedrock. No landslides have been identified beneath the building sites. There may be shallow landsliding on the slopes downhill of, and northeast of the lots (outside the area of detailed mapping), but these slides would not impact the proposed houses provided they are supported on foundations bearing in the underlying bedrock as anticipated. No evidence of deep-seated landsliding within the bedrock on this slope was observed during the stereo-paired aerial photograph review, and no

landslides were mapped on these slopes during the prior 1994 Soil and Foundations Systems investigation of the entire site.

No analysis of the project's impacts or the impacts of mitigation measures has been deferred.

Response to Comment ORG-1-10

As discussed under Impact GEO-2 on page 4.3-32 of the recirculated draft EIR, because all of the landslide material on lots 5 and 6 would be removed to prepare the building pads, the project would not cause the adjacent property to become unstable. The geotechnical investigation conducted by T&R concluded that the proposed buttress fill repair solution for lots 7 and 8 would create conditions on the site that would be stable under static conditions and would experience only a small amount of deformation (slope displacements on the order of 8 to 9 centimeters) under maximum seismically loaded conditions.

By supporting the proposed residences on pier and grade beam foundations bearing in the underlying bedrock, the weight of the structures will be transferred to the bedrock, and will not cause loading of the surficial soils or fills that could result in slope instability either on- or off-site. In addition, surface drainage improvements and subsurface intercept drains associated with the buttress for lots 7 and 8, and subsurface drains behind new retaining walls will increase the overall stability of the site and neighboring properties.

The recirculated draft EIR includes a mitigation measure (Mitigation Measure GEO-1, third bullet on page 4.3-31) which is to ensure that project site runoff does not mobilize new landslides in the thin veneer of soils mantling bedrock on the slope below lots 1 through 4.

Response to Comment ORG-1-11

The recirculated draft EIR states that the project is feasible from a geologic perspective, that all 11 home sites can be safely developed and that the construction will not involve any measures or activities beyond the standard design or construction for Bay Area residential hillside development and buttress fill landslide repair. The project as proposed and mitigated would not result in any significant impacts to the environment, including those related to Geology and Soils. According to the CEQA Guidelines, the decision-making body for this project, the Board of Supervisors, must review, consider, and certify the final EIR prior to project approval. The project would only be approved after it has been determined that the final EIR has been completed in compliance with CEQA.

Response to Comment ORG-1-12

The comment is noted. Please see **Response to Comment ORG-1-11.**

Response to Comment ORG-1-13

Geotechnical subsurface exploration locations on the subject lots are documented on pages 4.3-11 through 4.3-16 and boring locations are depicted in Figures 4.3-2 through 4.3-5 of the recirculated draft EIR. As shown in the graphics, between previous geotechnical studies and the latest geotechnical investigation completed in 2009 for this EIR, a total of two borings were completed for lots 1 through 4, 13 borings and test pits were completed for lots 5 through 8, nine test pits for lots 9 and 10, and two test pits for lot 11. This data forms the basis of the analysis in the recirculated draft EIR. Please see **Response to Comment ORG-1-6** above which shows that adequate information for lots 9, 10, and 11 was available to evaluate the project's impacts. Analysis of the project's impacts or the impacts of mitigation measures has not been deferred to the design-level geotechnical investigation. The design-level studies will be performed to develop the specific bedrock strength parameters to design the depth and size of foundation elements and site retaining walls for each lot to account for the highly variable nature of this bedrock unit, as has been done on many other projects including, as the commenter references, projects on the San Mateo flatlands, where the necessary pilings under the houses could vary between 10 and 20 feet deep.

Response to Comment ORG-1-14

As described above in **Response to Comment ORG-1-6**, the building placement is known and has been provided on Figure 2d of the Revised Geologic Evaluation. In addition, based on the site topography and data from prior test pits, it is anticipated that the depth to bedrock at this site is up to about 6 feet below the existing ground surface. The house will be supported on a pier and grade beam foundation, penetrating the fill and gaining support in the underlying bedrock.

Response to Comment ORG-1-15

Polhemus Road begins at the intersection of Tower Road and extends north from that point. South of the Tower Road intersection, the roadway is named Ralston Avenue and is within the jurisdiction of the City of Belmont. As discussed in Section 4.1, Aesthetics, of the recirculated draft EIR and shown in Figures 4.1-13 and 4.1-14, views from Polhemus Road of the proposed Cobblehill Place homes would be screened by intervening vegetation, including trees along Polhemus Road, between Tower Road and Ticonderoga Drive, and along Ticonderoga Drive. The proposed home on Cowpens Way is completely screened from Polhemus Road by topography as it is located further west beyond the ridge where Cobblehill Place is located.

With respect to views from Ralston Avenue, Figure 4.1-17 shows an existing view of the project site from a location along Lakewood Circle just east of Ralston Avenue. The recirculated draft EIR noted in error that the front elevations of the proposed homes on lots 5 through 8 on Ticonderoga Drive would be visible from this location. Upon closer inspection, it has been determined that views of the Ticonderoga Drive homes will not be available to motorists driving north on Ralston Avenue due to an intervening hill between the viewer and the homes. Only the roofline of the homes on Cobblehill Place would be visible from Ralston Avenue and this view would be similar to the views of other homes on the hillsides adjoining the roadway. Therefore there would be a less than significant impact to views from Ralston Avenue.

With respect to Crown Court and Timberlane Way, publically accessible viewpoints on county roadways were selected rather than private backyards from which photographs of the project site were taken. As these photographs (Figures 4.1-14 through 4.1-16) show, the project homes would not be visible from these roadways.

Because the photographs provided in the EIR and text clearly show that most of the project homes would not be visible from the publically accessible areas along the major roadways in the project vicinity, visual simulations were not determined to be necessary.

Response to Comment ORG-1-16

The County has not designated a scenic corridor for Polhemus Road. The County applies policies pertaining to scenic corridors only to areas so designated. Even if the County requires conformance with the Scenic Corridor policies for development visible from a County Scenic Road, the project would not involve changes that would be visible from viewpoints along Polhemus Road nor would the project involve work within the Polhemus Road right-of-way.

The conclusion remains that the impact to the Polhemus Road scenic road would be less than significant as only the proposed homes on Cobblehill Place would be partially visible from a portion of Ralston Avenue and they would be of similar scale to the adjacent homes that are currently visible.

Response to Comment ORG-1-17

For reasons presented in **Response to Comment ORG-1-15** above, the proposed Cobblehill Place and Cowpens Way homes would not be visible to incoming motorists along Polhemus Road. Only the rooftops of homes on Cobblehill Place would be visible to motorists traveling north on Ralston Avenue, as is acknowledged in the recirculated draft EIR.

The view of Cobblehill Place and Cowpens Way from Crown Court provided in Figure 4.1-16 in the recirculated draft EIR was selected because it is a publicly accessible viewpoint that shows the project site.

Response to Comment ORG-1-18

The analysis of visual impacts provided in Section 4.1, Aesthetics, of the recirculated draft EIR, is based on site reconnaissance and photos taken from various viewpoints. The photos used for the visual simulations shown in Figures 4.1-5, 4.1-9, 4.1-10, and 4.1-11 in the recirculated draft EIR were taken with a 50 mm lens. The remaining photos were taken with a 35 mm lens and the relevant portions of the project site (locations of the proposed homes) are included in the frame of the photos provided in Figures 4.1-13 through 4.1-17 of the recirculated draft EIR.

Response to Comment ORG-1-19

The comment is noted. An adequate number of photographs and visual simulations are included in the recirculated draft EIR for the decision makers to understand the potential visual impacts of the proposed project.

Response to Comment ORG-1-20

An adequate range of alternatives is included in the recirculated draft EIR. The project would result in potentially significant impacts to biological resources including woodrats, nesting birds, special status bat species (all lots); California red-legged frog (lot 11 only); protected trees (all lots); willow scrub habitat (lot 11 only); purple needlegrass (lot 8 only); wetlands (lot 11 only); landslide hazards (lots 7 and 8 only); hazard from unstable geologic unit (all lots); soil erosion (all lots); seismic groundshaking and expansive soils (all lots); construction phase air quality (all lots); high noise levels during construction (all lots); exposure to wildland fires (all lots); exposure to hazardous materials during construction (all lots); and water quality impacts from potential sewage overflows (all lots). All of these impacts would be reduced to a less than significant level with the implementation of the proposed mitigation measures. Therefore, the proposed project would not result in any impact that could not be mitigated to a less than significant level (i.e., a significant and unavoidable impact).

Consequently, the EIR analyzes alternatives that address potentially significant (as opposed to significant and unavoidable) impacts of the proposed project. In addition to two No Project alternatives, the draft EIR includes an alternative project scheme (Alternative 3) that eliminates the four homes along Ticonderoga Drive to avoid construction in an area with landslides and proposes to build four additional homes at Cobblehill Place; and a reduced density alternative (Alternative 4) that proposes to build four

homes at Cobblehill Place and four along Bunker Hill Road to avoid construction along Ticonderoga Drive in an area with landslides and to eliminate impacts on biological resources that stem from developing lot 11. Because the majority of the impacts of the proposed project are related to geology and biological resources, the alternatives analyzed in the recirculated draft EIR were specifically designed to address the impacts of the proposed project in these key resource areas.

Response to Comment ORG-1-21

As discussed on pages 6.0-10 through 6.0-14 of the recirculated draft EIR, Alternative 3 (Alternative Project Scheme) is proposed specifically to reduce the potentially significant impact associated with development in areas with known landslides on Ticonderoga Drive. The six residences extending down the crest of the ridge from the end of Cobblehill Place would be accessed by an extension of the roadway. Based on the current topographic map of this area, there is approximately 75 feet of vertical relief from the end of Cobblehill Place to the central portion of the lowest two lots (lots 5 and 6 depicted in Figure 6.0-2 of the recirculated draft EIR) over a distance of about 300 feet. This relationship indicates that a proposed access road could be constructed with a gradient of about 4:1, or about 14 degrees. From a geotechnical standpoint, a roadway this steep may be developed.

In addition, these alternative lots are located in an area underlain by Franciscan assemblage sandstone overlain by colluvium and native soil. No evidence of deep-seated landsliding on this slope was observed during the aerial photograph review which was performed as part of the Revised Geologic Evaluation. The construction of new homes on slopes with these gradients using pier and grade beam foundations gaining support in the underlying sandstone would not be beyond the standard for current Bay Area hillside residential development.

The recirculated draft EIR discusses that Alternative 3 would result in greater visual impacts from off-site viewing locations than the current proposed project, but the effect would still be less than significant. Regarding biological impacts, the recirculated draft EIR discusses that mitigation measures to reduce the potentially significant impact relative to the loss of stands of purple needlegrass for the proposed project would apply to Alternative 3. Additionally, Alternative 3 would avoid the removal of five protected trees on the Ticonderoga lots. Therefore, Alternative 3 would reduce a potentially significant impact of the proposed project which is development in an area with known landslides but this alternative could result in additional and potentially greater impacts of its own. Pursuant to Section 15126.6(d) of the CEQA Guidelines, if an alternative would cause significant effects in addition to those that would be caused by the proposed project, the significant effects shall be discussed, but in less detail than the significant effects of the proposed project.

Response to Comment ORG-1-22

As discussed on page 6.0-16 of the recirculated draft EIR, Alternative 4 (Reduced Density Alternative) would result in a greater aesthetic impact to views from Crown Court, however, the effect would still be less than significant as only the rooflines of four homes on Cobblehill Place would be visible. The rooflines of adjacent homes on Cobblehill Place are currently visible from Crown Court, therefore Alternative 4 would not substantially degrade the visual character or alter scenic views. As noted in **Response to Comment ORG-1-20**, the Reduced Density Alternative was not designed to address significant visual impacts (as the project would not have such impacts), but to address project impacts related to geology and biological resources.

Response to Comment ORG-1-23

As discussed on page 3.0-1 of the recirculated draft EIR, the primary objective of the proposed project is the development of 11 single-family homes and the preservation of over 90 acres of open space. CEQA Guidelines Section 15126.6(c) provides that an EIR shall include a range of alternatives that would "feasibly accomplish most of the basic objectives of the project." The preservation of open space is a basic objective (and not a byproduct) of the proposed project which could not be accomplished at a comparable scale at an off-site location. In its comments on the recirculated draft EIR (see comments ORG-1-2 and ORG-1-3 regarding open space), Commenter ORG-1 acknowledges that open space is an integral part of the project and does not describe it as a byproduct of the subdivision.

Response to Comment ORG-1-24

Please see **Response to Comment ORG-1-20**.

Response to Comment ORG-1-25

The interaction between geology and hydrology was considered in the recirculated draft EIR in the evaluation of the stability of the lots (Impact GEO-1). In view of the thin layer of soil mantling bedrock on lots 1 through 4 and the proximity of a landslide near these lots, the EIR includes a mitigation measure (page 4.3-31) that requires a surface drainage system for each lot along Bunker Hill Road so that stormwater discharge from the site does not destabilize the landslide. The EIR also includes a mitigation measure to install subsurface drainage galleries to control flow of groundwater and reduce the potential for slope instability for all lots (page 4.3-31).

The effects of improperly controlled runoff are also discussed in the recirculated draft EIR under Impact GEO-2 on page 4.3-32 and are listed to include foundation heave and/or settlement, erosion, gullying,

ponding, and potential slope instability. A requirement was added to Mitigation Measure GEO-2b related to surface water hydrology. Due to the proposed on-site bioretention/treatment planters and the adequacy of the existing storm drain system to accommodate runoff flows from the project (as discussed on page 4.4.-40 of the recirculated draft EIR), a performance standard with respect to control and discharge of site stormwater is not necessary.

Response to Comment ORG-1-26

A Certificate of Compliance (Type A) was approved for APN 041-072-030, making the parcel legal. The Certificate of Compliance application was reviewed according to the procedure established by Section 7134 of the County's Subdivision Regulations, which includes a review of the land division history and regulations applicable at the time of the parcel's creation. At the time of the approval, it was determined that the property complies with the State of California Subdivision Map Act and the San Mateo County Subdivision Ordinance. Every legal parcel in the County has a minimum of one density credit regardless of size or physical constraint(s). The proposed lot line adjustment essentially combines the area of this parcel with the remainder parcel and results in a reconfigured parcel at the end of Cobblehill Place, containing one density credit.

Response to Comment ORG-1-27

The Subdivision Regulations define a Lot Line Adjustment as a shift, rotation, or movement of an existing line between two or more adjacent parcels, where the land taken from one parcel is added to an adjacent parcel and where the adjustment does not result in a greater number of parcels than originally existed.

The applicant proposes a Lot Line Adjustment between APN 041-072-030 (Parcel A), currently 2,178 sf in size, and APN 041-101-290 (Parcel B), currently 96.92 acres in size. The proposed Lot Line Adjustment would move the southern property line of Parcel A in a southeasterly direction to form the rear and side property lines of the proposed lot 10 at the base of Cobblehill Place. The Lot Line Adjustment transfers 96.51-acres from Parcel B to Parcel A, resulting in much larger Parcel A (now 96.51-acres) and a much smaller Parcel B (now 17,995 sf.). Parcel A would be subsequently subdivided into ten residential lots and one remainder parcel as described below. Parcel B would carry the designation of Lot 10 on the development plan. The lot line adjustment would result in the same number of parcels that currently exist, two.

Response to Comment ORG-1-28

Please see **Response to Comment ORG-1-5**.

Response to Comment ORG-1-29

Under the County's Significant Tree Ordinance, for areas that are zoned RM, as discussed on page 4.2-20 of the recirculated draft EIR, Section 6324.2(j) of the Site Design Criteria under the RM District Development Review Criteria applies and that section provides that "removal of living trees with trunk circumference of more than 55 inches measured 4 ½ feet above the average surface of the ground is prohibited, except as may be required for development permitted under this Ordinance." Removal of these protected trees associated with the proposed development is permitted under the Zoning Regulations. A total of seven protected trees are within the development footprint of the project and will be replaced consistent with the County requirement of a 1:1 replacement ratio.

While trees with smaller trunk diameters would also be removed, those are not considered protected under the County Zoning Ordinance and therefore will not be replaced. The loss of the smaller trees on the 11 residential lots would not substantially reduce the oak woodland habitat because of the extent of oak woodland habitat in the project area. Furthermore, the proposed project would permanently protect large areas of oak woodland by placing a conservation easement on the 12th parcel of the proposed project (open space).

Response to Comment ORG-1-30

See **Response to Comment ORG-1-29** above. All trees over 12 inches in diameter measured 4 ½ feet above ground surface proposed for removal were identified by the applicant and were submitted in list format to the County Planning Department. The Planning Department staff identified seven trees that required replacement in conformance with the RM District requirements for tree protection. The County ordinance does not consider smaller trees as protected and therefore the draft EIR did not include a description of all trees to be removed. The applicant proposes to replace each of the seven protected trees with a 15-gallon replacement tree. In addition, Mitigation Measure AES-1b requires the planting of four 24-gallon trees, bringing the total number of replacement trees to 11 trees. The planting of 11 trees adequately mitigates the impacts of the removal of both protected and unprotected trees.

The recirculated draft EIR includes a mitigation measure (Mitigation Measure BIO-3) to develop a tree replacement plan which will be required to include measures to protect oak and other trees from damage during construction by installing protective fencing, and other measures. The plan will also include a list of criteria and performance standards to maintain and monitor tree replacement sites to measure success and contingency measures in case replacement efforts are not successful (see page 4.2-29 of the recirculated draft EIR).

Response to Comment ORG-1-31

Project construction is expected to extend over two years. The reference to phases in Mitigation Measure AQ-1 is essentially a reference to the two years of construction.

Response to Comment ORG-1-32

As discussed on pages 4.4-44 and 4.4-45 of the recirculated draft EIR, because the project would not generate emissions in excess of BAAQMD thresholds, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment. The construction emissions generated by on-site grading activities from the Ascension Heights project would not combine with those generated by the construction of this project because the construction schedules may not necessarily overlap and more importantly the portion of the project site (Bunker Hill Drive homes) that is closest to the Ascension Heights project site is at least 0.4 mile from the Ascension Heights project which is located near the intersection of Bel Aire Drive and Ascension Drive on the east side of Polhemus Road.

Response to Comment ORG-1-33

The project proposes to add only four single-family homes along Ticonderoga Drive which would be expected to generate very limited need for guest parking and associated pedestrian movement. The sidewalk along the northern edge of Ticonderoga Drive will be extended east up to the home on lot 8. Currently parking is not restricted on either side of Ticonderoga Drive. The sight distance from the easternmost property line on the north side of Ticonderoga Drive (lot 8) is approximately 230 feet. According to *A Policy on Geometric Design of Highways and Streets*[2], this is adequate for a design speed of 35 MPH. The posted speed limit on Ticonderoga Drive is 25 MPH. This is not an anticipated safety concern. Please also see **Response to Comment LA-1-3**.

Response to Comment ORG-1-34

As discussed in Section 4.4, Other Resource Topics, and shown in Figures 3.0-11 through 3.0-14, in the recirculated draft EIR, the proposed homes, would have rear elevation heights ranging from 26 to 30 feet. The rooflines of the proposed homes on Cobblehill Place and Cowpens Way would be visible from off-site locations with the remaining elevations screened by vegetation.

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[2] American Association of State Highway and Transportation Officials (AASHTO). 2004. *A Policy on Geometric Design of Highways and Streets*. Exhibit 3-1, page 112.

Response to Comment ORG-1-35

Please refer to the descriptions and impact analyses of bio-retention planters as proposed for each lot under Impact AES-2 in Section 4.1, Aesthetics, of the recirculated draft EIR.

Response to Comment ORG-1-36

The patch of purple needlegrass is present in the southwestern portion of lot 8. A large portion of the needlegrass patch is within the footprint of the proposed home and driveway that would serve the home. Therefore, elimination of the eastern portion of lot 8 from the home site would not avoid the impact to purple needlegrass.

The mitigation measure for the loss of the plant species includes restoration of non-native plant areas adjacent to the serpentine grassland to support native grasses (see page 4.2-32 of the recirculated draft EIR). The proposed mitigation measure will adequately address the impact to the plant species.

Response to Comment ORG-1-37

Please see **Section 4.0, Mitigation Monitoring and Reporting Program**, in this final EIR.

Insert Comment Letter ORG-2

Response to Comment Letter ORG-2

Response to Comment ORG-2-1

As previously discussed, the applicant proposes to comply with the requirements of Section 6317A and 6318 of the RM regulations by granting a conservation easement to the County as a requirement of the requested RM permit for the proposed subdivision and requested density bonuses. Therefore, the recordation of the conservation easement would be required prior to recordation of the final subdivision map. At the time of the granting of the conservation easement to the County, the property owner will still retain ownership of the remainder parcel. The transfer of ownership or donation of the remainder parcel to a separate entity is not required, and therefore not regulated, by the County. No details regarding land transfer or donation are available at this time.

Response to Comment ORG-2-2

See **Response to Comment ORG-2-1** above.

Response to Comment ORG-2-3

As previously discussed, at the time of the granting of the conservation easement to the County, the property owner will still retain ownership of the remainder parcel. Therefore, only the owner (not the County) can donate the land to a separate entity. The transfer of ownership or donation of the remainder parcel by the property owner to a separate entity is not required, and therefore not regulated, by the County. Regarding the question of the applicant's liability after the transfer of the property to a new owner, this is a legal question and outside of the purview of this CEQA document.

Response to Comment ORG-2-4

The actual content of the proposed conservation easement will be provided to the County by the applicant prior to the Planning Commission hearing (tentatively scheduled for January 13, 2010), for review by the County for compliance with the RM regulations prior to the Planning Commission meeting. The proposed conservation easement will be provided as an attachment to the staff report prepared for the Planning Commission hearing. A staff report will be sent to the commenter.

Insert Comment Letter ORG-3

Response to Comment Letter ORG-3

Response to Comment ORG-3-1

The comment is noted.

Insert Comment Letter ORG-4

Response to Comment Letter ORG-4

Response to Comment ORG-4-1

The comment is noted.

Response to Comment ORG-4-2

Environmental impacts associated with extension of utility service to the proposed project are discussed on page 4.4-55 of the recirculated draft EIR.

Response to Comment ORG-4-3

The comment is noted.

Insert Comment Letter ORG-5

Response to Comment Letter ORG-5

Response to Comment ORG-5-1

The recirculated draft EIR adequately analyzes and discloses all significant environmental impacts of the project. For potentially significant impacts, it presents recommended mitigation measures and alternatives that would reduce those impacts to a less than significant level. Please see **Responses to Comments ORG-5-2** through **-8** which clearly show that the EIR is adequate as a disclosure document.

Response to Comment ORG-5-2

Please see **Response to Comment ORG-1-6.**

Response to Comment ORG-5-3

Please see **Responses to Comments ORG-1-5** and **ORG-1-10.**

Response to Comment ORG-5-4

Please see **Response to Comment ORG-1-2.**

Response to Comment ORG-5-5

Please see **Response to Comment ORG-1-25.**

Response to Comment ORG-5-6

Please see **Responses to Comments ORG-1-15** and **ORG-1-16.**

Response to Comment ORG-5-7

Please see **Response to Comment ORG-1-5.**

Response to Comment ORG-5-8

The recirculated draft EIR mentions that the Highlands Recreation Center, a potential future owner of the remainder parcel, may use a portion of the open space for additional parking. The potential use of a portion of the remainder parcel as a parking lot is not currently proposed and is not part of the project which is the subject of the recirculated draft EIR. As previously discussed, the transfer of ownership or donation of the remainder parcel to a separate entity is not required, and therefore not regulated, by the County. Likewise, the use of the parcel after ownership is transferred is also not regulated by the County,

so long as the future owner(s) comply with the terms of the conservation easement. No further details regarding land donation or land use after donation are available at this time.

Response to Comment ORG-5-9

The comment is noted.

Response to Comment ORG-5-10

Please see **Responses to Comments ORG-1-9, ORG-1-10,** and **ORG-1-11**.

Response to Comment ORG-5-11

Please see **Response to Comment ORG-1-16**.

Response to Comment ORG-5-12

Please see **Responses to Comments ORG-1-8, ORG-1-9, ORG-1-10,** and **ORG-1-11**.

Response to Comment ORG-5-13

Please see **Response to Comment ORG-1-21**.

Insert Comment Letter I-1

Response to Comment Letter I-1

Response to Comment I-1-1

The comment is noted. The recirculated draft EIR has been revised to include Richard Cole in the list of individuals and organizations that commented on the December 2008 draft EIR (see **Section 2.0, Project Refinements & Recirculated Draft EIR Text Changes**). Mr. Cole's comments were considered and reflected in the edits contained in the recirculated draft EIR. When the requested information was not provided, it was because the information is outside of the purview of the draft EIR. However, when an entire draft EIR is revised and recirculated (as was done with this EIR), CEQA states that the lead agency does not have to provide specific responses to the comments submitted on the previous draft EIR (CEQA Guidelines Section 15088.5(f)(1)).

Response to Comment I-1-2

Please see **Response to Comment ORG-1-2.**

Response to Comment I-1-3

Analysis of the proposed Resource Management (RM) District zoning text amendment is provided in Section 4.5, Resource Management District Zoning Text Amendment, of the recirculated draft EIR. Interested parties were provided an opportunity to comment on the proposed zoning text amendment during the 45-day public review period for the December 2008 draft EIR and the 57-day public review period for the recirculated draft EIR. The recirculated draft EIR has been prepared in accordance with and in fulfillment of CEQA requirements.

Response to Comment I-1-4

Please see **Response to Comment ORG-1-1.**

Response to Comment I-1-5

Please see Section 4.3, Geology and Soils, in the recirculated draft EIR, which provides analysis based on the supplemental geotechnical investigation conducted by Treadwell & Rollo. The scope of the supplemental geotechnical investigation was agreed upon at a March 16, 2009 meeting by Treadwell & Rollo; Cotton, Shires & Associates; Impact Sciences, Inc.; San Mateo County Staff, including the County Geologist; the project geotechnical consultant; representatives of the neighborhood associations; and the project applicant. Please also see **Responses to Comments ORG-1-8, ORG-1-9, ORG-1-10, ORG-1-11,** and **ORG-1-13.**

Response to Comment I-1-6

Mr. Cole's comments on the December 2008 draft EIR were addressed in the recirculated draft EIR as noted above under **Responses to Comments I-1-1** through **I-1-5**.

Insert Comment Letter I-2

Response to Comment Letter I-2

Response to Comment I-2-1

The County considers encroachments, related nuisances, and the removal of such encroachments to be a civil issue between property owners. Construction on another property owner's land would require consent of that property owner and would be subject to Planning and Building Department permitting requirements, including zoning development standards.

Regarding liability for encroachment-related nuisances, this is a legal question outside of the purview of this CEQA document.

Insert Comment Letter I-3

Response to Comment Letter I-3

Response to Comment I-3-1

The comment is noted.

Response to Comment I-3-2

As discussed in Section 6.0, Alternatives, of the recirculated draft EIR on page 6.0-6, Alternative 2 "would be expected to include up to nine housing units based on consistency with current zoning and economic feasibility for site acquisition and development." Under current zoning, the maximum potential density of the site is nine dwelling units, given the six density credits for APN 041-101-290, two density credits for an 11.78-acre area rezoned from RE/SS-107 to RM in 2007, and one density credit from the approved Certificate of Compliance for APN 041-072-030 (see Figure 3.0-3, Existing Zoning and Density Credits, in the recirculated draft EIR). The proposed project would be eligible for two density bonuses as a result of approval of the proposed RM District Zoning Text Amendment, which is not a component of Alternative 2. The development of Alternative 2 would occur along Bunker Hill Drive and Ticonderoga Drive and would be subject to the same geological, biological, and aesthetic constraints that apply to the proposed project. As noted for the proposed project (see **Responses to Comments ORG-1-9, ORG-1-10 and ORG-1-11**), using state of the art hillside engineering techniques construction of homes on these lots is viable.

Response to Comment I-3-3

The comment is noted.

Response to Comment I-3-4

Construction of the four homes along Ticonderoga Drive is not expected to extend over a long period of time. Furthermore, Mitigation Measure AQ-1 will be implemented by the project to minimize construction phase diesel emissions. This mitigation measure requires the use of construction equipment that meets EPA certification standards for clean technology.

Response to Comment I-3-5

The comment is noted.

Response to Comment I-3-6

The comment is noted. Please see **Responses to Comments ORG-1-6, ORG-1-9, ORG-1-11,** and **ORG-1-21.**

Response to Comment I-3-7

As discussed on page 1.0-3 of the recirculated draft EIR and in **Section 1.0, Introduction** of this final EIR, comments received on the December 2008 draft EIR were addressed in the recirculated draft EIR, as appropriate, and appear as redline/strikeout. County staff responded to Mr. Goodman's comment during the October 28, 2009 planning commission meeting.

Response to Comment I-3-8

As discussed on pages 4.1-31 and 4.1-36 of the recirculated draft EIR, although views of the project site from Lakewood Circle would be altered by development along Ticonderoga Drive and Cobblehill Place, the open space visible along Ticonderoga Drive is not characteristic of a scenic view (e.g., a picturesque ridgeline, open bay waters, distinctive urban skyline or major landmarks within the sight distance) and Cobblehill Place is currently developed with residential uses located directly adjacent to the proposed development. The proposed project would offer views consistent with the current landscape visible from Lakewood Circle. As no scenic views would be altered by the proposed project and because the project site is located in an area that is already developed with residential uses, the proposed project would not have an adverse effect on scenic views nor would it degrade visual character.

Insert Comment Letter I-4

Response to Comment Letter I-4

Response to Comment I-4-1

The comment is noted. Notices were reissued to interested parties on September 25, 2009, and the public review period was extended by 12 days.

Response to Comment I-4-2

Mr. Naifeh stated that County consultation to gain a full understanding of CSA's concerns, as outlined at the geology meeting of March 16, 2009, was not completed. All agreements reached at the March 16, 2009 meeting have been fulfilled. County Planning Staff has responded to Mr. Naifeh's email requesting more detail regarding this issue, specifically asking Mr. Naifeh to cite page(s) of the transcript as necessary when referencing points of consensus from the meeting of March 16, 2009. Also see **Response to Comment ORG-1-6**.

Response to Comment I-4-3

Please see **Response to Comment I-4-1**.

4.0 MITIGATION MONITORING AND REPORTING PROGRAM

The California Environmental Quality Act (CEQA) requires that a Lead Agency establish a program to monitor and report on mitigation measures adopted as part of the environmental review process to avoid or reduce the severity and magnitude of potentially significant environmental impacts associated with project implementation. CEQA (Public Resources Code Section 21081.6 (a) (1)) requires that a Mitigation Monitoring and Reporting Program (MMRP) be adopted at the time that the public agency determines to approve a project for which an EIR has been prepared, to ensure that mitigation measures identified in the EIR are fully implemented.

The MMRP for the Highland Estates project is presented in **Table 4.0-1, Mitigation and Monitoring Reporting Program**. **Table 4.0-1** includes the full text of project-specific mitigation measures identified in the final EIR. The MMRP describes implementation and monitoring procedures, responsibilities, and timing for each mitigation measure identified in the EIR, including:

Significant Impact: Identifies the Impact Number and statement from the final EIR.

Mitigation Measure: Provides full text of the mitigation measure as provided in the final EIR.

Monitoring/Reporting Action(s): Designates responsibility for implementation of the mitigation measure and when appropriate, summarizes the steps to be taken to implement the measure.

Mitigation Timing: Identifies the stage of the project during which the mitigation action will be taken.

Monitoring Schedule: Specifies procedures for documenting and reporting mitigation implementation.

The County of San Mateo may modify the means by which a mitigation measure will be implemented, as long as the alternative means ensure compliance during project implementation. The responsibilities of mitigation implementation, monitoring, and reporting extend to several County departments and offices. The manager or department lead of the identified unit or department will be directly responsible for ensuring the responsible party complies with the mitigation. The Planning and Building Department is responsible for the overall administration of the program and for assisting relevant departments and project managers in their oversight and reporting responsibilities. The Planning and Building Department is also responsible for ensuring the relevant parties understand their charge and complete the required procedures accurately and on schedule.

Table 4.0-1
Mitigation Monitoring and Reporting Program

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Action(s)	Mitigation Timing	Monitoring Schedule
AESTHETICS				
Impact AES-1: The proposed project would alter project views but would not obstruct scenic views from existing off-site and residential areas or adversely affect scenic views from a designated scenic route.	**Improvement Measure AES-1a:** The Project Applicant shall provide "finished floor verification" to certify that the structures are actually constructed at the height shown on the approved plans. The Project Applicant shall have a licensed land surveyor or engineer establish a baseline elevation datum point in the vicinity of the construction site. Prior to the below floor framing inspection or the pouring of concrete slab for the lowest floors, the land surveyor shall certify that the lowest floor height as constructed is equal to the elevation of that floor specified by the approved plans. Similarly, certifications of the garage slab and the topmost elevation of the roof are required. The application shall provide the certification letter from the licensed land surveyor to the Building Inspection Section.	County of San Mateo Planning and Building Department Shall oversee compliance with approved height of construction	Project design and review process	Confirm and document during building permit review and project construction
	Improvement Measure AES-1b: The Project Applicant shall plant a total of four (4) trees (minimum 24-gallon each), one directly in front of each home on lots 5 through 8 to soften and screen views of the new homes from off-site locations. These trees will be in addition to the seven (7) 15-gallon replacement trees included in the proposed project.	County of San Mateo Planning and Building Department Shall oversee tree placement	Project design and review process and during construction	Confirm and document prior to completion of construction
Impact AES-2: The proposed project would construct single-family residences on an undeveloped site in a residential neighborhood but would not degrade the existing visual character of the site.	**Improvement Measure AES-2:** Construction contractors shall minimize the use of on-site storage and when necessary store building materials and equipment away from public view and shall keep activity within the project site and construction equipment laydown areas.	County of San Mateo Planning and Building Department Shall oversee monitoring of construction activities	During construction	Confirm and document during construction

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Action(s)	Mitigation Timing	Monitoring Schedule
BIOLOGICAL RESOURCES				
Impact BIO-2: The proposed project would result in a substantial adverse effect on special-status wildlife species.	**Mitigation Measure BIO-2a:** No earlier than 30 days prior to the commencement of construction activities, a survey shall be conducted to determine if active woodrat nests (stickhouses) with young are present within the disturbance zone or within 100 feet of the disturbance zone. If active woodrat nests (stickhouses) with young are identified, a fence shall be erected around the nest site adequate to provide the woodrat sufficient foraging habitat at the discretion of a qualified biologist and based on consultation with the CDFG. At the discretion of the monitoring biologist, clearing and construction within the fenced area would be postponed or halted until young have left the nest. The biologist shall serve as a construction monitor during those periods when disturbance activities will occur near active nest areas to ensure that no inadvertent impacts on these nests will occur. If woodrats are observed within the disturbance footprint outside of the breeding period, individuals shall be relocated to a suitable location within the open space by a qualified biologist in possession of a scientific collecting permit. This will be accomplished by dismantling woodrat nests (outside of the breeding period), to allow individuals to relocate to suitable habitat within the adjacent open space.	County of San Mateo Planning and Building Department Shall oversee implementation of pre-construction survey recommendations	No earlier than 30 days prior to commencement of construction activities	Confirm completion of survey prior to grading and construction and monitor for compliance with construction limits during construction

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Action(s)	Mitigation Timing	Monitoring Schedule
BIOLOGICAL RESOURCES (continued)				
Impact BIO-2 (continued)	**Mitigation Measure BIO-2b:** No earlier than two weeks prior to commencement of construction activities that would occur during the nesting/breeding season of native bird species potentially nesting/roosting on the site (typically February through August in the project region), a survey for nesting birds shall be conducted by a qualified biologist experienced with the nesting behavior of bird species of the region. The intent of the survey would be to determine if active nests of special-status bird species or other species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the construction zone or within 500 feet of the construction zone. The surveys shall be timed such that the last survey is concluded no more than two weeks prior to initiation of construction or tree removal work. If ground disturbance activities are delayed, then an additional pre-construction survey shall be conducted such that no more than two weeks will have elapsed between the last survey and the commencement of ground disturbance activities. If active nests are found in areas that could be directly affected or subject to prolonged construction-related noise, a no-disturbance buffer zone shall be created around active nests during the breeding season or until a qualified biologist determines that all young have fledged. The size of the buffer zones and types of construction activities restricted within them will be determined through consultation with the CDFG, taking into account factors such as the following: • Noise and human disturbance levels at the construction site at the time of the survey and the noise and disturbance expected during the construction activity; • Distance and amount of vegetation or other screening between the construction site and the nest; and • Sensitivity of individual nesting species and behaviors of the nesting birds.	County of San Mateo Planning and Building Department Shall oversee implementation of pre-construction survey recommendations	No earlier than two weeks prior to commencement of grading	Confirm and document prior to grading

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Action(s)	Mitigation Timing	Monitoring Schedule
BIOLOGICAL RESOURCES (continued)				
Impact BIO-2 (continued)	Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers and construction personnel shall be instructed on the sensitivity of nest areas. A qualified biologist shall serve as a construction monitor during those periods when construction activities would occur near active nest areas of special-status bird species and all birds covered by the Migratory Bird Act to ensure that no impacts on these nests occur.			
	Mitigation Measure BIO-2c: Prior to the commencement of construction activities during the breeding season of native bat species in California (generally occurs from April 1 through August 31), a focused survey shall be conducted by a qualified bat biologist to determine if active maternity roosts of special-status bats are present within any of the trees proposed for removal. Should an active maternity roost of a special-status bat species be identified, the roost shall not be disturbed until the roost is vacated and juveniles have fledged, as determined by the biologist. Once all young have fledged, then the tree may be removed. Species-appropriate replacement roosting habitat (e.g., bat boxes) shall be provided should the project require the removal of a tree actively used as a maternity roost. The replacement roosting habitat shall be subject to the approval of the CDFG.	County of San Mateo Planning and Building Department Shall oversee implementation of pre-construction survey recommendations	Prior to commencement of construction activities during the breeding season (April 1 through August 31)	Confirm and document prior to grading and construction
	Mitigation Measure BIO-2d: Immediately preceding initial ground disturbance activities on lot 11, a preconstruction clearance survey shall be conducted by a qualified biologist for California red-legged frogs. The survey shall be conducted to determine whether individual California red-legged frogs are present within the disturbance boundary. Should a California red-legged frog be observed during the clearance survey, all construction activities on lot 11 shall be immediately halted and the USFWS shall be immediately contacted. Under no circumstances shall a California red-legged frog be collected or relocated, unless USFWS personnel or their agents implement the measure. Construction-related activities may resume once the frog has naturally left the lot or has been relocated by a permitted biologist (authorized by the USFWS).	County of San Mateo Planning and Building Department Shall oversee implementation of pre-grading survey recommendations	Prior to commencement of grading on lot 11	Confirm and document prior to grading

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Action(s)	Mitigation Timing	Monitoring Schedule
BIOLOGICAL RESOURCES (continued)				
Impact BIO-3: The implementation of the proposed project would result in the loss of protected trees.	**Mitigation Measure BIO-3:** As required by the County for the removal of trees within the RM District, tree replacement shall occur at a minimum 1:1 ratio for all protected trees removed with a circumference of or exceeding 55 inches (17.5 inches diameter at breast height). The replacement of indigenous trees shall be in kind (i.e., live oaks removed shall be replaced by live oaks) and exotic trees to be removed shall be replaced with an appropriate species on the tree list maintained by the County of San Mateo Planning Department. Replacement trees shall also be maintained for a minimum of 2 years, but up to 5 years (as determined by the County of San Mateo Planning Department). To facilitate the successful replacement of trees, a tree replacement plan shall be prepared and shall meet the following standards: • Where possible, the plan shall identify suitable areas for tree replacement to occur such that the existing native woodlands in the open space are enhanced and/or expanded. • The plan shall specify, at a minimum, the following: – The location of planting sites; – Site preparation and planting procedures; – A schedule and action plan to maintain and monitor the tree replacement sites; – A list of criteria and performance standards by which to measure success of the tree replacement; and – Contingency measures in the event that tree replacement efforts are not successful.	County of San Mateo Planning and Building Department Shall oversee tree replacement	Project design and review process and during construction	Confirm and document during building permit review and prior to completion of construction
Impact BIO-5: The proposed project could have a substantial adverse effect on willow scrub habitat (a riparian and sensitive plant community) bordering lot 11.	**Mitigation Measure BIO-5a**: Prior to the commencement of construction activities on lot 11, the outer edge of the willow scrub habitat (facing lot 11) shall be delineated by a qualified biologist. Temporary fencing shall be installed that clearly identifies the outer edge of the willow habitat and that identifies the willow scrub as an "Environmentally Sensitive Area." Signs shall be installed indicating that the fenced area is "restricted" and that all construction activities, personnel, and operational disturbances are prohibited.	County of San Mateo Planning and Building Department Shall oversee installation of temporary fencing	Prior to commencement of grading on lot 11	Confirm and document prior to grading

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Action(s)	Mitigation Timing	Monitoring Schedule
BIOLOGICAL RESOURCES (continued)				
Impact BIO-5 (continued)	**Mitigation Measure BIO-5b:** Prior to the issuance of a grading permit, the Project Applicant shall develop an erosion control plan. The plan shall include measures such as silt fencing to prevent project-related erosion and sedimentation from adversely affecting the creek zone and other habitats on and near lots 1–11. The erosion control plan shall be subject to approval by the County of San Mateo Planning Department.	County of San Mateo Planning and Building Department Shall review erosion control plan	Prior to issuance of grading permit	Document during grading and construction
	Mitigation Measure BIO-5c: Prior to the issuance of a grading permit, the Project Applicant shall develop a lighting plan. The lighting plan shall require that all lighting be directed and shielded as to minimize light spillage into nearby willow scrub habitat, as well as adjacent oak woodland habitats. The lighting plan shall be subject to approval by the County of San Mateo Planning Department.	County of San Mateo Planning and Building Department Shall review lighting plan	Prior to issuance of grading permit	Document prior to completion of construction
Impact BIO-6: The implementation of the proposed project would result in the loss of stands of purple needlegrass, which is a sensitive plant community.	**Mitigation Measure BIO-6:** Prior to the commencement of construction on lot 8, the occurrence of purple needlegrass shall be mapped, including all stands on the lot with 20 percent or greater cover of native grasses and having a diameter greater than 10 feet. The area of purple needlegrass to be lost due to development of the lot shall then be calculated. As part of the proposed project, approximately 92 acres of open space would be maintained as open space under a conservation easement. This open space contains a serpentine grassland (on the slope west of the water tanks) that is dominated by native grasses (including purple needlegrass) and other native plant species. These native grasses, including purple needlegrass, would be permanently protected by the conservation easement. In addition, non-native plant areas adjacent to the serpentine grassland shall be restored to support native grasses over an area twice the acreage (2:1) of the stands of purple needlegrass to be lost on lot 8.	County of San Mateo Planning and Building Department Shall oversee mapping of purple needlegrass and dedication of open space	Mapping: Prior to commencement of grading on lot 8; Granting of conservation easement: Prior to recordation of final subdivision map; Native grass planting: Prior to completion of construction	Mapping: Prior to commencement of grading on lot 8; Granting of conservation easement: Prior to recordation of final subdivision map; Native grass planting: Prior to completion of construction

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Agency	Mitigation Timing	Monitoring Schedule
GEOLOGY AND SOILS				
Impact GEO-1: The proposed project would involve development on slopes steeper than 15 percent and could expose people and structures to landslide hazards.	**Mitigation Measure GEO-1:** A design-level geotechnical investigation of the site shall be performed prior to any project grading including static and seismic slope stability analysis of the areas of the project site to be graded and developed. The specific mitigation measures to be utilized in order to stabilize existing landslides and areas of potential seismically induced landslides shall be presented in the report. The specific mitigation measures shall include some of the following measures or measures comparable to these: • Landslide debris on lots 7 and 8 shall be excavated and replaced with a fully drained conventional buttress fill that is founded in the underlying Franciscan mélange, as recommended by the project geotechnical engineer. (Lots 7-8) • Retaining walls shall be designed to withstand high lateral earth pressure from adjoining natural materials and/or backfill shall be installed at the rear of lots 5 through 8. In addition, retaining walls shall be built in the front of lots 5 and 6 to aid in maintaining the slopes behind the lots and the more extensive cut required for lots 5 and 6. (Lots 5-8) • A surface drainage system shall be installed for each lot to mitigate new landslides developing within the thin veneer of soil mantling the bedrock on the slope below lots 1 through 4. (Lots 1-4) • Subsurface drainage galleries may be installed to control the flow of groundwater and reduce the potential for slope instabilities from occurring in the future. (All lots) • Over-steepening of slopes shall be avoided. Horizontal benches shall be constructed on all reconstructed slopes at an interval of 25 to 30 feet. New fill shall be compacted to at least 90 percent relative compaction (as determined by ASTM test method D1557). (All lots) • Drilled piers and grade-beam foundations shall be used to support foundations in accordance with recommendations of the project geotechnical engineer. (All lots)	County of San Mateo Planning and Building Department Shall oversee implementation of design-level geotechnical investigation recommendations	Prior to issuance of grading permit	Confirm and document during grading and building permit review

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Agency	Mitigation Timing	Monitoring Schedule
GEOLOGY AND SOILS (continued)				
Impact GEO-2: The proposed project is located on a geologic unit that may be unstable or could become unstable as a result of the project.	**Mitigation Measure GEO-2a:** Materials used to construct the buttress fill should have effective strength parameters equal to or better than the parameters used in the Treadwell & Rollo 2009 study. (Lots 7 and 8)	County of San Mateo Planning and Building Department Shall oversee implementation of geotechnical investigation recommendations	Prior to issuance of grading permit	Document and confirm during building permit review
	Mitigation Measure GEO-2b: The following mitigation measures shall be implemented to ensure the stability of proposed structures that are located on deep fill soils: • A site-specific, design-level geotechnical investigation shall be completed during the design phase of the proposed project, and prior to approval of new building construction within the site for specific foundation design, slope configuration, and drainage design. (All lots) • The geotechnical investigation shall provide recommendations to prevent water from ponding in pavement areas and adjacent to the foundation of the proposed residences, and to prevent collected water from being discharged freely onto the ground surface adjacent to the residences, site retaining walls, or artificial slopes. The project geotechnical engineer shall identify on site areas downslope of the homes where the collected water may be discharged utilizing properly designed energy dissipaters. (All lots) • Fills used at the project site shall be properly placed with keyways and subsurface drainage, and adequately compacted following the recommendations of the final geotechnical report and Geotechnical Engineer, in order to significantly reduce fill settlement. (All lots) • Underground utilities shall be designed and constructed using flexible connection points to allow for differential settlement. (All lots)	County of San Mateo Planning and Building Department Shall oversee implementation of design-level geotechnical investigation recommendations	Prior to issuance of grading permit	Confirm and document during grading and building permit review

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Action(s)	Mitigation Timing	Monitoring Schedule
GEOLOGY AND SOILS (continued)				
Impact GEO-2 (continued)	Foundation plans shall be submitted to the County for review prior to issuance of a building permit. All foundation excavations shall be observed during construction by the project Geotechnical Engineer to insure that subsurface conditions encountered are as anticipated. As-built documentation shall be submitted to the County. (All lots) ◦ Drilled pier and grade-beam foundations or other appropriate foundations per the recommendations of the design-level geotechnical investigation shall be developed for lots that are determined to likely experience soil creep. (All lots) All work shall be completed in accordance with requirements of the 2007 California Building Code and the San Mateo County Building Code. (All lots)			
Impact GEO-3: The proposed project would not result in substantial soil erosion or the loss of topsoil from grading activities.	**Improvement Measure GEO-3:** In compliance with the NPDES regulations, the Project Applicant shall file a Notice of Intent with the State Water Resources Control Board (SWRCB) prior to the start of grading and prepare a SWPPP. The SWPPP shall include specific best management practices to reduce soil erosion. The SWPPP shall include locations and specifications of recommended soil stabilization techniques, such as placement of straw wattles, silt fence, berms, and storm drain inlet protection. The SWPPP shall also depict staging and mobilization areas with access routes to and from the site for heavy equipment. The SWPPP shall include temporary measures to reduce erosion to be implemented during construction, as well as permanent measures. County staff and/or representatives shall review the SWPPP to ensure adequate compliance with State and County standards. County staff and/or representatives shall visit the site during grading and construction to ensure compliance with the SWPPP, as well as note any violations, which shall be corrected immediately. A final inspection shall be completed prior to occupancy.	County of San Mateo Planning and Building Department Shall review and oversee compliance with the SWPPP	Prior to issuance of grading permit; During construction	Confirm and document during grading, building permit review, construction, and prior to project occupancy

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Method	Mitigation Timing	Monitoring Schedule
GEOLOGY AND SOILS (continued)				
Impact GEO-4: The proposed project could expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving strong seismic groundshaking.	**Mitigation Measure GEO-4:** The Project Applicant shall be required to use the seismic design criteria listed below to design structures and foundations to withstand expected seismic sources in accordance with the California Building Code (2007) as adopted by the County of San Mateo. Site Class: C Soil Profile Name: Very Dense Soil and Soft Rock Occupancy Category: II Seismic Design Category: E Mapped Spectral Response for Short Periods- 0.2 Sec (S_s): 2.226 g Mapped Spectral Response for Long Periods- 1 Sec (S1): 1.273 g Site Coefficient- Fa, based on the mapped spectral response for short periods: 1.0 Site Coefficient- Fv, based on the mapped spectral response for long periods: 1.3 Adjusted Maximum Considered EQ Spectral Response for Short Periods (SMS): 2.226 Adjusted Maximum Considered EQ Spectral Response for Long Periods (SM1): 1.655 Design (5-percent damped) Spectral Response Acceleration Parameters at short periods (SDS): 1.484 Design (5-percent damped) Spectral Response Acceleration Parameters at long periods (SD1): 1.103	County of San Mateo Planning and Building Department Shall oversee compliance with California Building Code	Project design and review process	Confirm and document during building permit review

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Agency	Mitigation Timing	Monitoring Schedule
GEOLOGY AND SOILS (continued)				
Impact GEO-5: The proposed project could potentially expose residents to substantial risks to life or property from development on expansive soils.	**Mitigation Measure GEO-5:** During site grading, soils in each lot shall be observed and tested by the project Geotechnical Engineer to determine if expansive soils are exposed. Should expansive soils be encountered in planned building or pavement locations, the following measures shall be implemented under the direction of the Geotechnical Engineer in order to mitigate the impact of expansive soils: • Expansive soils in foundation areas shall be excavated and replaced with non-expansive fill to the specifications of the geotechnical engineer. • A layer of non-expansive fill soils 12 to 24 inches in thickness shall be placed over the expansive materials and prior to the placement of pavements or foundations. • Moisture conditioning of expansive soil shall be applied to a degree that is several percent above the optimum moisture content or lime treating of the expansive soil. • Foundations shall be constructed to be below the zone of seasonal moisture fluctuation or to be capable of withstanding the effects of seasonal moisture fluctuations. • Specific control of surface drainage and subsurface drainage measures shall be provided. • Low water demand landscaping shall be used.	County of San Mateo Planning and Building Department Shall oversee implementation of geotechnical investigation recommendations	During grading activities	Confirm and document prior to issuance of building permit

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Agency	Mitigation Timing	Monitoring Schedule
OTHER RESOURCE TOPICS				
Impact AQ-1: The proposed project would generate pollutants that would violate existing standards of air quality on site or in the surrounding area or violate an air quality standard or contribute substantially to an existing or project air quality violation.	**Mitigation Measure AQ-1:** The Project Applicant shall require that the following BAAQMD recommended and additional PM_{10} reduction practices be implemented by including them in the contractor construction documents: The first phase of construction shall require 30 percent of construction equipment to meet Tier 1 EPA certification standards for clean technology. The remainder of construction equipment (70 percent), which would consist of older technologies, shall be required to use emulsified fuels. • The second phase of construction shall require 30 percent of construction equipment to meet Tier 2 EPA certification standards for clean technology and 50 percent to meet Tier 1 EPA certification standards. The remaining 20 percent of construction equipment, which would consist of older technologies, shall use emulsified fuels. • For all larger vehicles, including cement mixers or other devices that must be delivered by large trucks, vehicles shall be equipped with CARB level three verified control devices. • Water all active construction areas at least twice daily. • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard. • Pave, apply water three times daily, or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at the construction sites. • Sweep daily (with water sweepers) all paved access roads, parking eas, and staging areas at the construction sites. • Sweep public streets adjacent to construction sites daily (with water sweepers) if visible soil material is carried onto the streets. • Hydroseed or apply non-toxic soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).	County of San Mateo Planning and Building Department Shall oversee implementation of recommendations	During grading and construction	Confirm and document during grading and building permit review

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Action(s)	Mitigation Timing	Monitoring Schedule
OTHER RESOURCE TOPICS (continued)				
Impact AQ-1 (continued)	• Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.). Limit traffic speeds on unpaved roads to 15 miles per hour. o Limit traffic speeds on unpaved roads to 15 miles per hour. • Install sandbags or other erosion control measures to prevent silt runoff to public roadways. • Replant vegetation in disturbed areas as soon as possible. • Install wheel washers for all exiting trucks or wash off the tires or tracks of all trucks and equipment leaving the construction site. o Install wind breaks at the windward sides of the construction areas • Suspend excavation and grading activities when wind (as instantaneous gusts) exceeds 25 miles per hour.			

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Action(s)	Mitigation Timing	Monitoring Schedule
OTHER RESOURCE TOPICS (continued)				
Impact NOI-1: The proposed project would generate noise levels in excess of levels determined appropriate according to the County Noise Ordinance standard.	**Mitigation Measure NOI-1:** The Project Applicant shall require that the following noise reduction practices be implemented by including them in the contractor construction documents: • Equipment and trucks used for project construction would utilize the best available noise control techniques (e.g., improved exhaust mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds) in order to minimize construction noise impacts. • Equipment used for project construction would be hydraulically or electrically powered impact tools (e.g., jack hammers and pavement breakers) wherever possible to avoid noise associated with compressed air exhaust from pneumatically-powered tools. Compressed air exhaust silencers would be used on other equipment. Other quieter procedures would be used such as drilling rather than impact equipment whenever feasible. • The construction activity would be kept to the hours of 7:00 AM to 7:00 PM, Monday through Friday. Saturday hours (8:00 AM to 5:00 PM) are permitted upon the discretion of County approval based on input from nearby residents and businesses. Saturday construction (8:00 AM to 5:00 PM) would be allowed once the buildings are fully enclosed. • Residential property owners within 200 feet of planned construction areas shall be notified of the construction schedule in writing, prior to construction; the project sponsor shall designate a "disturbance coordinator" who shall be responsible for responding to any local complaints regarding construction noise; the coordinator (who may be an employee of the developer or general contractor) shall determine the cause of the complaint and shall require that reasonable measures warranted to correct the problem be implemented; a telephone number of the noise disturbance coordinator shall be conspicuously posted at the construction site fence and on the notification sent to neighbors adjacent to the site.	County of San Mateo Planning and Building Department Shall monitor compliance with construction noise reduction practices	During grading	Confirm and document during grading and building permit review

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Action(s)	Mitigation Timing	Monitoring Schedule
OTHER RESOURCE TOPICS (continued)				
Impact HAZMAT-1: The proposed project would expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	**Mitigation Measures HAZMAT-2:** Individual property owners for lots 1-4 and 9, 10, and 11 shall be responsible for maintaining a fuel break by removing all hazardous flammable materials or growth from the ground around each home for a distance of not less than 100 feet from its exterior circumference, for the life of the project. Property owners of lots listed above shall arrange with the property owner of the open space parcel to obtain legal access to the open space parcel for the purpose of vegetation clearance. This would not include the authorization of tree removal for trees protected by the RM zoning regulations. This requirement shall be recorded as a deed restriction on lots 1 through 4, and 9, 10, and 11 prior to the start of construction on these lots.	California Department of Forestry and Fire Protection Shall monitor maintenance of fuel breaks	During project occupancy	Confirm recordation of deed restriction prior to construction Confirm and document compliance during dry season annually

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Action(s)	Mitigation Timing	Monitoring Schedule
OTHER RESOURCE TOPICS (continued)				
Impact HAZMAT-2: The proposed project would create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	**Mitigation Measure HAZMAT-3:** During the design level geotechnical investigation, representative soil samples shall be obtained for each lot proposed on an area underlain or potentially underlain by serpentine bedrock. These samples shall be tested for the presence of naturally occurring asbestos by a state certified testing laboratory in accordance with requirements of the CARB and the BAAQMD and the results shall be provided to the County Planning Department. If naturally occurring asbestos is identified at the site, a site health and safety (H&S) plan including methods for control of airborne dust shall be prepared. This plan shall be reviewed and approved by the County of San Mateo prior to grading in areas underlain by serpentine-bearing soils or bedrock and naturally occurring asbestos. The H&S plan shall strictly control dust-generating excavation and compaction of material containing naturally occurring asbestos. The plan shall also identify site-monitoring activities deemed necessary during construction (e.g., air monitoring). Worker monitoring shall also be performed as appropriate. The plan shall define personal protection methods to be used by construction workers. All worker protection and monitoring shall comply with provisions of the Mining Safety and Health Administration (MSHA) guidelines, California Division of Occupational Safety and Health (DOSH), and the Federal Occupational Safety and Health Administration (OSHA). If naturally occurring asbestos is found at the site, a Soil Management Plan shall be developed and approved by the County Planning Department to provide detailed descriptions of the control and disposition of soils containing naturally occurring asbestos. Serpentine material placed as fill shall be sufficiently buried in order to prevent erosion by wind or surface water run-off, or exposure to future human activities, such as landscaping or shallow trenches. Additionally, the BAAQMD shall be notified prior to the start of any excavation in areas containing naturally occurring asbestos.	County of San Mateo Planning and Building Department Shall review and oversee implementation of site Health and Safety Plan and Soil Management Plan	Completion of plan prior to grading and compliance with plan during grading	Completion of plan prior to grading and compliance with plan during grading

Impact	Mitigation Measure/Improvement Measure	Monitoring/Reporting Activity	Mitigation Timing	Monitoring Schedule
OTHER RESOURCE TOPICS (continued)				
Impact TRANS-1: The proposed project would not result in significant transportation-related impacts.	**Improvement Measure TRANS-1:** The Project Applicant shall prepare and submit a Construction Management Plan that will, among other things, require that all truck movement associated with project construction occur outside the commute peak hours.	County of San Mateo Planning and Building Department Shall review and oversee implementation of Construction Management Plan	Project design and review process	Confirm and document prior to issuance of grading permit
Impact TRANS-2: The proposed project would not result in or increase traffic hazards due to a design feature or incompatible uses.	**Mitigation Measure TRANS-2:** The Project Applicant shall be required to pay for the installation of advisory traffic signs on Ticonderoga Drive in the vicinity of the proposed homes as determined necessary by the County of San Mateo Department of Public Works.	County of San Mateo Department of Public Works Shall collect fee from Project Applicant	Prior to Department of Public Works' final approval of building permits for lots 7 and 8	Complete upon installation of advisory traffic signs
Impact UTIL-1: The proposed project would require hookup to an existing sewage collection system which is at or over capacity, and therefore could potentially result in water quality impacts from sewage overflows.	**Mitigation Measure UTIL-1:** The Project Applicant shall mitigate the project-generated increase in sewer flow such that there is a "zero net increase" in flow during wet weather events, by reducing the amount of existing Inflow and Infiltration (INI) into the Crystal Springs County Sanitation District (District) sewer system. This shall be achieved through the construction of improvements to impacted areas of the sewer system, with construction plans subject to District approval. Construction of improvements, as approved by the District, shall be completed prior to the start of the construction of the residences. In addition, as project sewage will be treated by the City of San Mateo's Wastewater Treatment Plant, the Project Applicant shall submit payment of the City of San Mateo Wastewater Treatment Plant Expansion development impact fee to the City of San Mateo. This fee is based on the number of bedrooms in each residential unit and is calculated at the time of the final plans, using the City's fee schedule in effect at the time of the building permit application.	Crystal Springs County Sanitation District Shall review sewer system improvement plans	Project design and review process	Complete upon construction of sewer system improvements and payment of development impact fee (prior to construction of residences)

5.0 LIST OF EIR PREPARERS

5.1 LEAD AGENCY

County of San Mateo
455 County Center, 2nd Floor
Redwood City, CA 94063

Lisa Grote, Community Development Director

Camille Leung, Planner III, Project Planner

Matt Seubert, Planner III

Pete Bentley, Senior Civil Engineer

5.2 PREPARERS OF THE ENVIRONMENTAL DOCUMENT

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Jennifer Millman, Staff Planner

Paul Manzer, Visual Services Manager

Tom Brauer, Graphics Coordinator

Ian Hillway, Publications Manager

Lisa Cuoco, Publications Coordinator

Brittanny O'Hanlon, Publications Editor

Lynda Lovett, Administrative Assistant

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Martinez, CA 94553
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Questa Engineering

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Will Hopkins, Senior Engineering Geologist

Treadwell & Rollo

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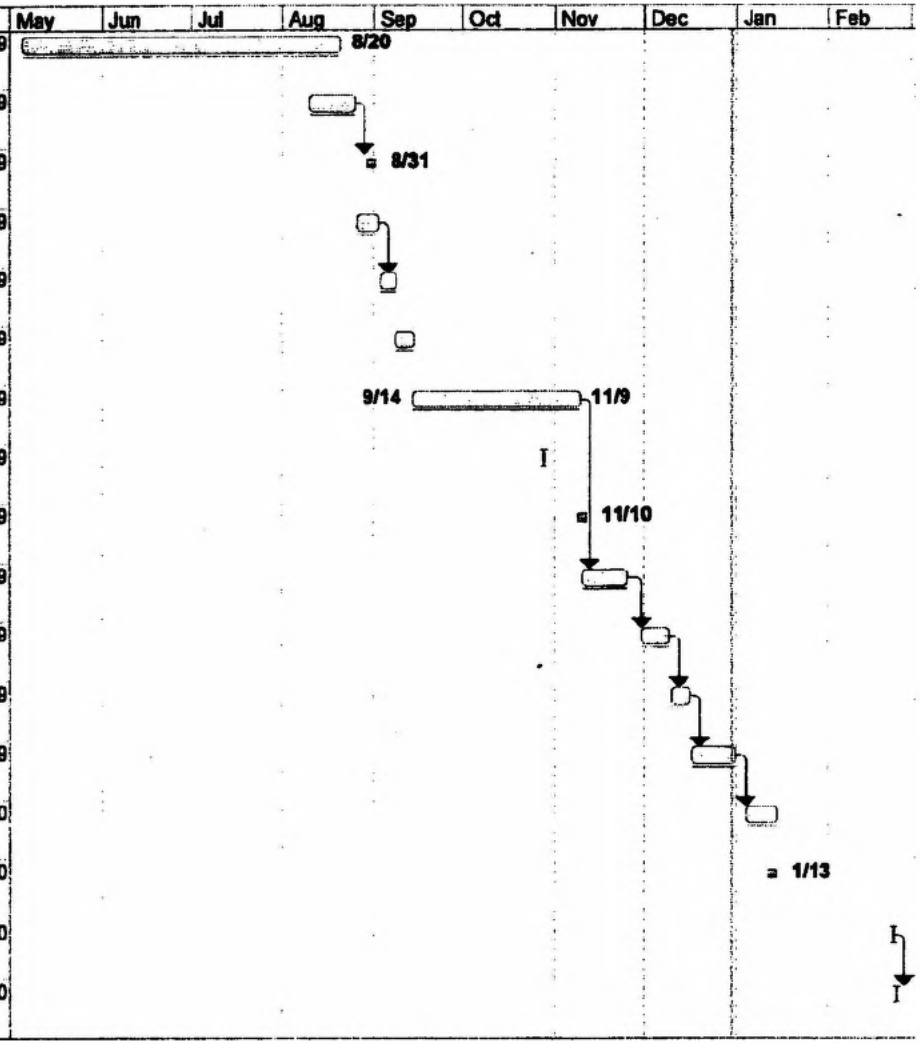
San Jose, CA 95117
Chris Hundemer, Senior Project Geologist

Highland Estates Project EIR Schedule

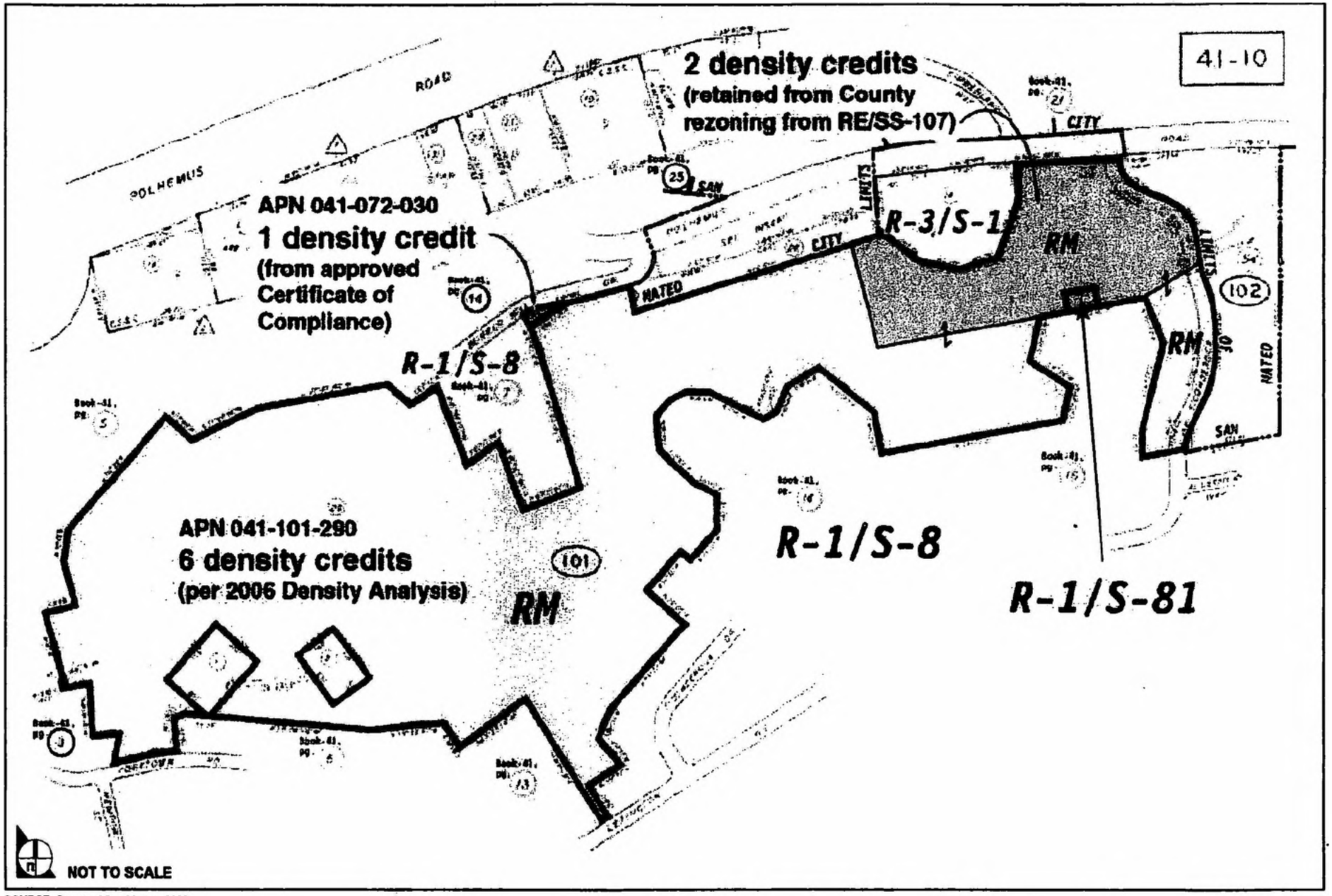
Updated: Wed 12/30/09

ID	Task	Duration	Start	Finish
1	Prepare Revised ADEIR	108 days	Tue 5/5/09	Thu 8/20/09
2	County Review of Revised ADEIR	16 days	Mon 8/10/09	Tue 8/25/09
3	Meeting to Discuss Revised ADEIR	1 day	Mon 8/31/09	Mon 8/31/09
4	Prepare Revised DEIR	8 days	Wed 8/26/09	Wed 9/2/09
5	County Review of Screencheck Revised DEIR	6 days	Thu 9/3/09	Tue 9/8/09
6	Prepare and Publish Revised DEIR and NOC	7 days	Tue 9/8/09	Mon 9/14/09
7	Revised DEIR Review Period	57 days	Mon 9/14/09	Mon 11/9/09
8	Planning Commission Preliminary Hearing	1 day	Wed 10/28/09	Wed 10/28/09
9	Meeting to discuss comments on Revised DEIR	1 day	Tue 11/10/09	Tue 11/10/09
10	Prepare Admin Draft FEIR/MMRP	16 days	Tue 11/10/09	Wed 11/25/09
11	County Review Admin Draft FEIR/MMRP	10 days	Mon 11/30/09	Wed 12/9/09
12	Prepare Screencheck FEIR	7 days	Thu 12/10/09	Wed 12/16/09
13	County Review of Screencheck FEIR	15 days	Thu 12/17/09	Thu 12/31/09
14	Publish FEIR *	11 days	Mon 1/4/10	Thu 1/14/10
15	Planning Commission Hearing	1 day	Wed 1/13/10	Wed 1/13/10
16	Board of Supervisors Hearing	1 day	Tue 2/23/10	Tue 2/23/10
17	Notice of Determination	1 day	Wed 2/24/10	Wed 2/24/10



* The Final EIR shall be circulated to interested public agencies at least 10 days prior to certification by the Board of Supervisors.

Attachment H



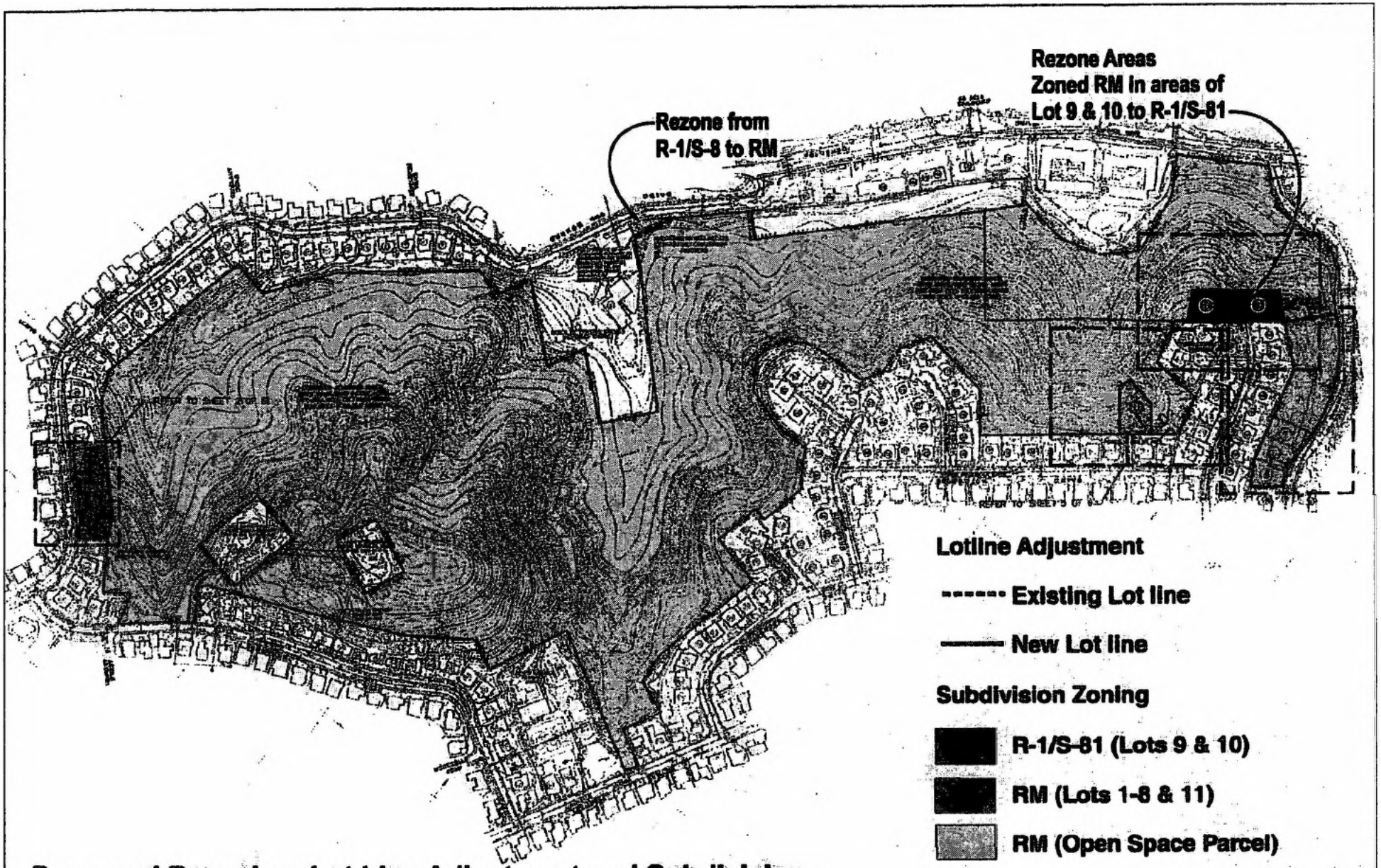
SOURCE: County of San Mateo - 2007

FIGURE 3.0-3

Existing Zoning and Density Credits

902-001-09/09

Attachment I



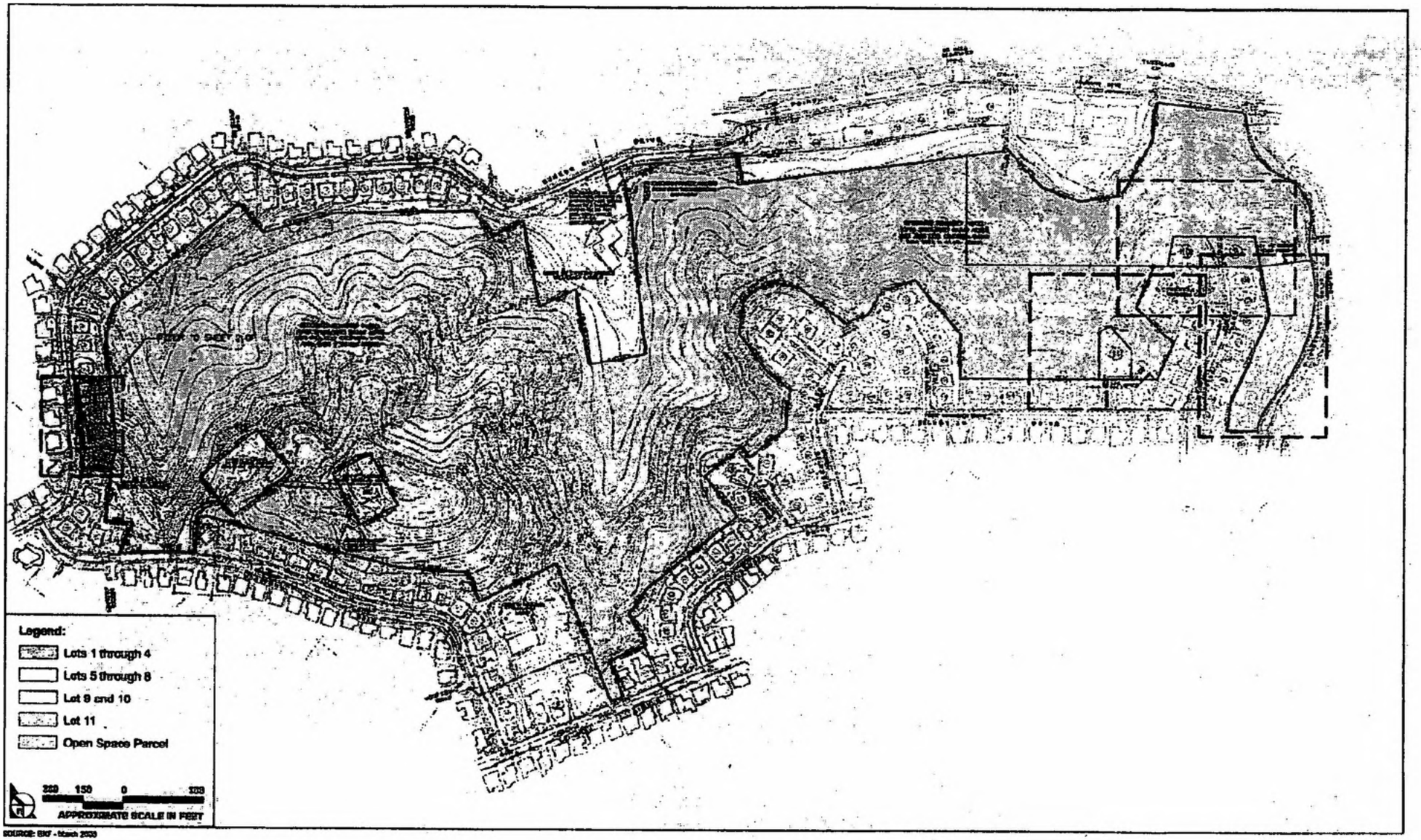
Proposed Rezoning, Lot Line Adjustment and Subdivision

San Mateo County Planning Commission's Meeting

Applicant: **Jack Chamberlain**

Attachment J

File Numbers: **PLN 2006-00357**



SOURCE: ESI - March 2009

FIGURE 3.0-4

Proposed Site Plan

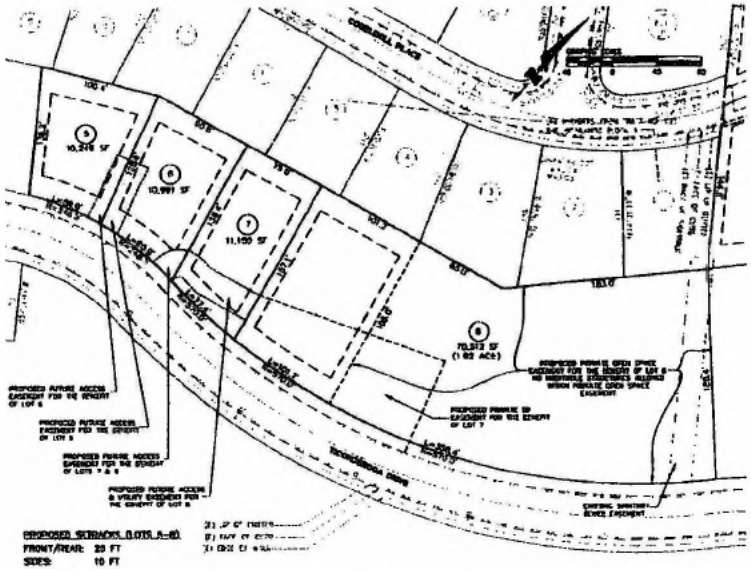
602-001-1208

Attachment K

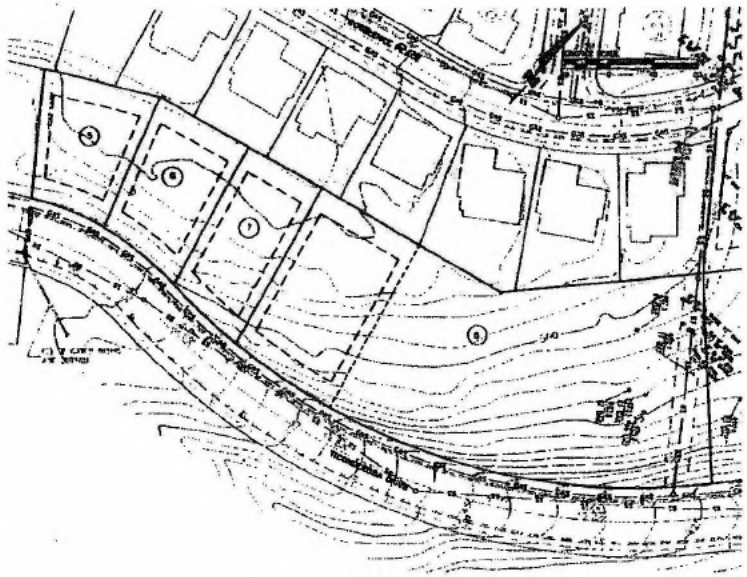
Attachment L

HIGHLAND ESTATES
VESTING TENTATIVE MAP
OVERALL SITE/TITLE SHEET
CITY OF SAN MATEO
SAN MATEO COUNTY
CALIFORNIA
BKF
ENGINEERS STATEMENT
NOVEMBER 10, 2009
1 - 8

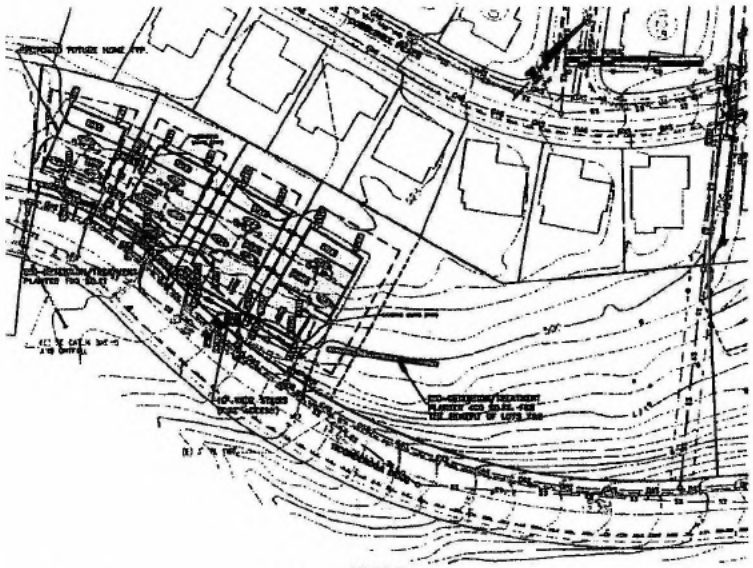
Attachment M



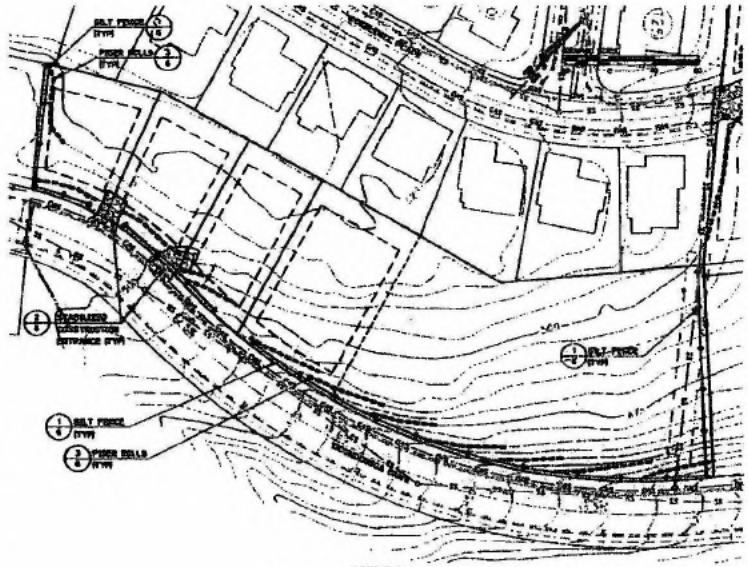
LOTS 5-9
PROPOSED LOTTING PLAN



LOTS 5-9
EXISTING TOPOGRAPHY AND UTILITIES



LOTS 5-9
PRELIMINARY GRADING & UTILITY PLAN



LOTS 5-9
PRELIMINARY EROSION CONTROL PLAN

NOVEMBER 10, 2008

HIGHLAND ESTATES
VESTING TENTATIVE MAP
LOTS 5 THROUGH 9
SAN MATEO COUNTY
CALIFORNIA

CITY OF SAN MATEO

BKF ENGINEERS

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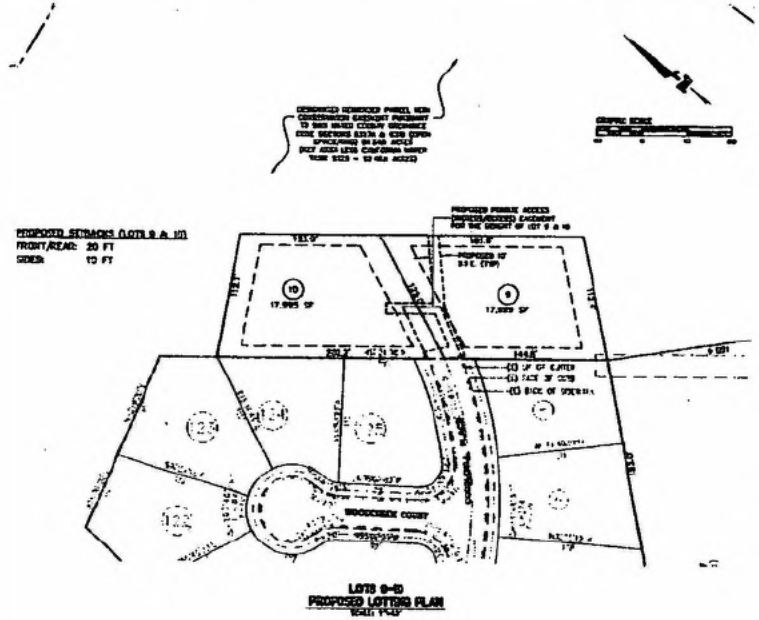
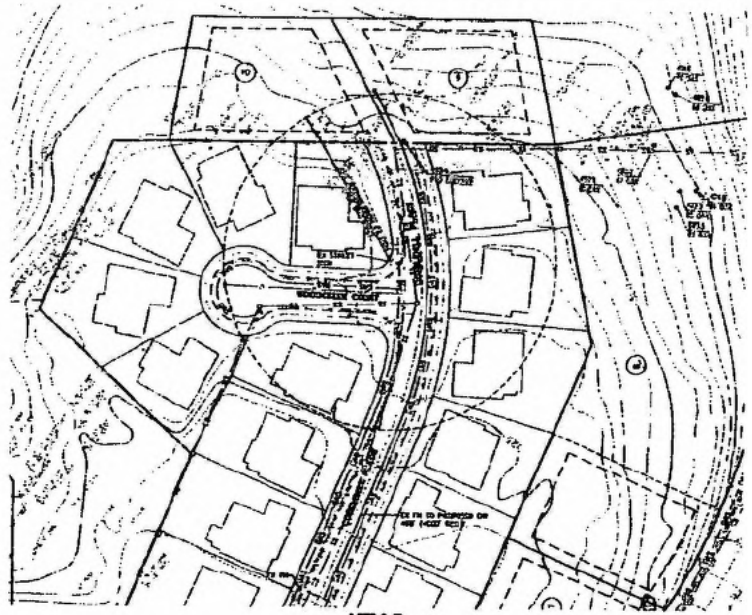


LOTS 9-10
PROPOSED LOTTING PLAN



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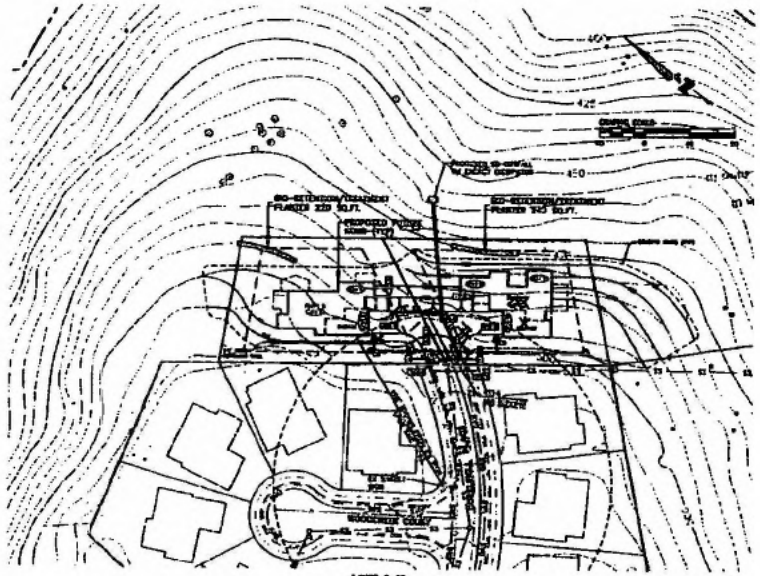

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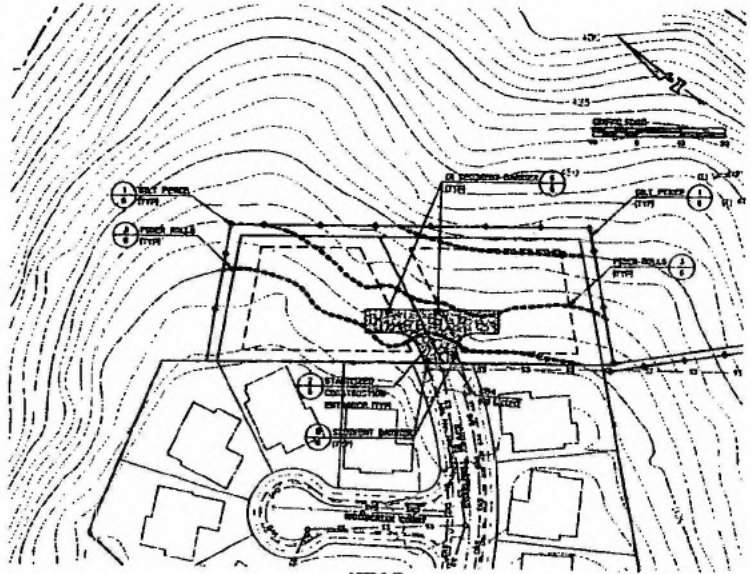
PRELIMINARY GRADING & UTILITY PLAN



LOTS 9-10
PRELIMINARY EROSION CONTROL PLAN

HIGHLAND ESTATES
VESTING TENTATIVE MAP
LOTS 9 THROUGH 10
SAN MATEO COUNTY

CITY OF SAN MATEO

CALIFORNIA

BKF

NOVEMBER 10, 2009

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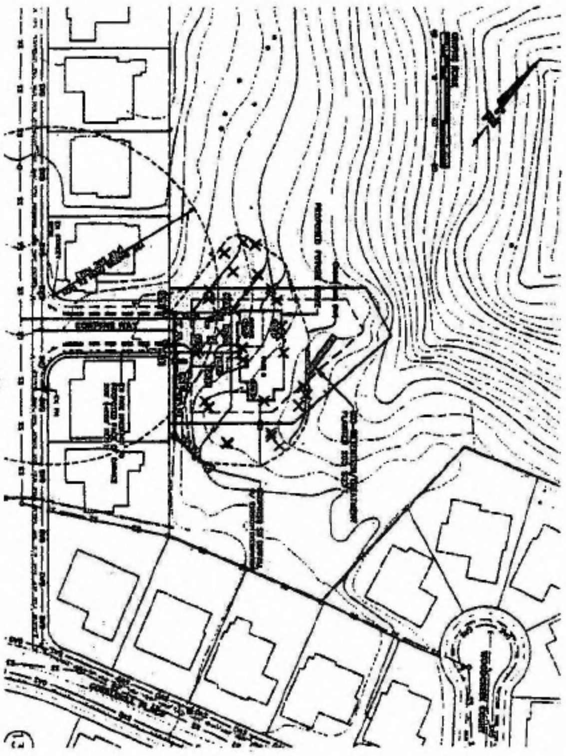
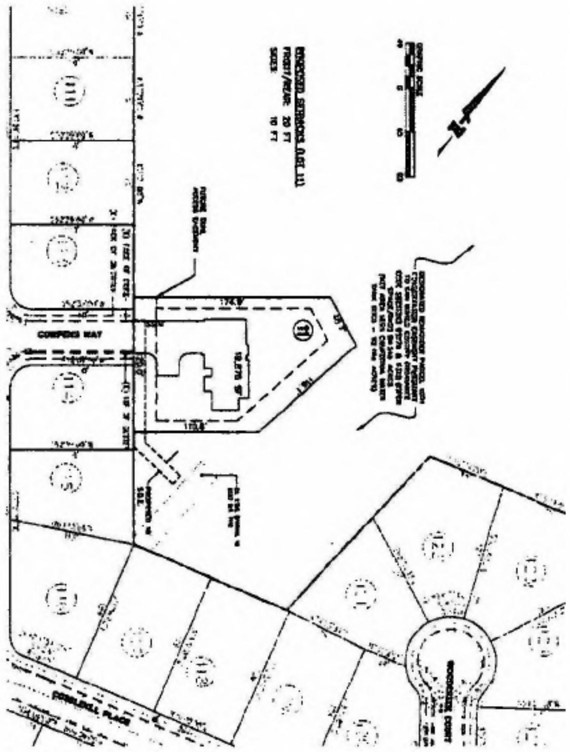
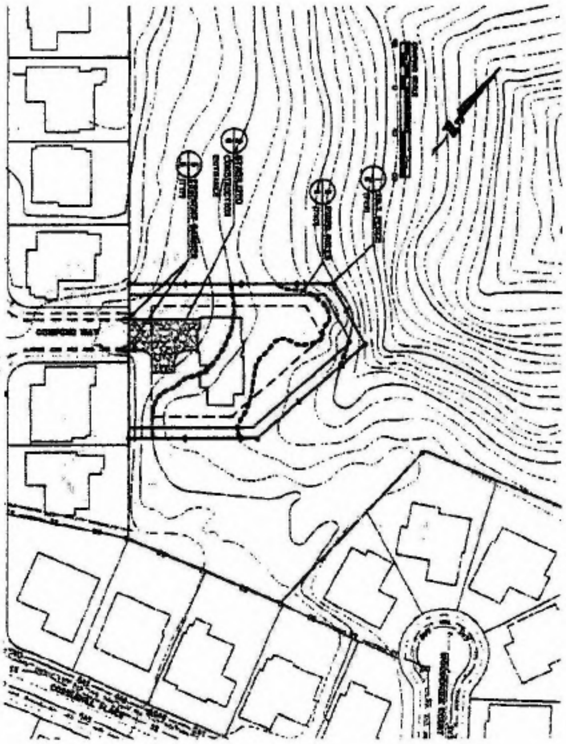


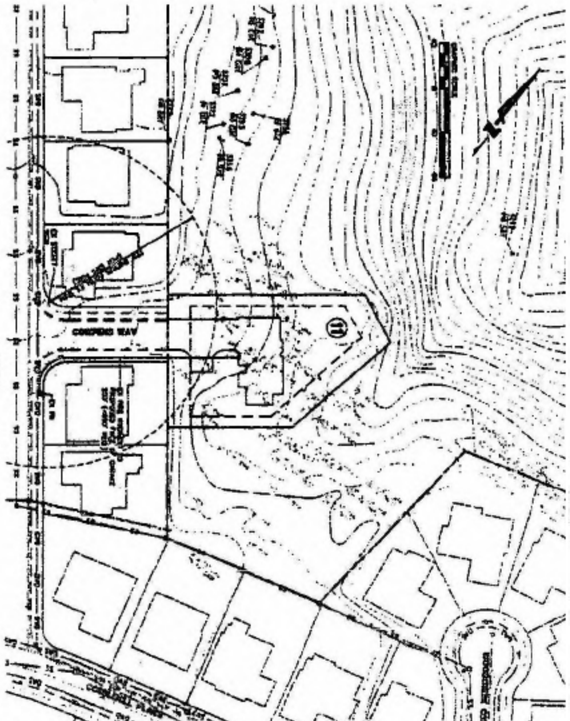
LOT 11 PRELIMINARY GRADING & UTILITY PLAN



LOT 11 PROPOSED LOT LINES PLAN



LOT 11 PRELIMINARY EROSION CONTROL PLAN



LOT 11 EXISTING TOPOGRAPHY AND UTILITIES

NOVEMBER 10, 2008

HIGHLAND ESTATES
VESTING TENTATIVE MAP
LOT 11

CITY OF SAN MATEO
SAN MATEO COUNTY
CALIFORNIA

BKF

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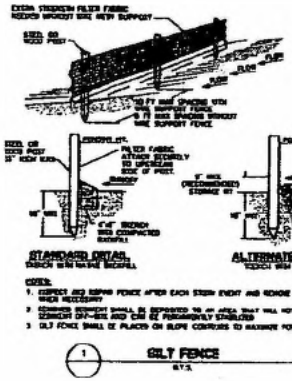
EROSION CONTROL NOTES

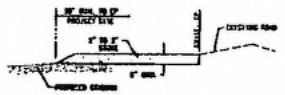
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
2. ALL EROSION CONTROL FACILITIES, INCLUDING FOR TEMPORARY CONTROL FACILITIES AND SHOWN ON THESE PLANS, IT IS RECOMMENDED THAT EROSION CONTROL PLAN BE ACTIVATED PRIOR TO/DURING THE WET FIELD CONDITIONS DURING AND STOP PLANT AND EXCAVATIONS MAY BE ALLOWED AS LONG AS THE FOLLOWING MEASURES ARE TAKEN FOR TEMPORARY STOCKPILING AND STORAGE AREA ARE PROVIDED.
3. THE PURPOSE OF THESE PLANS IS TO PROVIDE THE INITIAL CONCEPT FOR EFFECTIVE EROSION CONTROL. THE CONTRACTOR SHALL MODIFY THE PLANS TO SUITABLY ADDRESS SITE CONDITIONS. PLAN REVISIONS SHALL BE MADE WHEN CONCEPTUAL CONTROL DETAIL, EROSION CONTROL EFFECTIVENESS, COSTS, ALSO BE CONSIDERED AND THE PLANS REVISED AS NECESSARY TO PREVENT UNANTICIPATED OBSTRUCTION OF STORMWATER FROM OCCURRING THE DISCHARGING OF SEDIMENT.
4. SEDIMENT CONTROL MEASURES AS DEFINED IN THE SWPPP SHALL BE INSTALLED AS NECESSARY.
5. THE CONTRACTOR SHALL BE LIABLE FOR AND ARE ALL CHARGES TO PUBLIC AND/OR PRIVATE GROUNDS AND MAINTENANCE DUE TO EROSION OF THE CONTRACTOR'S CONSTRUCTION ACTIVITIES, AND SHALL BE RESPONSIBLE FOR THE REMOVAL OF SAID MATERIALS. SPECIAL ATTENTION SHALL BE PAID TO THE MUD TRACK. ADJACENT PUBLIC STREETS SHALL BE CLEANED AT THE END OF EACH WORKING DAY.
6. SEDIMENT CONTROL MEASURES AS DEFINED IN THE SWPPP SHALL BE INSTALLED WHERE NECESSARY.
7. DURING THE RAINY SEASON, ALL PAVED AREAS ARE TO BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE AREA IS TO BE MAINTAINED AS TO AVOIDED SEDIMENT-LADEN RUNOFF TO ANY STORM DRAIN SYSTEM.
8. ALL EROSION CONTROL DEVICES AS IDENTIFIED AS DEFINED SHALL DURING THE RAIN EVENTS. ALL TORN SHALL BE REPAIRED AT THE AS POSSIBLE WHEN DAMAGED.
9. STORM DRAIN INLET PROTECTIVE DEVICES SHALL BE PROVIDED WITH APPROPRIATE SEDIMENT CONTROL MEASURES (SANDBAG, FIBER ROLLS, GRAVEL BAGS, ETC.) AS DESCRIBED WITH THE SWPPP TO PREVENT SILT FROM ENTERING THE STORM DRAIN SYSTEM.
10. ALL TRUCK TIRES SHALL BE CLEANED PRIOR TO ENTERING THE PROPERTY.
11. DURING PERIODS WHEN STORMS ARE FORECAST – BETWEEN OCT 15 – APR 15:
    A. DISTURBED AREAS SHOULD NOT BE PLACED IN ACTIVITIES OR AS PRACTICABLE.
    B. ADJACENT DISTURBED SURFACES SHOULD BE PROTECTED FROM THE EFFECTS OF THE END OF THE DAY.
    C. EROSION CONTROL MEASURES, AS APPROPRIATE, SHALL BE IMPLEMENTED TO PREVENT THE TRANSPORTATION OF SEDIMENT FROM THE SITE DURING STORMS OR RUNOFF.
    D. USE BERMS CHANNELS (I.E. FILTER BAGS) TO CLEAN DRAINS ELSEWHERE ON THE ESTABLISHED TOPOGRAPHY.
    E. SEDIMENT TRAPS, PONDS, AND/OR BASINS SHALL BE DESIGNED TO ACCOMMODATE INCREASED RUNOFF AS A RESULT OF REMOVAL OF VEGETATION AND PLACEMENT OF IMPERVIOUS SURFACES.
12. IF THE WORK HAS BEEN DISCONTINUED FOR A PERIOD OF 4 WEEKS OR MORE, FINAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED IMPLEMENTATION PLAN.
13. EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES DURING AND REMOVED WHEN SPECIFIED AS DIRECTED BY THE CITY AND COUNTY INSPECTOR. EXCAVATED AND EXPOSED AREAS SHALL BE RE-SEEDED WITH TEMPORARY SEEDING AND MULCH WHERE AFTER EACH CLOSE.
14. MUD SHALL BE CLEANED TO MINIMIZE SEDIMENT WATER FROM THE LOCATIONS INCLUDING IMPROVEMENTS. ORDERS TO REMOVE ACCEPTABLE CHANGE SHALL BE DETERMINED BY THE CONSTRUCTION MANAGER. ALL ENTRANCE AND CUT, STRAWLESS EXCAVATION OR SILT SHALL BE CLEANED TO SILT PERMEABLE BAG ROLLS.
15. STACKED BAG ENDS OF HORIZONTALLY CONNECTED SEDIMENTS SHALL BE ENTERED WITH NO APPROVED FABRIC TO PREVENT SOIL AND DEBRIS FROM ENTERING THE PIPE.
16. WHEN STORMS ARE CURRENTLY NOT UNDER OR IN USE PLANT, EROSION CONTROL MEASURES SHALL BE TAKEN TO MINIMIZE EROSION ALLOWED TO FULL WORK.
17. ADDITIONAL MEASURE FOR SEDIMENT TO BE DETERMINED IN FIELD, WHEN NECESSARY, TO ACCOMPLISH, IT SHALL BE MAINTAINED BY A SILT FENCE/FIBER ROLLS.
18. TEMPORARY AND PERMANENT DRAINAGE DIVERTER SHALL A MUST SHALL BE DESIGNED UNLESS ALTERNATIVE MEASURES ARE USED.
19. THAT EROSION CONTROL PLANS AS ARE CONSTRUCTION CHANGED DIVERSION IS NOT OPEN, AS, WHEN CHANGE ACCESS ARE NOT BE PLANNED BY SCHEDULED TO OF THE CHANGE, AND ARE NOT WET, THE CONTRACTOR SHALL SUBMIT A DIVERSION CHANGE PLAN TO THE SAN MATEO COUNTY PUBLIC WORKS FOR REVIEW AND APPROVAL. SHOULD THE PROPOSED RACE BE STORM DRAIN DIVERT NOT BE INSTALLED BY OCTOBER 15, TEMPORARY SEDIMENT BASINS SHALL BE INSTALLED UNDER THE DIRECTION OF SAN MATEO COUNTY PUBLIC WORKS STAFF. SEDIMENT BASINS ON THE SITE, SEDIMENT SEDIMENT BASINS SHALL BE SIZED TO ACCOMMODATE ANTICIPATED RUNOFF FROM ALL UNPAVED PORTIONS OF THE SITE.
20. SEDIMENT SCHEDULE SHALL BE SUBMITTED FOR APPROVAL TO SAN MATEO COUNTY PUBLIC WORKS BY JANUARY 15.
21. WORK MAY BE INSPECTED FOR ACCEPTANCE AND MAINTENANCE. INSPECTION CALIFORNIA CODES ARE TO ACCEPTOR OF WORK.
    - 24 HOUR NOTICE
    - 48 HOUR NOTICE
    - 72 HOUR NOTICE
    - 120 DAYS NOTICE (SEED)
    - NON CALIFORNIA WINTER WEATHER(SEED)

    APPLY AT 48 HOURS PER HOUR SEDIMENT
22. THE OWNER, ENGINEER, AND ON SITE REPRESENTATIVE OWNER OF THE EROSION RESPONSIBLE FOR IMPLEMENTATION OF EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE PROVIDED TO THE CITY.
23. SHOULD IT OCCUR DURING THE EROSION CONTROL PLAN, OR ANY OTHER WINTER INSPECTION, TO NOT MEET MINIMUM REQUIRED AS EMPLOYED OR NOTE REVISE, THE CONTRACTOR SHALL CONTACT THE SAN MATEO ENGINEER AT (650) 363-4750 FOR SUCH FURTHER EMPLOYED DOES AS MAY BE NECESSARY.

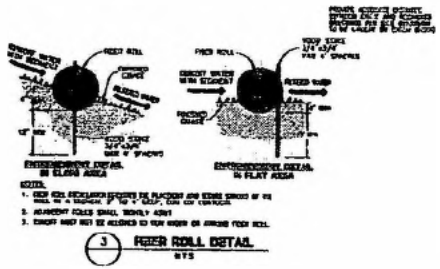
ALL EROSION CONTROL MEASURES SHALL BE IN PLACE BY OCTOBER 15 AND MAINTAINED DURING ALL PHASES OF CONSTRUCTION.



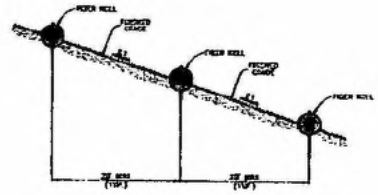
1 SILT FENCE



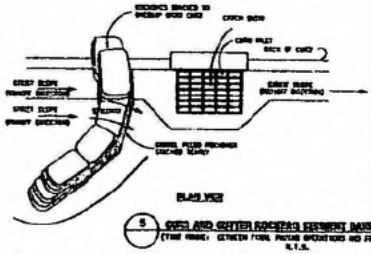
2 STABILIZED CONSTRUCTION ENTRANCE



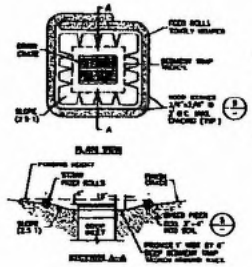
3 FIBER ROLL DETAIL



4 FIBER ROLL INSTALLATION ON SLOPE



5 CURB AND GUTTER INLET SEDIMENT BARRIER ON SLOPE



6 DROP INLET FIBER ROLLS SEDIMENT BARRIER

HIGHLAND ESTATES
VESTING TENTATIVE MAP
PRELIMINARY EROSION CONTROL DETAILS
SAN MATEO COUNTY, CALIFORNIA

CITY OF SAN MATEO

BKF Engineers | Surveyors | Planners
1171 Homestead Road, Suite 255
Santa Clara, CA 95050
(408) 467-9100 Phone
(408) 467-9199 Fax

NOVEMBER 10, 2009

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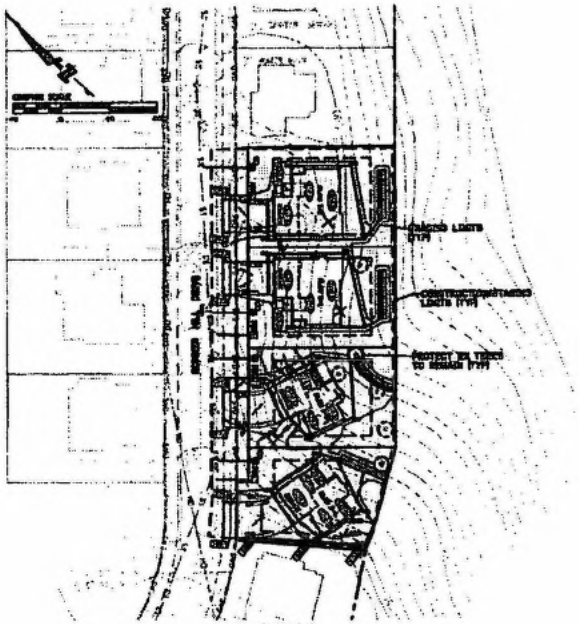
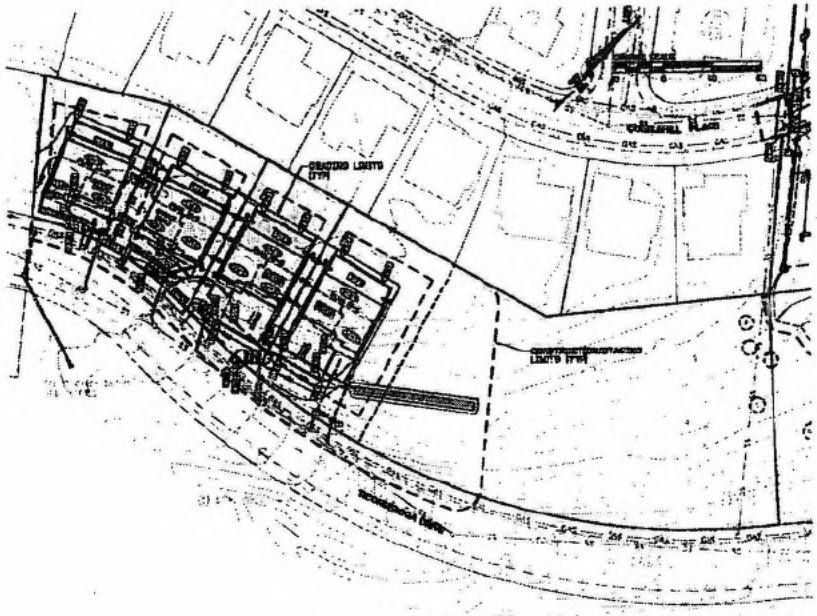


LOTS 1-7
CLEARING, CONSTRUCTION, AND GRADING LIMITS PLAN
SCALE: 1"=40'



LOTS 8-8
CLEARING, CONSTRUCTION, AND GRADING LIMITS PLAN
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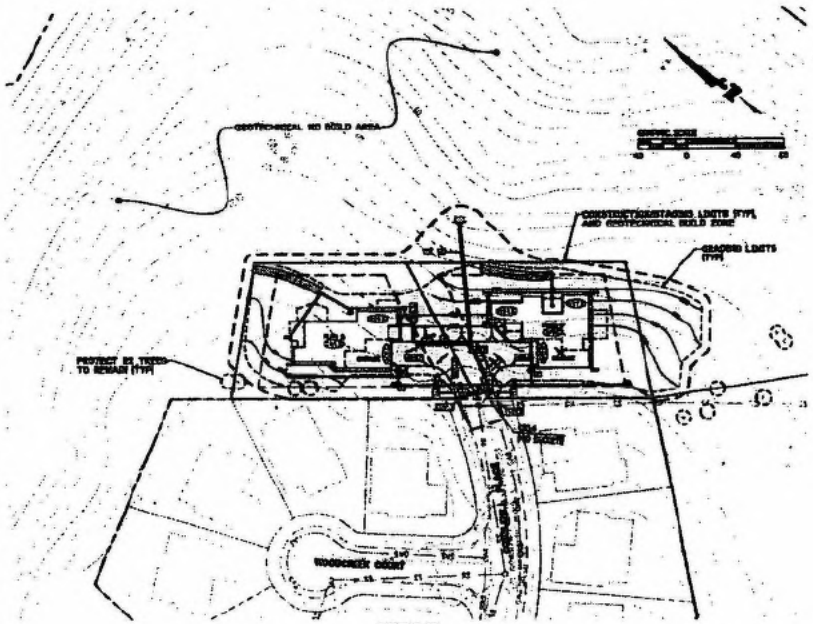
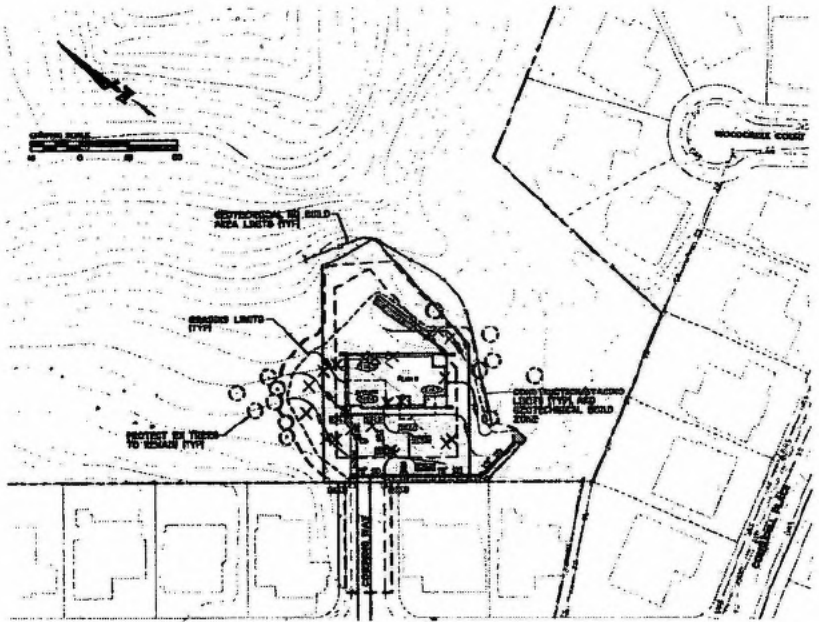


LOTS 9-10
CLEARING, CONSTRUCTION, AND GRADING LIMITS PLAN
SCALE: 1"=40'



LOT 11
CLEARING, CONSTRUCTION, AND GRADING LIMITS PLAN
SCALE: 1"=40'

NOTE:
CONSTRUCTION STAGING LIMITS AND GEOTECHNICAL BUILD ZONES STILL BE DEPENDENT ON FIELD AND GEOTECHNICAL CONDITIONS AT THE TIME OF CONSTRUCTION. THE ZONES/LIMITS SHOWN ON THIS PLAN REPRESENT THE ANTICIPATED AREAS NEEDED FOR CONSTRUCTION AT THIS TIME.

BKF

HIGHLAND ESTATES
VESTING TENTATIVE MAP
CLEARING, CONSTRUCTION, AND GRADING LIMITS PLAN
CITY OF SAN MATEO SAN MATEO COUNTY CALIFORNIA

PROGRESS PRINT DECEMBER 23, 2009

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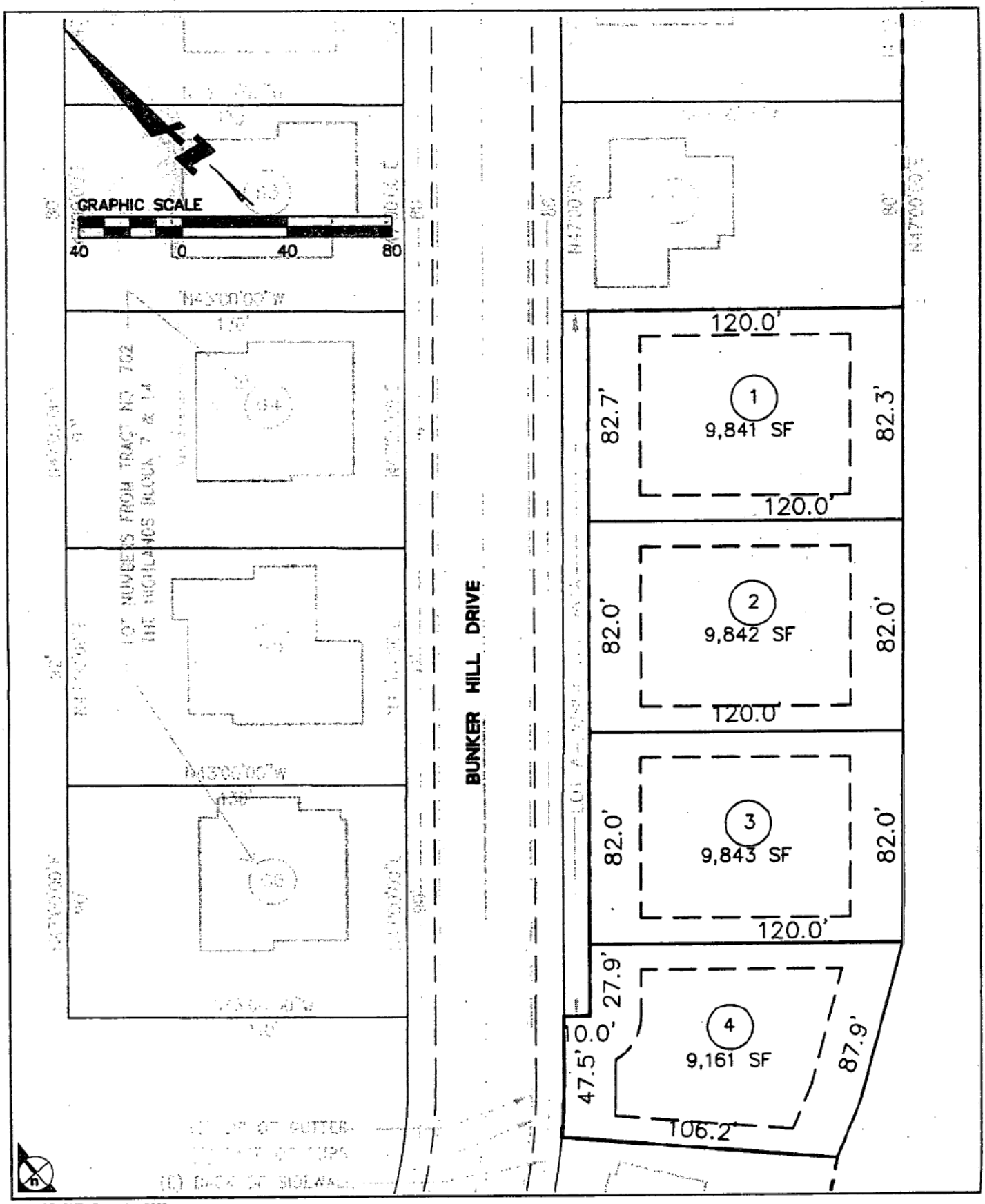
Attachment N



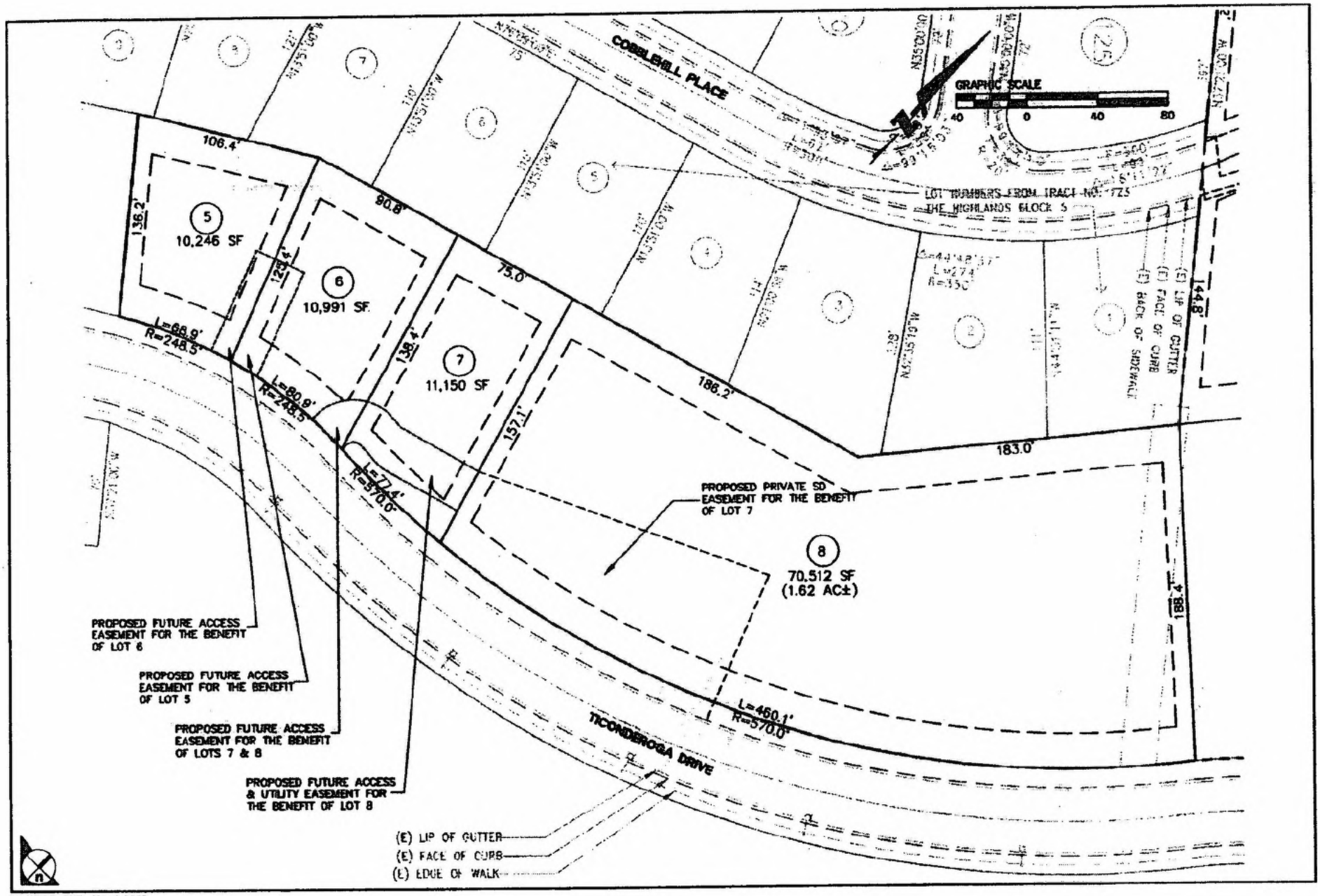
SOURCE: BKF - December 2008

FIGURE **3.0-5**

Proposed Lot Plan for Lots 1-4 (Bunker Hill Drive)

902-001-12/08

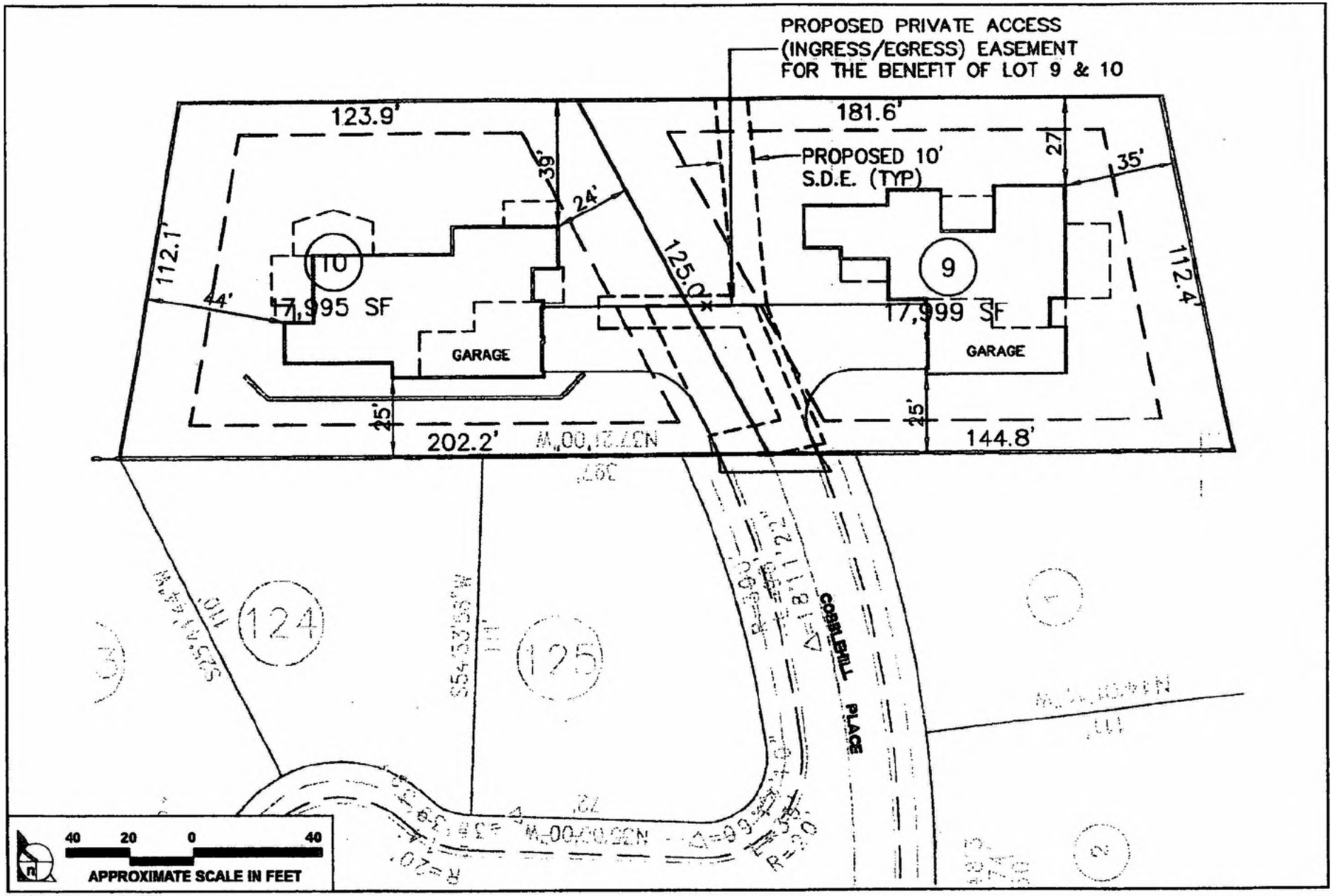
Attachment O



SOURCE: BKF - March 2008

FIGURE **3.0-6**

Proposed Lot Plan for Lots 5-8 (Ticonderoga Drive)

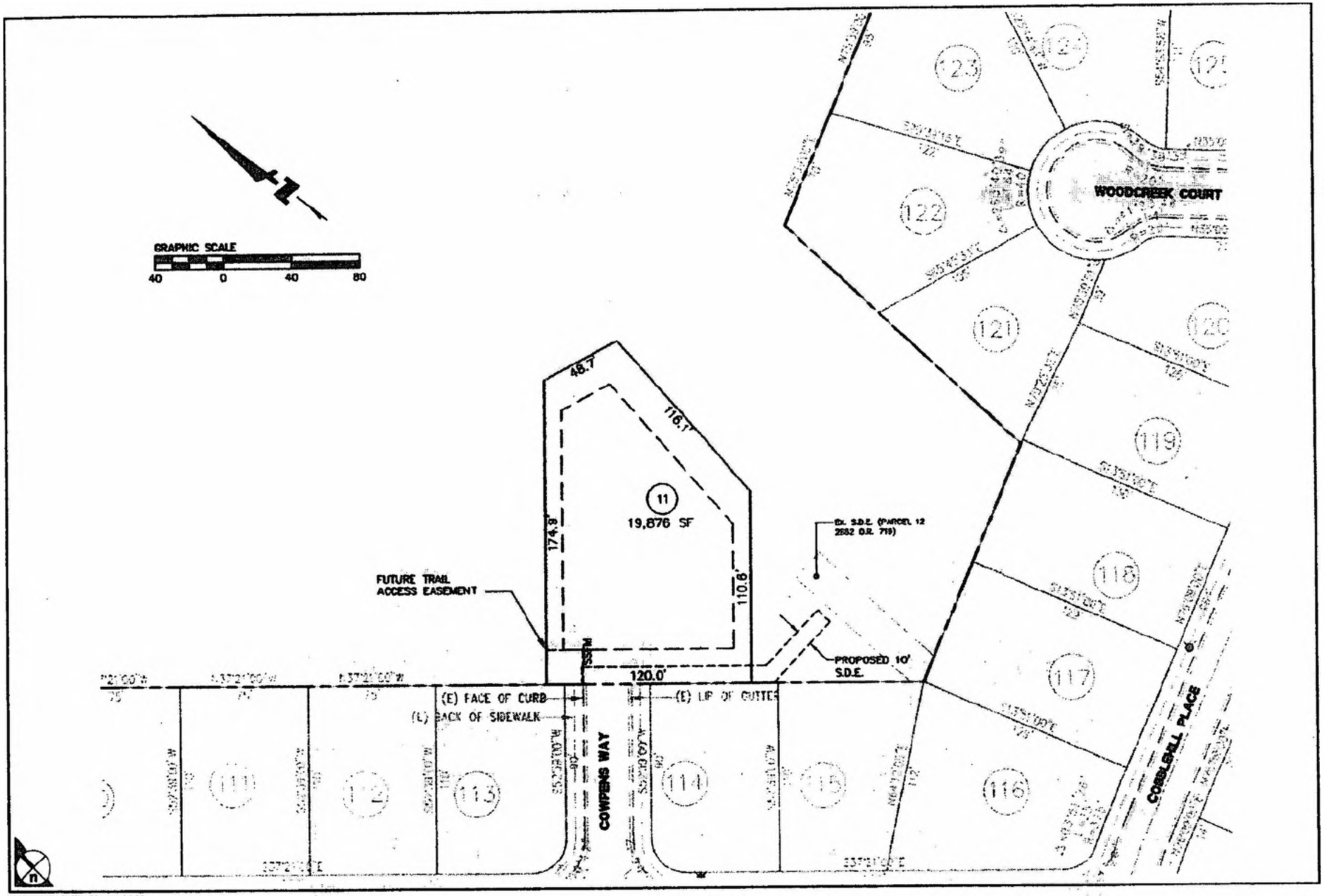


SOURCE: BKF - November 2008

FIGURE 3.0-7

Proposed Lot Plan for Lots 9 and 10 (Cobblehill Place)

902-001-11/08

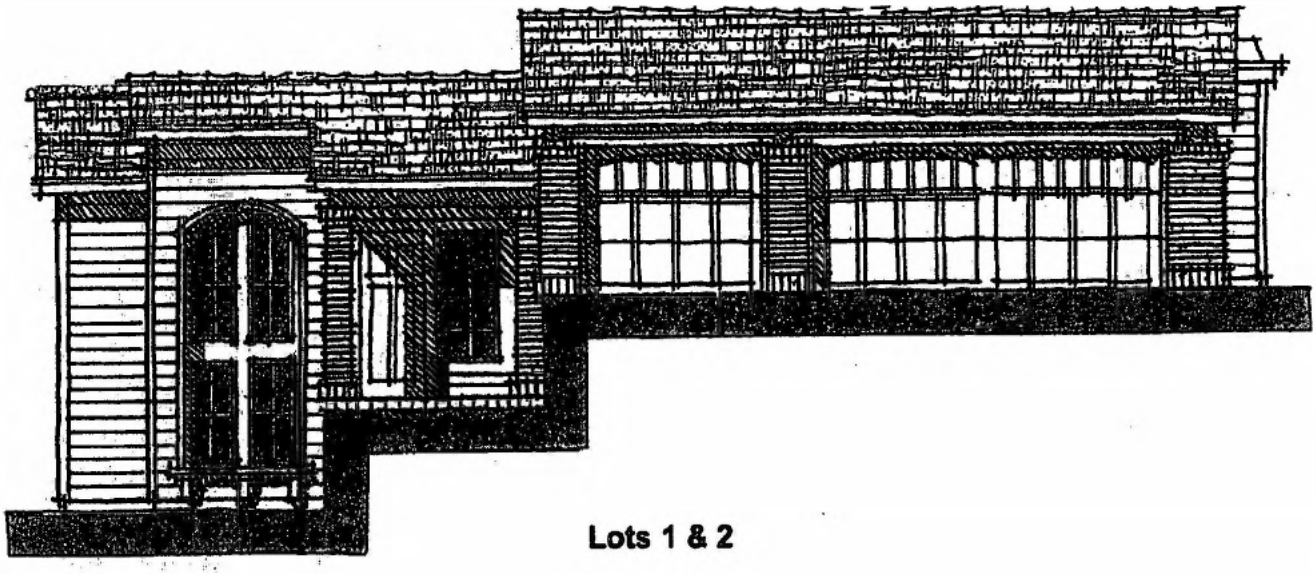


SOURCE: BKF - March 2008

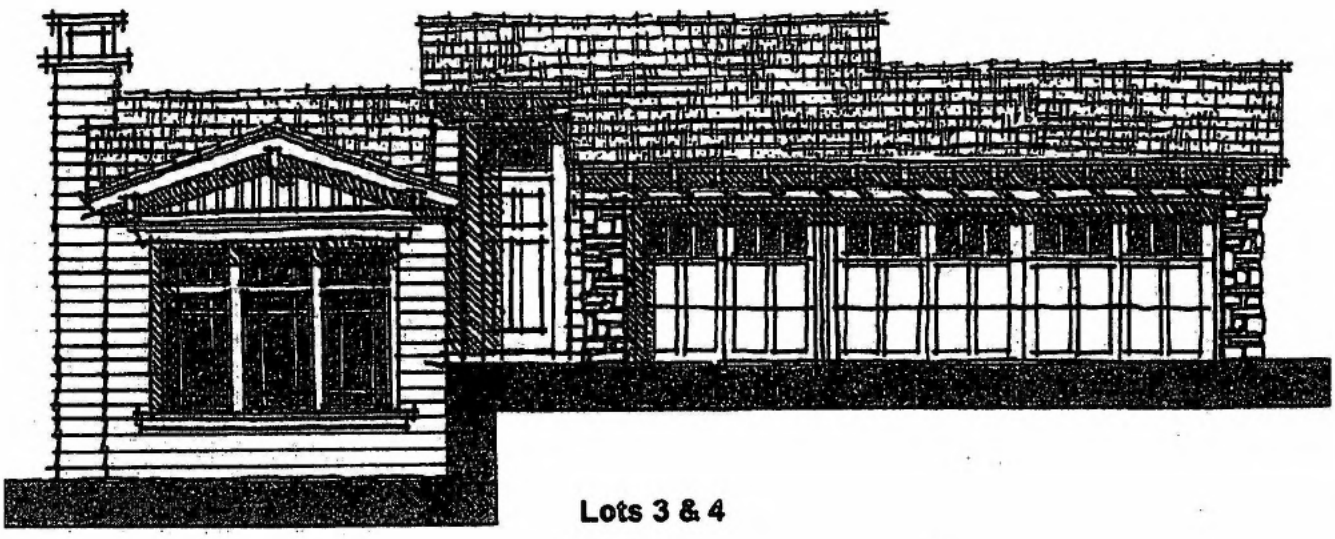
FIGURE **3.0-8**

Proposed Lot Plan for Lot 11 (Cowpens Way)

902-001-10/08



Lots 1 & 2



Lots 3 & 4

NOT TO SCALE

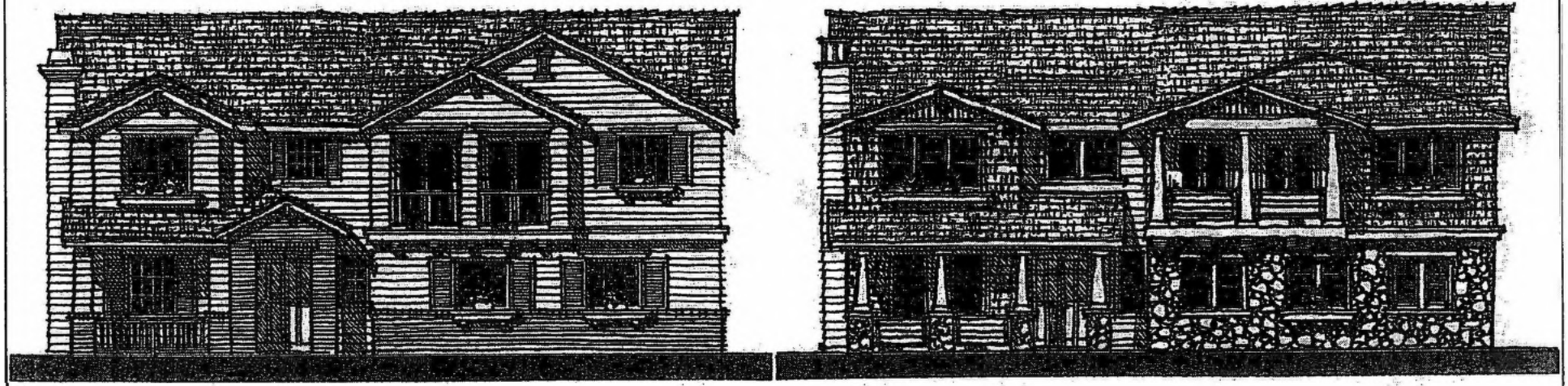
SOURCE: BKF - 2007

FIGURE 3.0-9

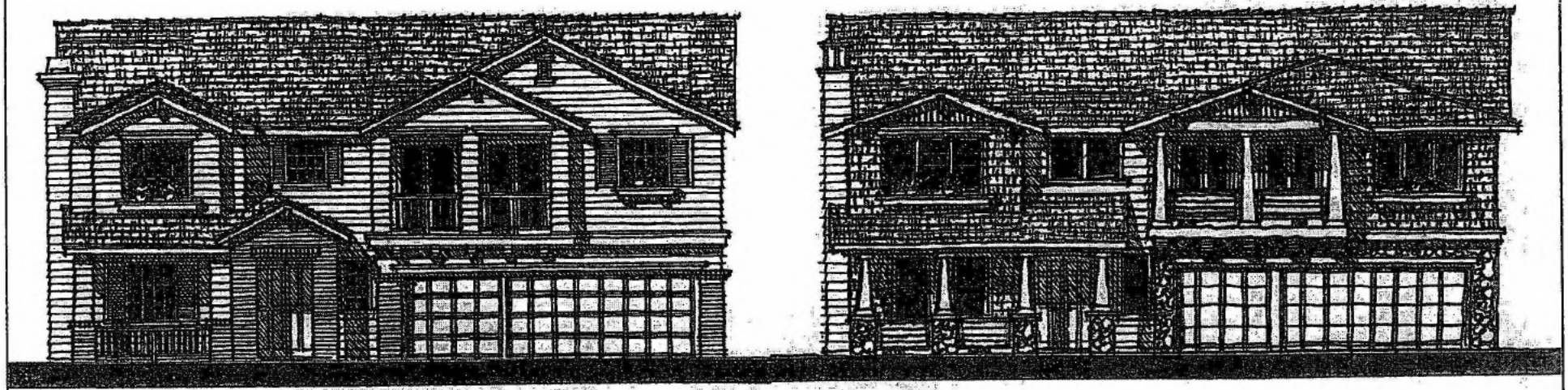
Conceptual Exterior Lots 1-4

902-001-08/08

Attachment P



Lots 5 & 6



Lots 7 & 8

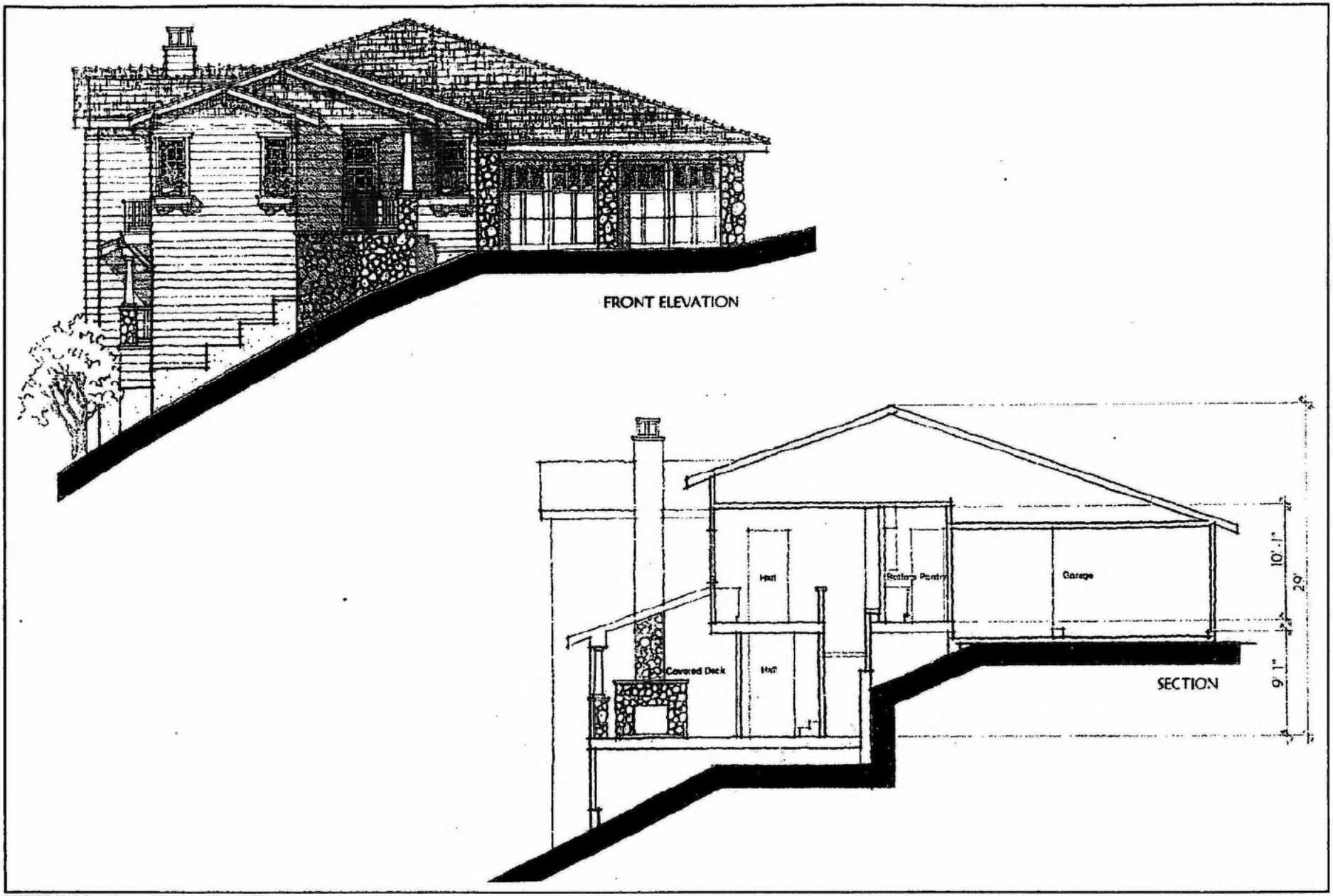
NOT TO SCALE

SOURCE: BKF - 2007

FIGURE 3.0-10

Conceptual Exterior Lots 5-8

903-01-08/08

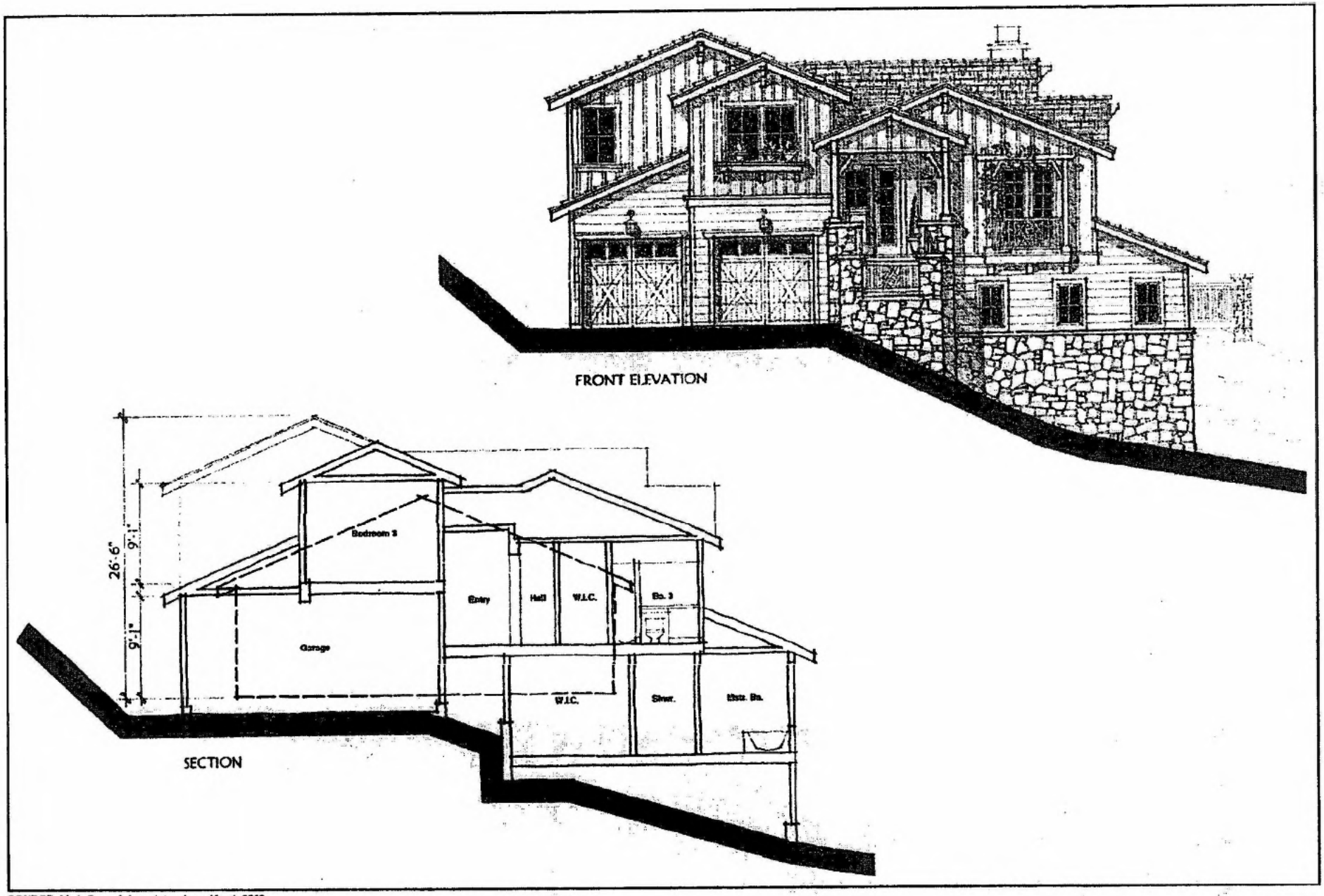


SOURCE: Mark Gross & Associates, Inc. - March 2008

FIGURE 3.0-11

Conceptual Exterior Lot 9

902-001-08/08

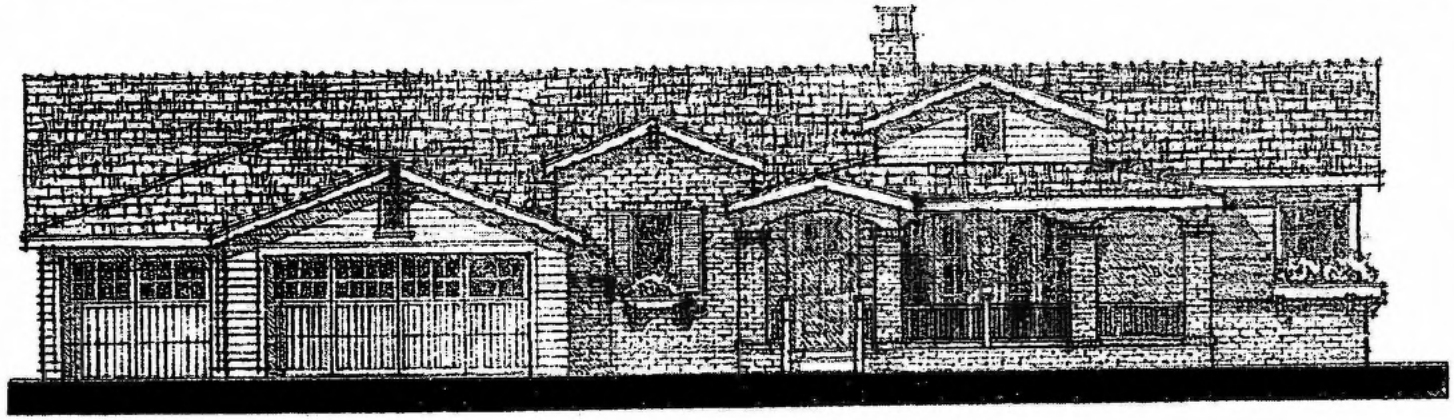


SOURCE: Mark Gross & Associates, Inc. - March 2008

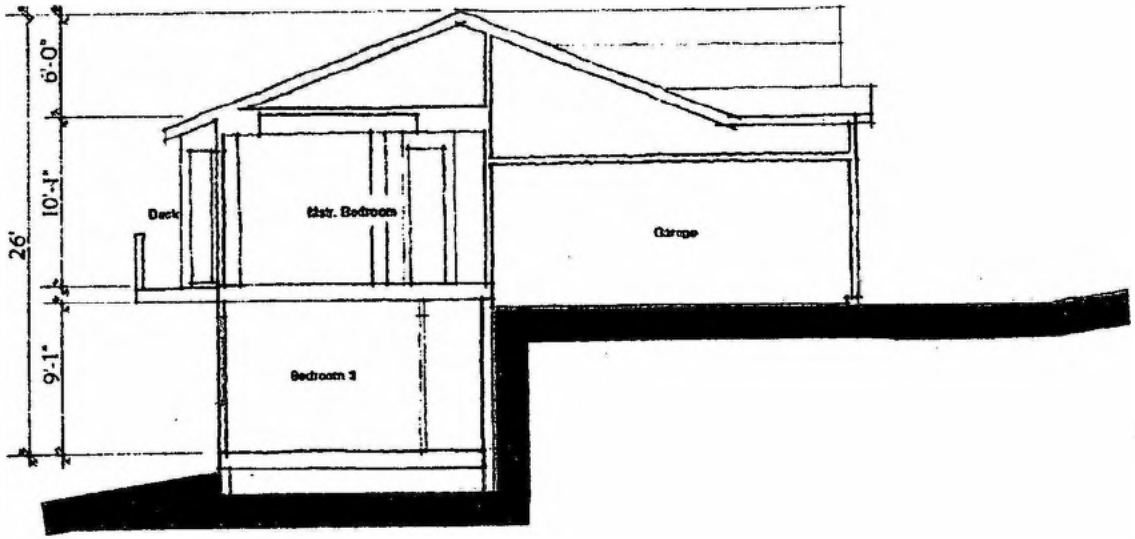
FIGURE 3.0-12

Conceptual Exterior Lot 10

902-001-08/08



FRONT ELEVATION



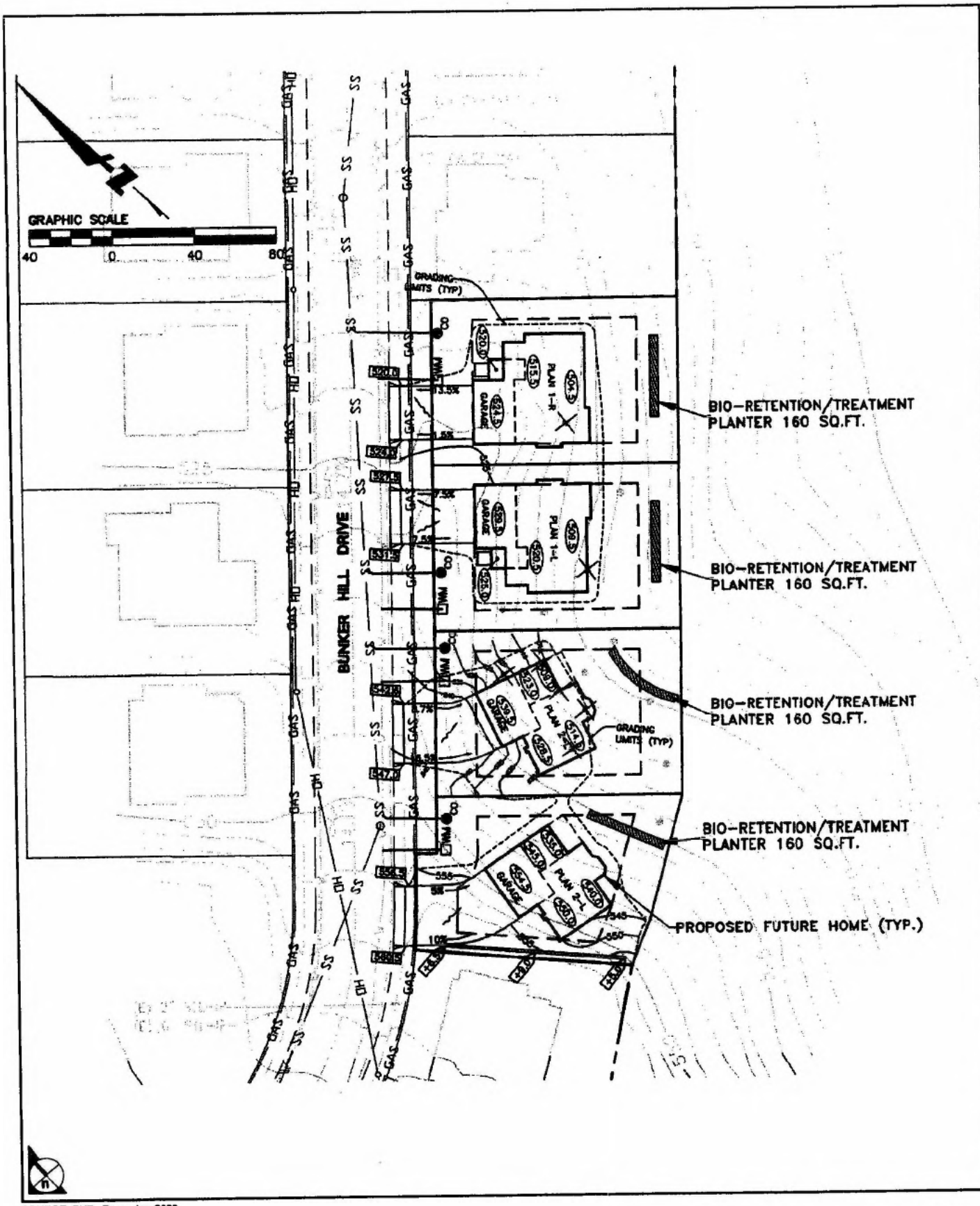
SECTION

SOURCE: Mark Gross & Associates, Inc. - March 2008

FIGURE 3.0-13

Conceptual Exterior Lot 11

902-001-08/08



SOURCE: BKF - December 2008

FIGURE **3.0-14**

Proposed Grading and Detention Plan, Lots 1-4 (Bunker Hill Drive)

902-001-12/08

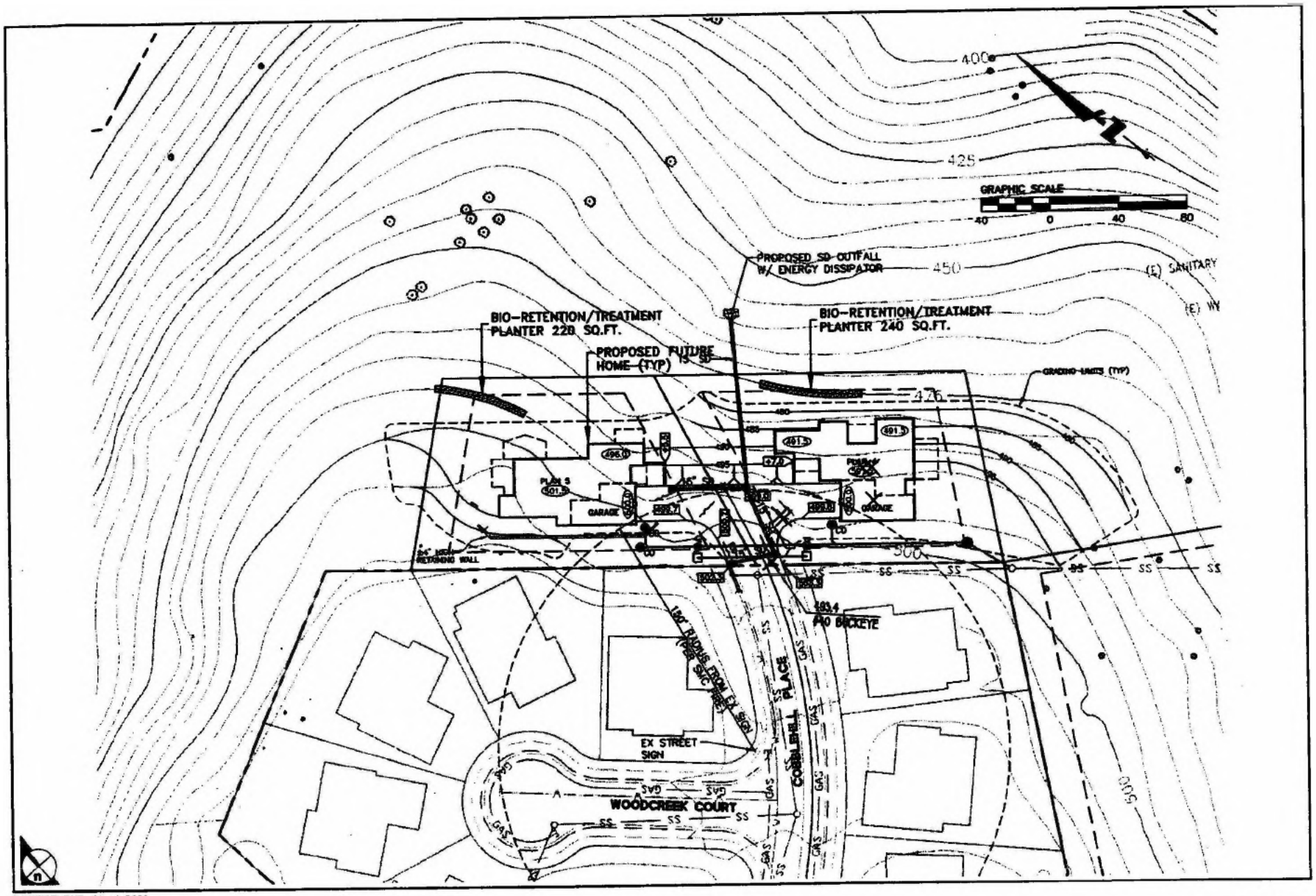
Attachment Q

SOURCE: BKF - March 2008

FIGURE 3.0-15

Proposed Grading and Detention Plan, Lots 5-8 (Ticonderoga Drive)

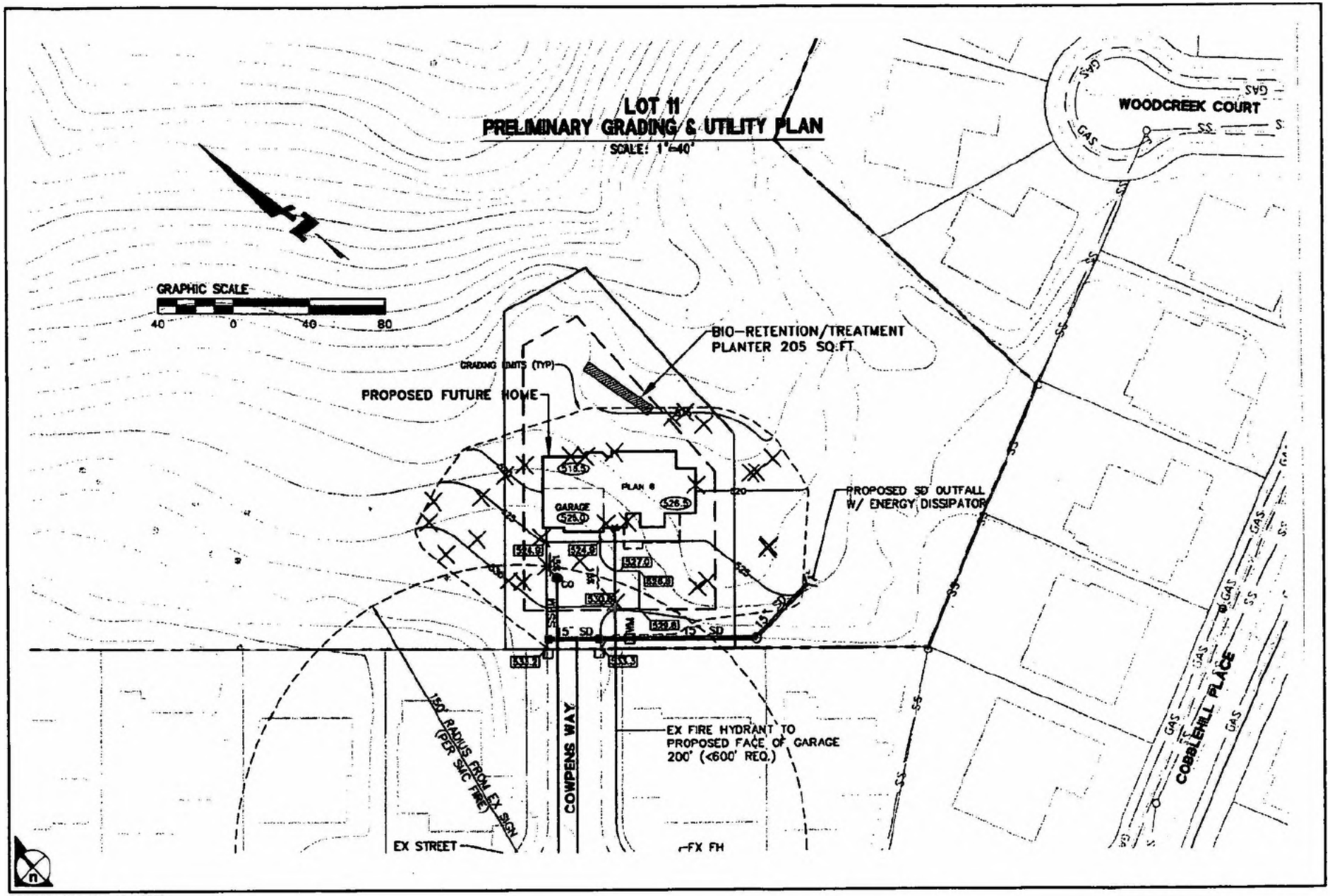
902-001-10/08



SOURCE: BKF - March 2008

FIGURE 3.0-16

Proposed Grading and Detention Plan, Lots 9 and 10 (Cobblehill Place)

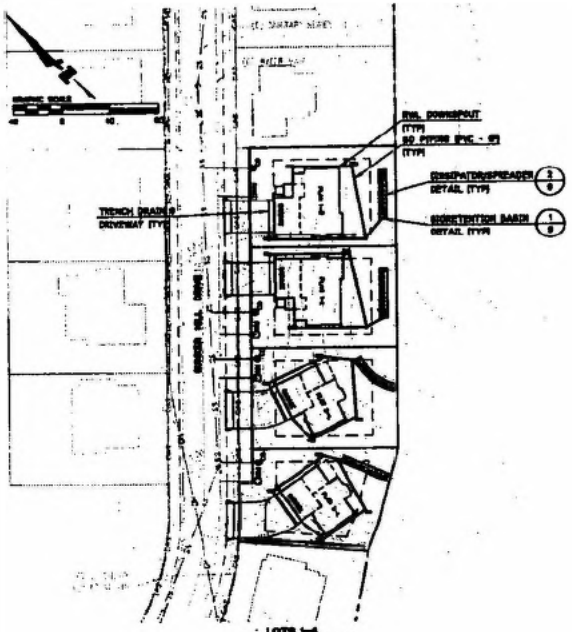


SOURCE: BKF - November 2008

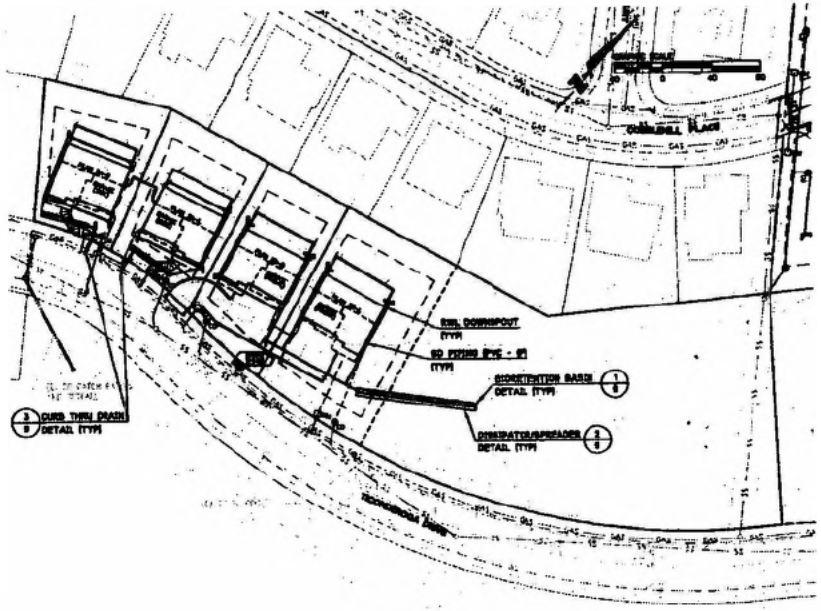
FIGURE **3.0-17**

Proposed Grading and Detention Plan, Lot 11 (Cowpens Way)

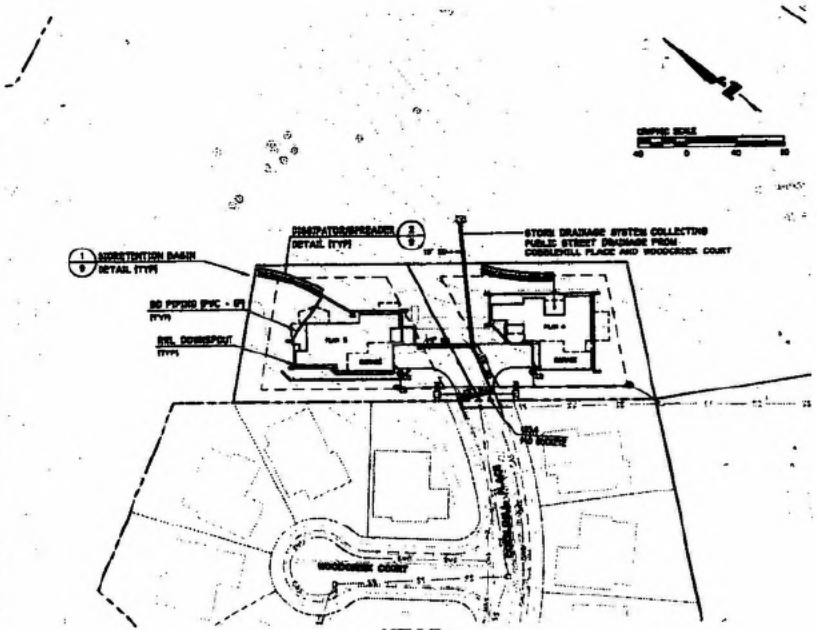
902-001-11/08



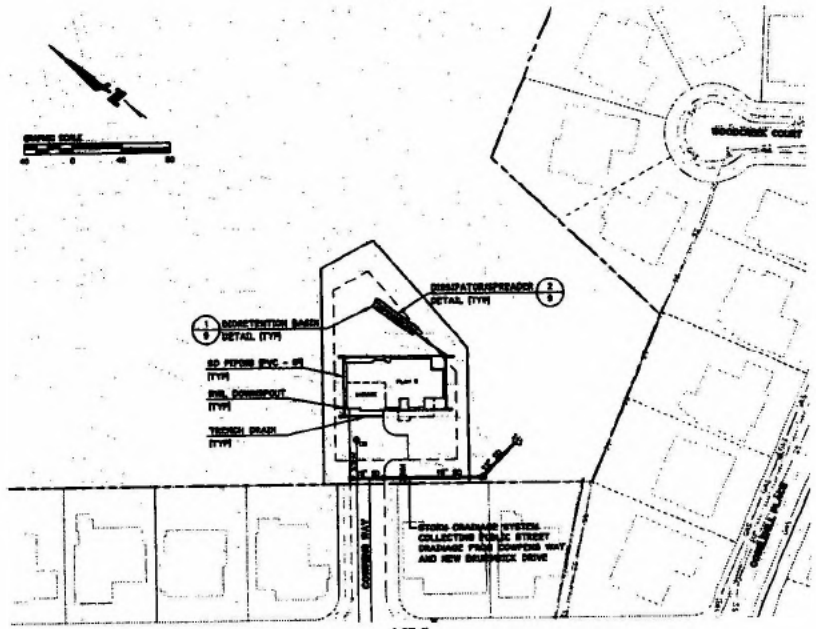
LOTS 1-4
STORM DRAINAGE PLAN



LOTS 5-8
STORM DRAINAGE PLAN



LOTS 9-13
STORM DRAINAGE PLAN



LOT 1
STORM DRAINAGE PLAN

HIGHLAND ESTATES
VESTING TENTATIVE MAP
STORM DRAINAGE PLAN
SAN MATEO COUNTY
CALIFORNIA

CITY OF SAN MATEO

PROGRESS PRINT DECEMBER 23, 2009

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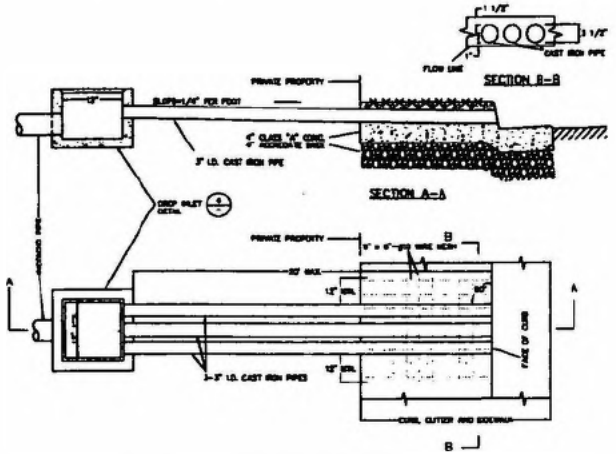
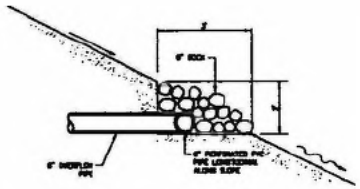
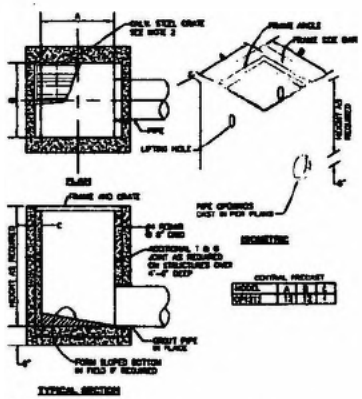
Attachment R



9 — CURB THRU DRAIN DETAIL
NTS

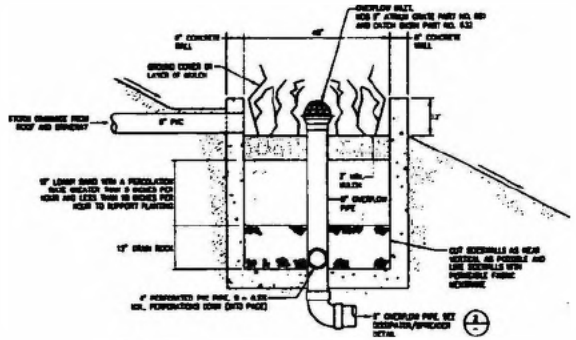


8 — DISSIPATOR/SPREADER DETAIL
NTS



1. CATCH BASIN SHALL BE CONTECH PRECAST OR APPROVED EQUAL.
2. AN ENGINEERED PRECAST DROP INLET UNIT CAN BE USED AS AN ALTERNATE.

4 — DROP INLET DETAIL
NTS



1 — BIORETENTION BASIN DETAIL
NTS

HIGHLAND ESTATES
VESTING TENTATIVE MAP
CONSTRUCTION DETAILS
SAN MATEO COUNTY
CITY OF SAN MATEO
CALIFORNIA

BKF

PROGRESS PRINT DECEMBER 23, 2009

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GRANT OF OPEN-SPACE EASEMENT

This GRANT DEED OF OPEN-SPACE EASEMENT is made on _____, by TICONDEROGA PARTNERS LLC having an address at 655 Skyway Road, Ste. 230, San Carlos, CA 94070 ("Grantor") in favor of the COUNTY OF SAN MATEO having an address at County Government Center, 400 County Center, Redwood City, CA 94063 ("Grantee" or "County").

Recitals

Description of Property

1. Grantor is the sole owner of the property that is the subject of this grant ("Subject Property"), located in the County of San Mateo, State of California, legally described as fully set forth in Exhibit A, which is attached to and made a part of this grant by reference. The Subject Property is delineated on the map on file in the office of the Clerk of the Board of Supervisors of the County of San Mateo as Map No. _____ and listed and described on Exhibit B, which is attached to and made a part of this grant by reference.

Conservation Values

2. The Subject Property possesses natural, scenic, open-space and recreational values. In particular,

(a) the preservation of the Subject Property as open space is consistent with the general plan of the County; and

(b) the preservation of the Subject Property as open space is in the best interest of the County and specifically because one or more of the following reasons exists:

Attachment S

(1) the land is essentially unimproved and if retained in its natural state has scenic value to the public and this instrument contains appropriate covenants to that end;

(2) it is in the public interest that the Subject Property be retained as Open Space because such land will add to the amenities of living in neighboring urbanized areas;

(3) the public interest will otherwise be served in a manner consistent with the purposes of California Government Code §§ 51050 et seq., the Open Space Easement Act of 1974, and Section 8 of Article XIII of the Constitution of the State of California.

The specific conservation values of the Subject Property are documented in an inventory of relevant features of the Subject Property ascertained in the Environmental Impact Report for the Highlands Estates prepared by Impact Sciences, Inc. for the County dated September 2009.

Intention of Grantor

3. It is the intention of Grantor to grant to Grantee an open-space easement on, over, across, and under the Subject Property pursuant to the Open-Space Easement Act of 1974, appearing at Chapter 6.6 (commencing with Section 51070) of Part 1, Division 1, Title 5 of the California Government Code, whereby Grantor relinquishes certain rights and enters into certain covenants concerning the Subject Property, as more particularly set forth below. It is the intention of the grantor that this grant meets all the requirements of IRC Section 170(h)(1).

Purpose of Easement

4. The purpose of this grant of an open-space easement in the Subject Property is to preserve the natural and scenic character of the property for public use and enjoyment.

Description of Grantee

5. Grantee is a political subdivision of the State of California.

Acceptance by Grantee

6. By accepting this grant, Grantee agrees to honor the intentions of Grantor to act in a manner consistent with the purposes of this grant, and to preserve and protect for the term of this easement the conservation values of the Subject Property. Grantee shall not accept this grant until a final Vesting Tentative Subdivision Map is recorded in the Office of the Recorder of the County of San Mateo. In the event any action is filed after the final Vesting Subdivision Map is recorded attacking the legal validity of the Map, this Easement shall have no effect. This grant satisfies the requirements in the County's Resource Management Zone for a density bonus under County Ordinance Section 6318 and for a subdivision under the Resource Management Zone. By accepting this grant, County further agrees to accept the Subject Property in fee after it is offered if no other suitable owner can be found.

Grant of Easement

7. In consideration of the above and the mutual covenants, terms, conditions, and restrictions contained in this grant deed, and pursuant to the laws of California and in particular to the Open-Space Easement Act of 1974, Grantor voluntarily grants and conveys to Grantee an open-space easement in the Subject Property in perpetuity subject to the terms of this grant deed.

Covenants

8. The Subject Property shall be used by Grantor and Grantor's successors in interest only for those purposes that will maintain the existing open-space character of the Subject Property. Grantor and Grantor's successors in interest will refrain from doing, causing, or permitting any of the following acts with respect to the Subject Property:

(1) Using or permitting the use of the Subject Property for any purpose except as is consistent with the stated purposes, terms, conditions, restrictions, and covenants of this easement, with the provisions of the Open-Space Easement Act of 1974, and with the findings of the Board of Supervisors of the County of San Mateo pursuant to California Government Code Section 51084.

(2) Constructing its own improvements on the Subject Property. However, it may construct and maintain utility easements and road and access easements reserved or those authorized by the Vesting Tentative Subdivision Map approved by the Board of Supervisors of the County of San Mateo on _____. It is anticipated that there will be normal construction activities to build the eleven houses permitted by the Vesting Tentative Subdivision Map. The normal construction activities associated with building the eleven houses shall not be considered a violation of this Easement. No existing improvements constructed by any third person on the Subject Property are authorized under this easement.

(3) Constructing, placing, or maintaining a parking lot, storage area, or dump site for the storage or disposal of anything that is not indigenous or natural to the Subject Property other than those activities associated with the construction of the eleven authorized houses.

(4) Surfacing the Subject Property, in whole or in part, with any asphalt, stone, concrete, or other material that does not constitute natural cover for the land, except acts reserved in this grant.

(5) Mining, extracting, severing, or removing any natural resource found or located on, above, or below the Subject Property, or otherwise engaging in any activity that will alter the unique physical and scenic characteristics of the Subject Property.

(6) Cutting or removing timber or trees found or located on the Subject Property, except as may be required for fire prevention, thinning, elimination of diseased growth, or similar preventive measures in a manner compatible with the purposes of this grant.

(7) Cutting, uprooting, or removing natural growth found or located on the Subject Property, except as may be required for fire prevention, thinning, elimination of diseased growth, or similar preventive measures in a manner compatible with the purposes of this grant.

(8) Dividing or subdividing the Subject Property.

(9) Excavating, grading, or placing any sand, soil, rock, gravel, or any material on the Subject Property, subject to those rights reserved in Paragraph 9, below, and except with prior written permission of Grantee, provided that the excavation, grading, or placing of material on the Subject Property is consistent with the purposes of this grant. Except that Grantor, its agents, or its successors may take all and any action to construct all eleven residences authorized by the Vesting Tentative Subdivision Map approved by the Board of Supervisors of the County of San Mateo on _____.

Reservation of Rights

9. Grantor reserves the right to all uses and occupancy of, and ingress and egress to and from, the Subject Property in any manner consistent with the stated purposes, terms, conditions, restrictions, and covenants of this grant.

Grantee's Approval

10. Whenever this grant deed requires Grantor to obtain the prior written approval or permission of the Grantee, the Grantor will notify the Grantee not less than five days in advance of the date that Grantor intends to undertake the activity. The notice must describe the nature, scope, design, location, timetable, and any other material aspect of the proposed activity in sufficient detail to permit Grantee to make an informed judgment as to the consistency of the activity with the purpose of this grant. The Grantee shall grant or deny approval in writing within five days of receipt of Grantors notice. Grantee may deny approval only on a reasonable determination that the proposed action would be inconsistent with the purpose of this grant.

Right to Prevent Prohibited Use

11. Grantor grants to Grantee and Grantee's successors and assigns, for the duration of this grant, the right, but not the obligation, to prevent or prohibit any activity that is inconsistent with the stated purposes, terms, conditions, restrictions, or covenants of this grant and the right to enter the Subject Property for the purpose of removing any building, structure, improvement, or any material whatsoever constructed, placed, stored, deposited, or maintained on the Subject Property contrary to the stated purposes of this grant or to any term, condition, restriction, or covenant of this grant. By this grant, Grantor retains all rights to enforce the easement and any rights as an owner not inconsistent with this grant.

Enforcement

12. The purposes, terms, conditions, restrictions, and covenants in this grant may be specifically enforced or enjoined by proceedings in the Superior Court of the State of California, consistent with the terms of Section 51086 of the California Government Code.

Acts Beyond Grantor's Control

13. Nothing contained in this instrument may be construed to entitle Grantee to bring any action against Grantor for any injury to or change in the Subject Property resulting from causes that are beyond Grantor's control, including, but not limited to, third party actions, trespass, fire, flood, storm, earth movement, or any prudent or reasonable action undertaken by Grantor in emergency situations to prevent or mitigate significant damage or injury to the Subject Property resulting from such causes.

No Authorization for Public Trespass

14. The granting of this open-space easement by this instrument and the acceptance of the easement by the Grantee do not authorize, and are not to be construed as authorizing, the public or any member of the public to enter, trespass on, or use all or any portion of the Subject

Property, or as granting to the public or any member of the public any tangible rights in or to the Subject Property. It is understood that the purpose of this grant is solely to restrict the use of the Subject Property, so that it may be kept as near as possible in its natural state.

Condemnation

15. If an action in eminent domain for condemnation of any interest in the Subject Property is filed, or if the Subject Property is acquired for a public improvement by a public agency or person, these restrictions will be null and void as to the interest in the Subject Property actually condemned or acquired. However, all conditions, restrictions, and covenants of this grant will be in effect during the pendency of such an action; if such an action is abandoned before the recordation of a final order of condemnation, any portion of the Subject Property that is not actually acquired for public use will once again be subject to all of the terms, conditions, restrictions, and covenants of this grant. Grantor will be entitled to the amount of compensation as if the Subject Property had not been burdened by the open-space easement, consistent with Section 51095 of the California Government Code.

Abandonment

16. The easement granted by this instrument may be abandoned in the manner provided in Sections 51093 and 51094 of the California Government Code.

Amendment

17. This open-space easement may not be amended in whole or in part as to any term, condition, restriction, or covenant without the prior written consent of the Grantor and Grantee.

Binding on Successors and Assigns

18. This grant, and each and every term, condition, restriction, and covenant of this grant, is intended for the benefit of the public and is enforceable pursuant to the provisions of the Open-Space Easement Act of 1974. This grant binds Grantor and Grantor's successors and

assigns and constitutes a servitude on the Subject Property that runs with the land.

Liberal Construction

19. This easement is to be liberally construed in favor of the grant in order to effectuate the purposes of the easement and the policy and purpose of the Open-Space Act of 1974. If any provision in this grant is found to be ambiguous, an interpretation consistent with the purpose of this easement that would render the provision valid will be adopted over any interpretation that would render it invalid.

Severability

20. If any provision of this grant is found to be invalid, or if the application of this easement to any person or circumstance is disallowed or found to be invalid, the remainder of the provisions of the grant, or the application of the grant to persons or circumstances other than those to which its application was disallowed or found invalid, will not be affected and will remain in full force and effect.

Controlling Law

21. This grant of easement is to be interpreted, enforced, and performed in accordance with the laws of the State of California.

Entire Agreement

22. This grant sets forth the entire agreement of the parties with respect to the open-space easement and supersedes all previous conversations, negotiations, understandings, settlements, or agreements related to the open-space easement.

Captions

23. The captions in this grant have been inserted solely for the purpose of convenience of

reference and are not to be construed as part of this instrument and do not affect the construction or interpretation of the grant.

Enforceable Restriction

24. This easement is intended to constitute an enforceable restriction pursuant to the provisions of California Constitution, Article XIII, Section 8, and Sections 402.1 and 421 through 423.3 of the California Revenue and Taxation Code.

Counterparts

25. The parties may execute this instrument in two or more counterparts, which shall, collectively, be signed by all parties. Each counterpart shall be deemed an original instrument as against any party who has signed it. In the event of any disparity between the counterparts produced, the recorded counterpart controls.

Dated: _____

_____, GRANTOR
TICONDEROGA PARTNERS LLC
By: Jack Chamberlain

ACCEPTANCE OF OPEN-SPACE EASEMENT

Pursuant to the provisions of the Open-Space Easement Act of 1974, appearing at Chapter 6.6 of Part 1, Division 1, Title 5 of the California Government Code (commencing with Section 51070), _____[name of city, county, or nonprofit organization] accepts this grant of an open-space easement.

Dated: : _____

_____
COUNTY OF SAN MATEO
By: _____

CALIFORNIA CODES
GOVERNMENT CODE
SECTION 65560

65560. (a) "Local open-space plan" is the open-space element of a county or city general plan adopted by the board or council, either as the local open-space plan or as the interim local open-space plan adopted pursuant to Section 65563.

(b) "Open-space land" is any parcel or area of land or water that is essentially unimproved and devoted to an open-space use as defined in this section, and that is designated on a local, regional or state open-space plan as any of the following:

(1) Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands.

(2) Open space used for the managed production of resources, including but not limited to, forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of groundwater basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.

(3) Open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.

(4) Open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.

(5) Open space in support of the mission of military installations that comprises areas adjacent to military installations, military training routes, and underlying restricted airspace that can provide additional buffer zones to military activities and complement the resource values of the military lands.

(6) Open space for the protection of places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code.

dated = 12/23/09

County of San Mateo
Environmental Services Agency
Planning and Building Division

In-Lieu Park Fee Worksheet

[This formula is excerpted from Section 7055 of the County's Subdivision Regulations]

This work sheet should be completed for any residential subdivision which contains 50 or fewer lots. For subdivisions with more than 50 lots, the County may require either an in-lieu fee or dedication of land.

1. **For the parcel proposed for subdivision, look up the value of the land on the most recent equalized assessment roll. (Remember you are interested in the land only.)**

   Value of Land = [041-101-290] = $271,341 / [041-072-030] = $699 } Total = $272,040

2. **Determine the size of the subject parcel in acres.**

   Acres of Land = [041-101-290] = 96.92 acres / [041-072-030] = 0.05 acres } Total = 96.97 acres

3. **Determine the value of the property per acre.**

   a. **Set up a ratio to convert the value of the land given its current size to the value of the land if it were an acre in size.**

Formula:	
Parcel Size in Acres (From Item 2) / 1 Acre of Land	Value of Subject Parcel (From Item 1) / Value of Land/Acre
Fill Out: 96.97 acres / 1 Acre	$272,040 / Value of Land/Acre

   b. **Solve for X by cross multiplying.**

Formula:
Value of Land = Value of the Subject Parcel (From Item 1) / Size of the Subject Parcel in Acres (From Item 2) = _____
Fill Out: Value of Land = $272,040 / 96.97 acres = $2,805.40

4. **Determine the number of persons per subdivision.**

Formula: Number of New Lots Created* X 2.81** = Number of Persons Per Subdivision
*Example: A 2-lot split would = 1 newly created lot.
Fill Out: (P) 12 − (E) 2 = 10 X 2.81** = 28.1
**Average number of persons per dwelling unit according to the most recent federal census (1990).

5. **Determine the parkland demand due to the subdivision.**

Formula: Number of Persons Per Subdivision (From Item 4) X .003*** Acres/Person = Parkland Demand
Fill Out: 28.1 X .003*** Acres/Person = 0.0843
***Section 7055.1 of the County's Subdivision Ordinance establishes the need for .003 acres of parkland property for each person residing in the County.

6. **Determine the parkland in-lieu fee.**

Formula: Parkland Demand (From Item 5) X Value of the Land/Acre (From Item 3.b) = Parkland In-Lieu Fee
Fill Out: 0.0843 X 2,805.40 = $ 236.50

FRM00276
(4/93)

DRAFT

DRAFT

ORDINANCE NO. _____

BOARD OF SUPERVISORS, COUNTY OF SAN MATEO, STATE OF CALIFORNIA

* * * * * * * * * * * * *

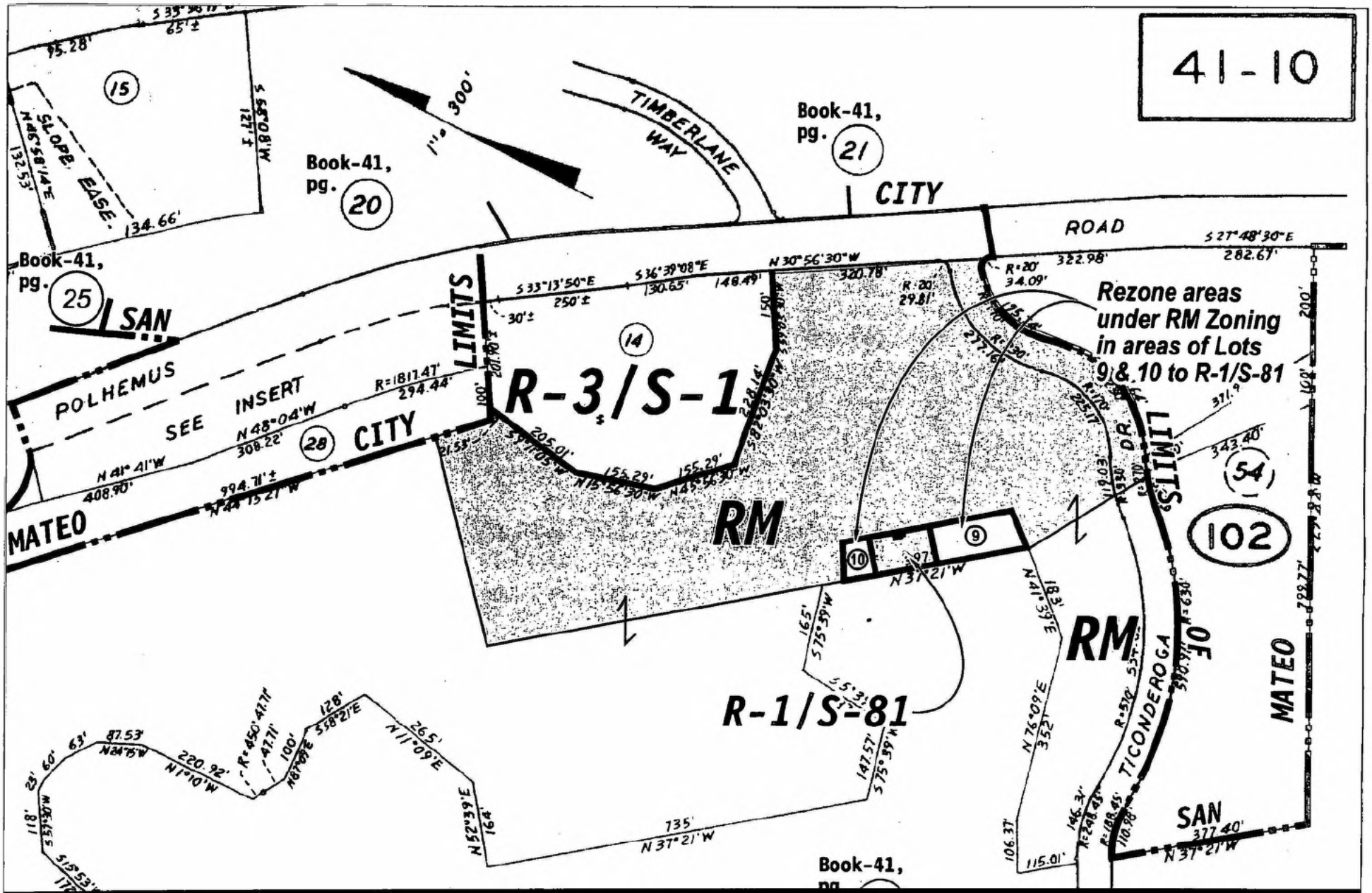
AN ORDINANCE AMENDING THE SAN MATEO COUNTY ORDINANCE CODE (ZONING MAPS) TO REZONE A PORTION OF A PARCEL IN THE SAN MATEO HIGHLANDS AREA FROM "RM" TO "R-1/S-81"

The Board of Supervisors of the County of San Mateo, State of California, ordains as follows:

SECTION 1. Division VI, Part One, Chapter 2, Section 6115 of the San Mateo County Ordinance Code (Zoning Maps) is hereby amended to change the zoning of a portion of APN 041-101-290 shown within the boundaries on the attached map identified as Exhibit "A" from "Resource Management (RM)" to an "R-1/S-81" zoning designation.

SECTION 2. This ordinance shall be in full force and effect thirty (30) days after adoption by the San Mateo County Board of Supervisors.

CML:fc – CMLT1035_WFQ.DOC (12/31/09)



San Mateo County Planning Commission's Meeting

Applicant:	**Jack Chamberlain**		Exhibit: **A**
File Numbers:	**PLN 2006-00357**	Ordinance No.	APN: **041-101-290**

plan06-357 12-30-09 rp

DRAFT

DRAFT

ORDINANCE NO. _____

BOARD OF SUPERVISORS, COUNTY OF SAN MATEO, STATE OF CALIFORNIA

* * * * * * * * * * * * *

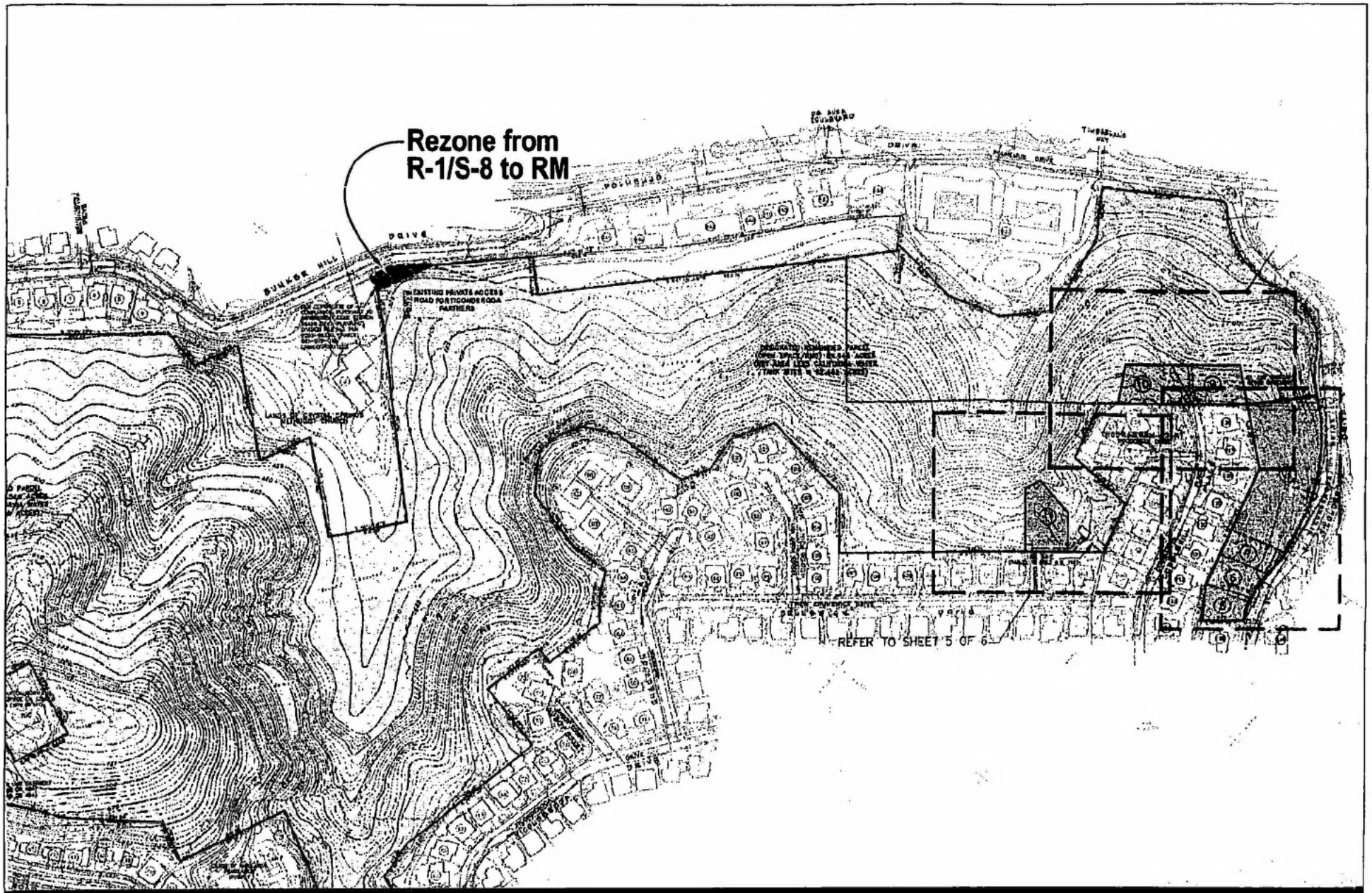
AN ORDINANCE AMENDING THE SAN MATEO COUNTY ORDINANCE CODE (ZONING MAPS) TO REZONE A PORTION OF A PARCEL IN THE SAN MATEO HIGHLANDS AREA FROM "R-1/S-8" TO "RM"

The Board of Supervisors of the County of San Mateo, State of California, ordains as follows:

SECTION 1. Division VI, Part One, Chapter 2, Section 6115 of the San Mateo County Ordinance Code (Zoning Maps) is hereby amended to change a 2,178 sq. ft. area (formerly APN 041-072-030) shown within the boundaries on the attached map identified as Exhibit "A" from an "R-1/S-8" zoning designation to "Resource Management (RM)."

SECTION 2. This ordinance shall be in full force and effect thirty (30) days after adoption by the San Mateo County Board of Supervisors.

CML:fc – CMLT1034_WFQ.DOC (12/31/09)



San Mateo County Planning Commission's Meeting

Applicant: **Jack Chamberlain** Exhibit: **A**

File Numbers: **PLN 2006-00357** Ordinance No. Formerly APN: **041-072-030**

DRAFT

ORDINANCE NO. _____

BOARD OF SUPERVISORS, COUNTY OF SAN MATEO, STATE OF CALIFORNIA

* * * * * * * * * * * * *

AN ORDINANCE AMENDING CHAPTER 20A OF DIVISION VI, PART ONE OF THE SAN MATEO COUNTY ORDINANCE CODE (ZONING ANNEX) TO REVISE THE RM ZONING DISTRICT REGULATIONS TO ALLOW A REDUCTION OF THE MINIMUM SETBACK (YARD) REQUIREMENTS FOR RESIDENTIAL PROJECTS IN URBAN AREAS THAT PRESERVE OPEN SPACE

The Board of Supervisors of the County of San Mateo, State of California, ordains as follows:

SECTION 1. Chapter 20A of Part One of Division VI of the San Mateo County Ordinance Code is hereby amended by adding a new Section 6319C to read as follows:

SECTION 6319C. CRITERIA FOR REDUCTION OF REQUIRED SETBACKS FOR RESIDENTIAL PROJECTS IN URBAN AREAS THAT PRESERVE OPEN SPACE.

1. **Decision Making Authority.** In order to grant a reduction of the required setbacks as allowed by this section, the decision making authority of the Resource Management Development Review Permit, pursuant to Section 6313 of this Chapter, must make the finding that the proposed development complies with the criteria listed in this section at the time of permit approval.

2. The front setback (yard) may be reduced to a minimum of 20 feet, and side setback(s) (yards) may be reduced to a minimum of 10 feet, if all of the following criteria apply:

a. The project preserves an area of open space that significantly enhances the protection of visual, habitat, or open space resources. The preservation of open space is accomplished by a conservation easement.

b. The project is located in an urban area, as shown on Map 8.1M of the San Mateo County General Plan.

c. The home sites are located immediately contiguous to an existing developed area.

d. The reduced setbacks are appropriate to conform the proposed development to existing development within the immediate vicinity, thereby helping to integrate the new development into the surrounding neighborhood.

e. The reduced setbacks will allow for increased open space by:

(1) Reducing the front setback allows for shallower parcels, and thereby allowing for increased open space and/or conservation easement area to be preserved in the rear area of the project or subdivision, and/or

(2) Reducing the side setback(s) will promote clustering of proposed residences thereby allowing more open space and/or conservation easement area to be preserved in the project or subdivision.

f. The project site will be subject to the following development standards:

(1) Minimum Lot Width of 75 feet.

(2) Maximum Building Site Coverage Ratio of 40%.

(3) Accessory buildings and structures will comply with Sections 6410 and 6411 (Detached Accessory Buildings) of this Ordinance Code, except that structures will maintain the minimum 20-foot rear setback and a minimum side setback of 10 feet.

g. The project will minimize grading.

h. The reduction of required setbacks does not adversely impact community character, public health, safety or welfare.

SECTION 2. Section 6319B (Minimum Yards) of Chapter 20A of Part One of Division VI of the San Mateo County Ordinance Code is hereby amended by inserting the text as underlined, to read as follows:

SECTION 6319B. MINIMUM YARDS. In the absence of more restrictive provisions within this ordinance and with the exception of setbacks determined under the provisions of Section 6319C of this Ordinance Code, the minimum yards required in the RM District shall be as follows:

Front: 50 feet
Side: 20 feet
Rear: 20 feet

Main and accessory buildings shall be located at least thirty (30) feet apart.

SECTION 3. This ordinance shall be in full force and effect thirty (30) days after adoption by the San Mateo County Board of Supervisors.

CML:fc – CMLT1043_WFQ.DOC (1/6/10)

Recorded at the Request of, and When Recorded Return to: Pete Bentley, Senior Engineer Planning and Building Division 455 County Center, 2nd Floor Mail Drop PLN122 Redwood City, CA 94063 **Exempt from Fees Pursuant to Government Code Section 27383**	For Clerk Use Only **2005-178737** **10:50am 10/13/05 CC Fee: NO FEE** **Count of pages 3** **Recorded in Official Records** **County of San Mateo** **Warren Slocum** **Assessor-County Clerk-Recorder** *2005017873 7AR*

3p

County of San Mateo
Environmental Services Agency
Planning and Building Division

CERTIFICATE OF COMPLIANCE

Pursuant to Government Code Section 66499.35(a)

Planning Division File No. PLN 2005-00350

The County of San Mateo has received a request from Ticonderoga Partners, LLC, 665 Skyway, Suite 230, P.O. Box 970, San Carlos, to determine if real property owned by Ticonderoga Partners, LLC, identified as Assessor's Parcel Number 041-072-030 and further described below, complies with provisions of the California Subdivision Map Act and the San Mateo County Subdivision Ordinance.

Property Description

All that certain real property situate in the County of San Mateo, State of California, described as follows:

Portion of the lands described in Parcel Two of the deed from Baywood Plaza Co. Inc., a corporation, to California Pacific Title Insurance Company, a corporation, dated February 10, 1956 and recorded February 27, 1956 in Book 2974 of Official Records of San Mateo County at Page 651 (31320-N), said portion being more particularly described as follows:

BEGINNING at the Northeasterly corner of Lot 1, Block 15, on the Southwesterly line of Bunker Hill Drive, as said Lot, Block, and Drive are shown on the map entitled "TRACT NO. 762, THE HIGHLANDS UNIT NO. 8, SAN MATEO COUNTY CALIFORNIA," which map was filed in the office of the Office of the Recorder of the County of San Mateo, State of California on December 18, 1957, in Book 48 of Maps at Pages 16 and 17; thence from said point of beginning along the said Southwesterly line of Bunker Hill Drive, South 62°17'30" East 12.99 feet; Southeasterly on the arc of a curve to the right, tangent to the preceding course, said curve having

a radius of 220 feet and a central angel of 20°36'30", a distance of 79.13; and South 41°41' East 73.65 feet to the general Southerly boundary of the lands described in Parcel Two of the Deed first above referred to; thence North 62°17'30" West along the last mentioned boundary 159.36 feet to the Southeasterly line of said Lot 1 in Block 15, as shown on the map above referred to; thence North 27°42'30" East along the last mentioned line 40 feet to the point of beginning.

Parcel 041-072-030 Unincorporated.

This is to certify that the real property described above complies with the State of California Subdivision Map Act and the San Mateo County Subdivision Ordinance.

NOTICE: This document certifies compliance with the State of California Subdivision Map Act and the San Mateo County Subdivision Regulations only. Any development on, or use of, the property described herein is subject to the San Mateo County General Plan, Zoning Regulations, building regulations, and other County regulations affecting use and development of the property. Further, this Certificate of Compliance shall in no way affect the requirements of any other federal, State or local agency that regulates development or use of real property.

Lisa Grote, Community Development Director
County of San Mateo

10/13/05
Date

LCG:PSB/kcd - PSBP1163_WKN.DOC

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California
County of San Mateo } ss.

On 10-13-05 (Date), before me, Susan Durling Notary Public (Name and Title of Officer (e.g., "Jane Doe, Notary Public"))
personally appeared Lisa Grote (Name(s) of Signer(s))

☒ personally known to me
☐ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(ies), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

SUSAN D. DURLING
COMM # 1336237
NOTARY PUBLIC • CALIFORNIA
SAN MATEO COUNTY
My Commission Expires Dec. 17, 2006

WITNESS my hand and official seal.

Susan D. Durling
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document
Title or Type of Document: _____
Document Date: _____ Number of Pages: _____
Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer
Signer's Name: _____
☐ Individual
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Attorney in Fact
☐ Trustee
☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

12/7/2009
Job No. 950168.10

BKF Engineers
255 Shoreline Drive, Suite 200
Redwood City, CA 94065
(650) 482-6300 , Fax (650) 482-6399

HIGHLAND ESTATES

TABULATION OF REVISED EARTHWORK QUANTITIES
BASED ON THE VESTING TENTATIVE MAP DATED NOVEMBER 10, 2009

AREA	CUT (CY)	FILL (CY)	TOTAL CUT/FILL (CY)
LOT 1	300	100	400
LOT 2	0	600	600
LOT 3	0	1300	1300
LOT 4	200	300	500
LOTS 1-4 SUBTOTAL CUT (CY)	*500*		
LOTS 1-4 SUBTOTAL FILL (CY)		*2,300*	
LOT 5	1100	0	1100
LOT 6	1400	0	1400
LOT 7	1400	200	1600
LOT 8	800	300	1100
LOTS 5-8 SUBTOTAL CUT (CY)	*4,700*		
LOTS 5-8 SUBTOTAL FILL (CY)		*500*	
LOT 9	0	2600	2600
LOT 10	300	300	600
LOTS 9-10 SUBTOTAL CUT (CY)	*300*		
LOTS 9-10 SUBTOTAL FILL (CY)		*2,900*	
LOT 11	*1200*	*1000*	2200
TOTALS ALL LOTS			
LOTS 1-11 SUBTOTAL CUT (CY)	*6,700*		
LOTS 1-11 SUBTOTAL FILL (CY)		*6,700*	
10% SHRINKAGE (CY)		*700*	
TOTALS	**6,700**	**7,400**	
IMPORT	**700**		

NOTES

1. All earthwork quantities have been rounded to the nearest 100 cubic yards. Earthwork quantities include an allowance for shrinkage of 10%.
2. The earthwork calculations/quantities are based on the" Vesting Tentative Map - Highland Estates" dated November 10, 2009.
3. Site grading associated with Lots 7 & 8, shared driveway.
4. Site grading associated with Lots 9 & 10, shared driveway.
5. Grading quantities do not include any building foundation requirements.

Attachment Z

HIGHLAND ESTATES

LOT 5 – LANDSCAPE PLANS

VICINITY MAP

SITE MAP

SHEET INDEX

REVISION LOG

DATE	SHEET NUMBER	DESCRIPTION

CLIENT
CHAMBERLAIN GROUP
850 Stanley, Suite 200
San Carlos, CA 94070
(650) 592.5582

800.227.2600

VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.
81 NINTH ST. SAN FRANCISCO, CA
94103 TEL (415) 861-1400 FAX (415) 861-1404

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

LANDSCAPE IMPROVEMENT PLANS
LOT 5

REVISIONS
NO | DESCRIPTION | BY | DATE

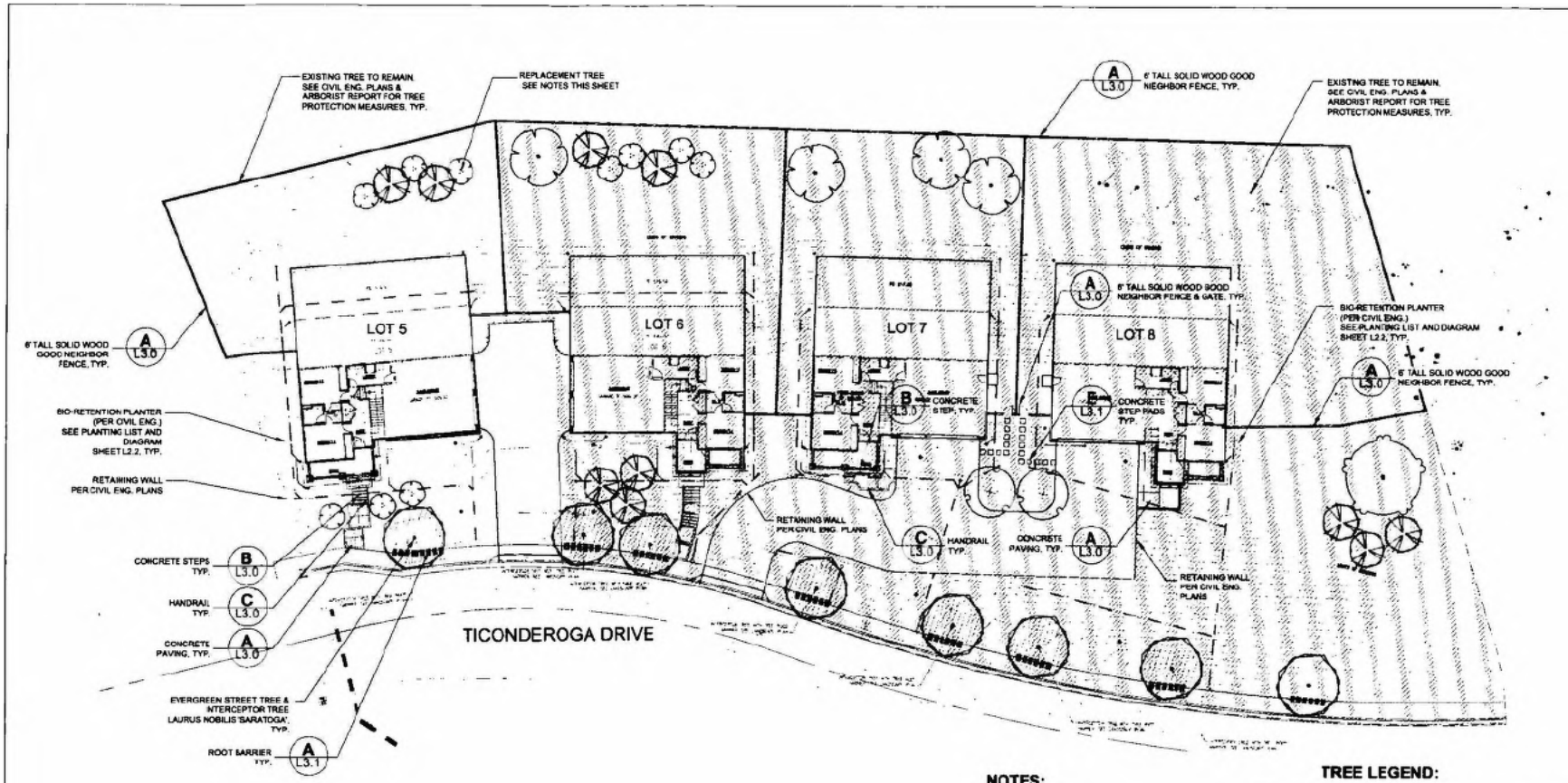
SHEET TITLE
COVER SHEET

SCALE
NTS

ISSUE DATE
02/18/16

PROJECT NO.
V0219

SHEET NO.
L0.0



NOTES:

1. NO PLANTING OR IRRIGATION SHALL OCCUR UNDER THE CANOPIES OF THE EXISTING OAK TREES. FIELD ADJUST NEW REPLACEMENT TREES AS NEEDED.

TREE LEGEND:

	STORMWATER CREDIT/EVERGREEN INTERCEPTOR TREES LAURUS NOBILIS 'SARATOGA' 11 TOTAL WITHIN 25'-0" IMPERVIOUS SURFACE
	PROPOSED REPLACEMENT TREES - SEE L2.2 FOR COMPLETE TREE SPECIES/LEGEND TOTAL SITE: 23 REPLACEMENT TREES REQUIRED 33 REPLACEMENT TREES PROVIDED LOT 5: 8 REPLACEMENT TREES PROVIDED
*	EXISTING TREES TO REMAIN, TYP. SEE CIVIL PLANS AND ARBORISTS REPORT FOR TREE PROTECTION MEASURES

CHAMBERLAIN GROUP
855 Stoneway, Suite 200
San Carlos, CA 94070
(650) 596.5082

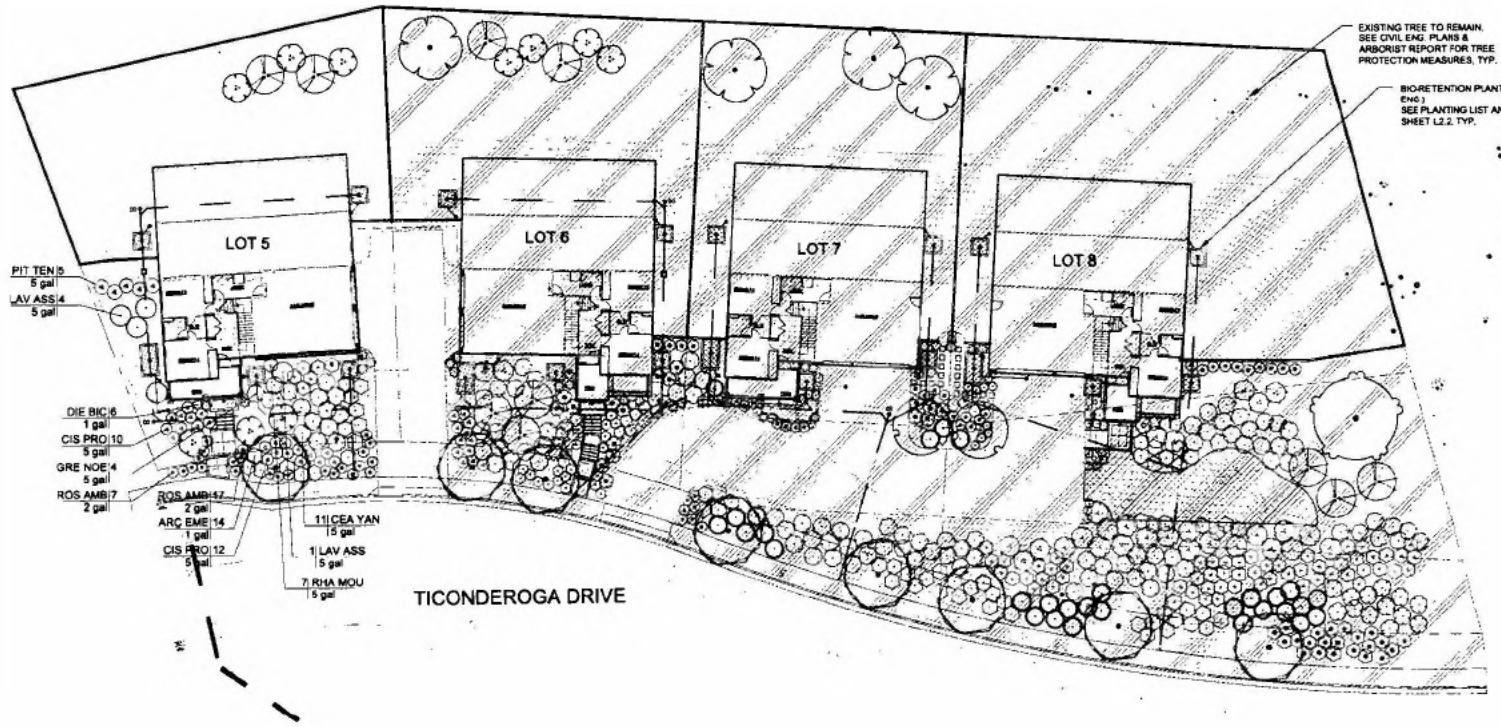
800.227.2600

VAN DORN ABED LANDSCAPE ARCHITECTS, INC.

PROJECT NAME: HIGHLAND ESTATES
SAN MATEO CALIFORNIA
DRAWING TITLE: LANDSCAPE IMPROVEMENT PLANS
LOT 5

CALLOUT & LAYOUT PLAN

SCALE: 1/16" = 1'-0"
DATE: 02/18/16
PROJECT NO: V0219
SHEET NO: L1.0



PLANTING NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. **NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY**
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.
4. IRRIGATION DRIP SYSTEM SHALL BE ADJUSTED AS REQ'D FOR OPTIMUM WATER SAVINGS AND NO RUN OFF.

EROSION CONTROL NOTES:

1. LEAVE EROSION CONTROL JUTE MESH ON ALL SLOPES. CUT HOLES FOR NEW SHRUBS AS NEEDED.

EXISTING OAK TREE NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY.
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.

SAN MATEO COUNTY WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE STATEMENT:

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN."

ZIKI ABED - LICENSED LANDSCAPE ARCHITECT

0 8 16 32 64

CLIENT
CRANDERRAIN GROUP
800.227.2600
VAN DORN ABED LANDSCAPE ARCHITECTS, INC.

PROJECT ASSOCIATION
HIGHLAND ESTATES
SAN MATEO
CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 5

NO	DESCRIPTION	DATE

SHEET TITLE
PLANTING PLAN

SCALE: 1/16" = 1'-0"
SHEET DATE: 02/16/16
PROJECT NO: Y0219
SHEET NO: L2.0

BIO-RETENTION PLANTERS ON THE NORTH & NORTHEAST SIDES OF BUILDINGS

5 GAL	CORNUS SERICEA "ISANTI"	QTY: 1
1 GAL	CAREX PRAEGRACILUS	QTY: CAN-TO-CAN FULL

ALTERNATIVE:

5 GAL	CARPENTERIA CALIFORNICA	QTY: 1
1 GAL	CAREX PRAEGRACILUS	QTY: CAN-TO-CAN FULL

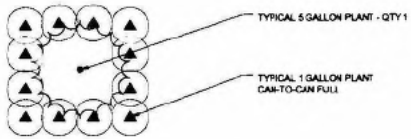
BIO-RETENTION PLANTERS ON THE SOUTH & SOUTHWEST SIDES OF BUILDINGS

5 GAL	MUHLENBERGIA RIGENS	QTY: 1
1 GAL	MIMULUS AURANTIACUS & CAREX PRAEGRACILUS (ALTERNATING)	QTY: CAN-TO-CAN FULL

NOTES:

1. CONTRACTOR TO HAND WATER PLANTS IN BIO-RETENTION PLANTERS UNTIL ESTABLISHED.
2. SEE CIVIL ENGINEER'S PLANS AND SPECIFICATIONS FOR BIO-RETENTION SOIL MIX.
3. PLANT SPECIES LISTED ABOVE ARE APPROVED FOR USE IN BIO-PLANTERS PER THE SAN MATEO COUNTY STORMWATER MEASURES PLANT LIST

PLANTING DIAGRAM:



PLANTING LIST

TREES	CODE	BOTANICAL NAME	COMMON NAME	CONT	QTY	REMARKS
	ARB HYB	Arbutus x 'Marina'	Arbutus Standard	15 gal	2	Replacement Tree
	ARC MAN	Arctostaphylos manzanita MULTI-TRUNK	Manzanita	15 gal	10	Multi-Trunk Replacement Tree
	CER OCC	Cercis occidentalis - MULTI-TRUNK	Western Redbud	15 gal	15	Multi-trunk Replacement Tree
	LAU SAR	Laurus nobilis 'Saratoga'	Sweet Bay	15 gal	12	Street Tree/Interceptor Tree Evergreen
	QUE AGR	Quercus agrifolia	Coast Live Oak	15 gal	1	Replacement tree
	SAM MEX	Sambucus mexicana - MULTI-TRUNK	Mexican Elderberry	15 gal	5	Multi-Trunk Replacement tree

PLANTING LIST (cont.)

SHRUBS	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
	ACA COG	Acacia cognata 'Cousin Itt'	River Wattle	5 gal	17
	ALY MON	Alyogyne huegelii 'Monterey Bay'	Blue Hibiscus	5 gal	11
	ARB ELF	Arbutus unedo 'Elfin King'	Dwarf Strawberry Tree	5 gal	8
	ARC EME	Arctostaphylos x 'Emerald Carpet'	Emerald Carpet Manzanita	1 gal	121
	CEA YAN	Ceanothus griseus horizontalis 'Yankee Point'	California Lilac	5 gal	100
	CEA CON	Ceanothus x 'Concha'	California Lilac	5 gal	7
	CIS LAD	Cistus ladanifer	Crimson Spot Rockrose	5 gal	31
	CIS PUL	Cistus pulverulentus 'Sunset'	Rockrose	5 gal	34
	CIS PRO	Cistus salvifolius 'Prostratus'	Sageleaf Rockrose	5 gal	54
	CIS HYB	Cistus x hybridus	White Rockrose	5 gal	58
	CIT MEY	Citrus x meyeri	Meyer Lemon	5 gal	3
	DIE BIC	Dietes bicolor	Fortnight Lily	1 gal	47
	ERI WAY	Erigeron glaucus 'Wayne Roderick'	Seaside Daisy	1 gal	36
	GRE NOE	Grevillea x 'Noelii'	Grevillea	5 gal	45
	LAV ASS	Lavatera assurgentiflora	Mallow	5 gal	9
	PEN FAR	Pennisetum x 'Fairy Tails'	Evergreen Fountain Grass	5 gal	12
	PIT TEN	Pittosporum tenuifolium 'Marjorie Channon'	Tawhiwhi	5 gal	30
	PIT CRE	Pittosporum tobira 'Cream De Mint' TM	Cream De Mint Dwarf Mock Orange	5 gal	15
	PIT WHE	Pittosporum tobira 'Wheelers Dwarf'	Wheeler's Dwarf Mock Orange	5 gal	34
	PRU BRI	Prunus caroliniana 'Bright 'N Tight' TM	Bright 'N Tight Carolina Laurel	5 gal	44
	RHA MOU	Rhamnus californica 'Mound San Bruno'	California Coffeeberry	5 gal	120
	RHA SEA	Rhamnus californica 'Seaview'	California Coffee Berry	5 gal	22
	ROS AMB	Rosa x 'Flower Carpet Amber'	Amber Carpet Rose	2 gal	65
	ROS RED	Rosa x 'Flower Carpet Red'	Rose	2 gal	35
	WES MOR	Westringia fruticosa 'Morning Light'	Morning Light Coast Rosemary	5 gal	11

GRASSES	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
	FES IDA	Festuca idahoensis	Idaho Fescue	1 gal	64

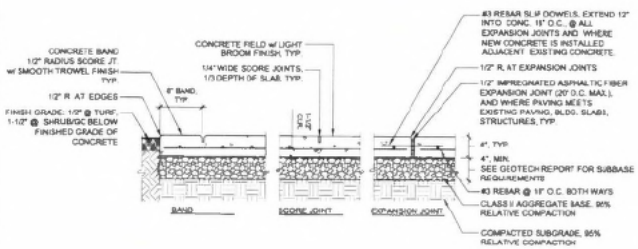
GROUND COVERS	CODE	BOTANICAL NAME	COMMON NAME	CONT	SPACING	QTY
	CAR PAN	Carex pansa	Sanddune Sedge	4" pot	6" o.c.	13 sf

CLIENT
CRANBERRAIN GROUP
800.227.2600
VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.

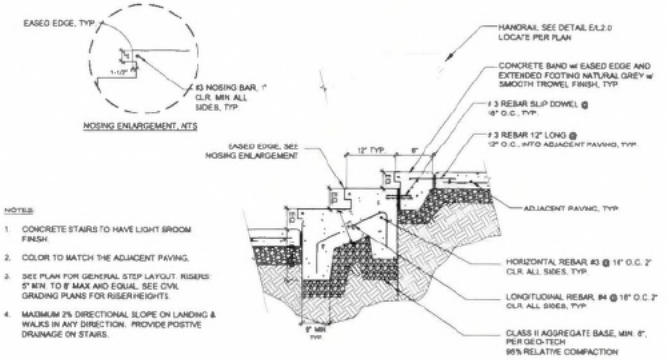
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 5

PLANTING LEGEND

SCALE: NTS
RECEIVED: 02/10/15
PROJECT NO: Y0219
SHEET NO: L2.1



A CONCRETE PAVING
1" - 1'-0"



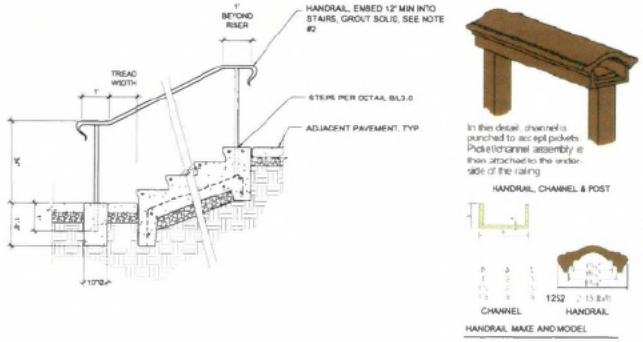
NOTES:

1. CONCRETE STAIRS TO HAVE LIGHT BROOM FINISH.
2. COLOR TO MATCH THE ADJACENT PAVING.
3. SEE PLAN FOR GENERAL STEP LAYOUT. RISERS: 5" MIN. TO 8" MAX AND EQUAL. SEE CIVIL GRADING PLANS FOR RISER HEIGHTS.
4. MAXIMUM 2% DIRECTIONAL SLOPE ON LANDING & WALKS IN ANY DIRECTION. PROVIDE POSITIVE DRAINAGE ON STAIRS.

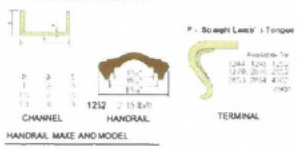
B CONCRETE STEPS
3/4" - 1'-0"

CONCRETE NOTES:

1. SCORING PATTERN TO MEET ALL ACI INTERNATIONAL GUIDELINES.
2. ALL FORMWORK/SCORING/PROPOSED JOINT SPACING TO BE APPROVED AND REVIEWED BY OWNERS' REPRESENTATIVE PRIOR TO POURING.
3. ALL SCORING/CONTRACTION JOINTS TO BE MINIMUM 1/3 DEPTH OF SLAB.
4. DISTANCE BETWEEN CONTRACTION JTS TO BE MAXIMUM 24 TIMES SLAB THICKNESS. ALL CONTRACTION JTS TO BE CONTINUOUS NOT STAGGERED. OR OFFSET. REFER TO ACI INTL CCS-1 SERIES GUIDELINES FOR ALL CONCRETE WORK. ANY DISCREPANCIES WITH DRAWINGS TO BE BROUGHT TO ATTENTION OF OWNER/ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
5. CONCRETE PANELS TO BE AS SQUARE AS PRACTICAL, NEVER MAKE LONG SIDE MORE THAN 1-1/2 TIMES LENGTH OF SHORT SIDE. NO ONE PANEL TO BE MORE THAN 100 SQ. FT.
6. INSTALL EXPANSION JOINTS WHERE NEW PAVING MEETS EXISTING PAVING, WALLS, CURBS, FOUNDATIONS, OR OTHER FIXED OBJECTS, AND CHANGES IN WALK DIRECTIONS.
7. CONCRETE COLOR TO BE NATURAL GRAY.
8. BROOM FINISH SHALL BE PERPENDICULAR TO PATH OF TRAVEL.
9. CONTRACTOR SHALL COORDINATE INSTALLATION OF REBAR SLIP DOWELS WHERE DRIVEWAY MEETS GARAGE CONCRETE PAD WITH OWNER'S REPRESENTATIVE AND PROJECT STRUCTURAL ENGINEER. DOWELS SHALL BE #4 REBAR SPACED 24" O.C. EXTENDING 12" INTO DRIVEWAY AND GARAGE PAD, OR AS SPECIFIED BY STRUCTURAL ENGINEER. CONTRACTOR SHALL ONLY INSTALL REBAR DOWELS IF APPROVED BY OWNER'S REPRESENTATIVE AND PROJECT STRUCTURAL ENGINEER. SUBMIT TO OWNER'S REPRESENTATIVE PROPOSED DOWEL LOCATIONS.
10. FOR ALL PAVING DETAILS SHOWN, THE PAVING PROFILE, AGGREGATE, SUBBASE, PREPARATION & COMPACTION PER GEOTECH ENGINEER, TYP. PROFILES ARE SHOWN FOR DESIGN INTENT & BIDDING PURPOSES ONLY. SEE GEOTECH REPORT FOR PAVING & SUBBASE REQUIREMENTS.



HANDRAIL, CHANNEL & POST



HANDRAIL MAKE AND MODEL

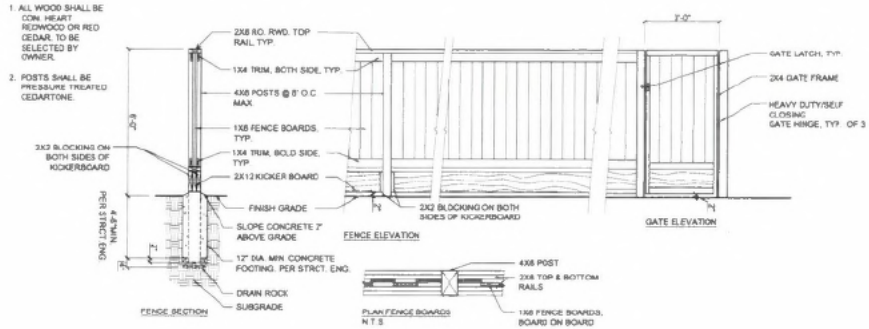
HANDRAIL NOTES:

1. HANDRAILS TO BE 1-5/8"ø MODEL N2801 ALUMINUM HANDRAIL WITH LAMBS TONGUE TERMINUS AS SHOWN. ALUMINUM CHANNEL SHALL BE MODEL C2100812. POSTS SHALL BE 1" SQUARE STEEL BAR WELDED TO BASE OF CHANNEL.
2. PRIME AND PAINT WITH ZINC-RICH PRIMER AND 2 COATS ENAMEL. COLOR TO BE DARK BRONZE. SUBMIT PAINT SAMPLE TO OWNER FOR APPROVAL.
3. AVAILABLE THROUGH H&B WAGNER, INC. (888) 243-6914.

C HANDRAIL
1/2" - 1'-0"

NOTES:

1. ALL WOOD SHALL BE CON. HEART REDWOOD OR RED CEDAR, TO BE SELECTED BY OWNER.
2. POSTS SHALL BE PRESSURE TREATED CEDARTONE.



D 6' TALL WOOD FENCE & GATE
NTS

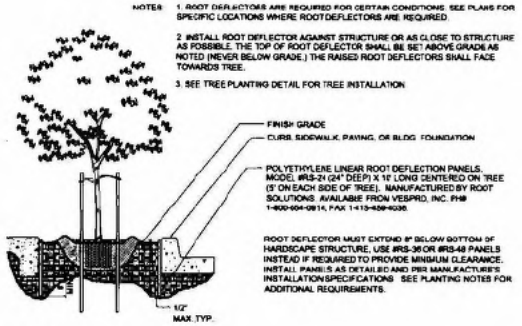
CIVIL:
CHAMBERLAIN GROUP
655 Skyway, Suite 150
San Carlos, CA 94070
(650) 596-0582

800.227.2600

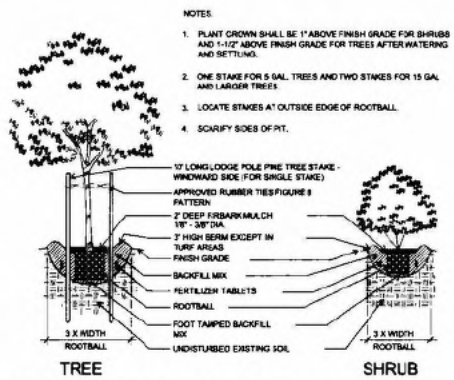
VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.
ZP 9453 PH 1458 864-7821 FAX 1458 864-0764

PROJECT NAME / LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 5

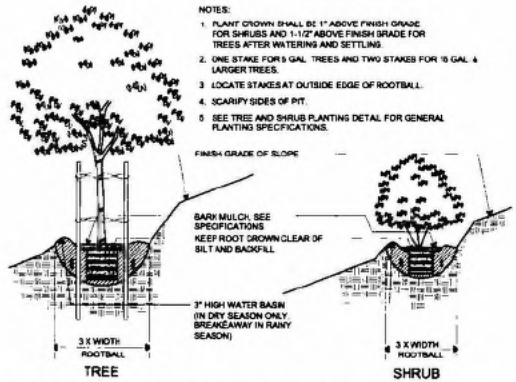
SHEET TITLE
LANDSCAPE DETAILS
SCALE
AS NOTED
ISSUE DATE
02/18/16
PROJECT NO.
V0219
SHEET NO.
L3.0



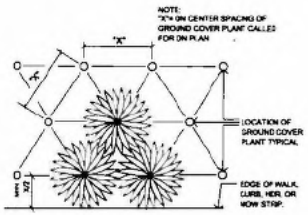
A ROOT DEFLECTOR
NTS



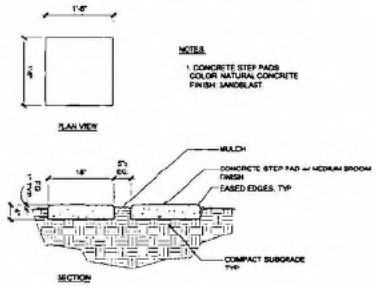
B TREE AND SHRUB PLANTING
NTS



C HILLSIDE TREE AND SHRUB PLANTING
NTS



D GROUNDCOVER PLANTING
NTS



E CONCRETE STEP PADS
3/4" = 1'-0"

CHAMBERLAIN GROUP
555 Skyway, Suite 250
San Carlos, CA 94070
(650) 595-5552

650.227.2600

VAN DORN ABED LANDSCAPE ARCHITECTS, INC.
81 4TH ST. SAN FRANCISCO, CA

PROJECT NAME & LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 5

LANDSCAPE DETAILS
SCALE: AS NOTED
ISSUE DATE: 02/18/16
PROJECT NO.: VC219
SHEET NO.: L3.1

GENERAL NOTES:

1. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC., SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE, UNLESS OTHERWISE NOTED. AVOID ANY CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING AND ARCHITECTURAL FEATURES.
2. CONTRACTOR SHALL PERFORM PRESSURE TESTS (STATIC & DYNAMIC) AND FLOW TESTS (GPM) AT POINT OF CONNECTION (P.O.C.) PRIOR TO BEGINNING WORK. SEE IRRIGATION NOTES FOR PRESSURE AND FLOW TEST REQUIREMENTS AND PROCEDURES. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CORRECTIVE MEASURES REQUIRED TO IRRIGATION SYSTEM, AT NO ADDITIONAL COST TO THE OWNER, IF IRRIGATION SYSTEM IS INSTALLED WITHOUT REQUIRED TESTS, AND DISCREPANCIES IN PRESSURE AND FLOW AT THE P.O.C. ARE DISCOVERED THAT PREVENT THE IRRIGATION SYSTEM FROM FUNCTIONING CORRECTLY.

WATER PRESSURE AT P.O.C. NOTES

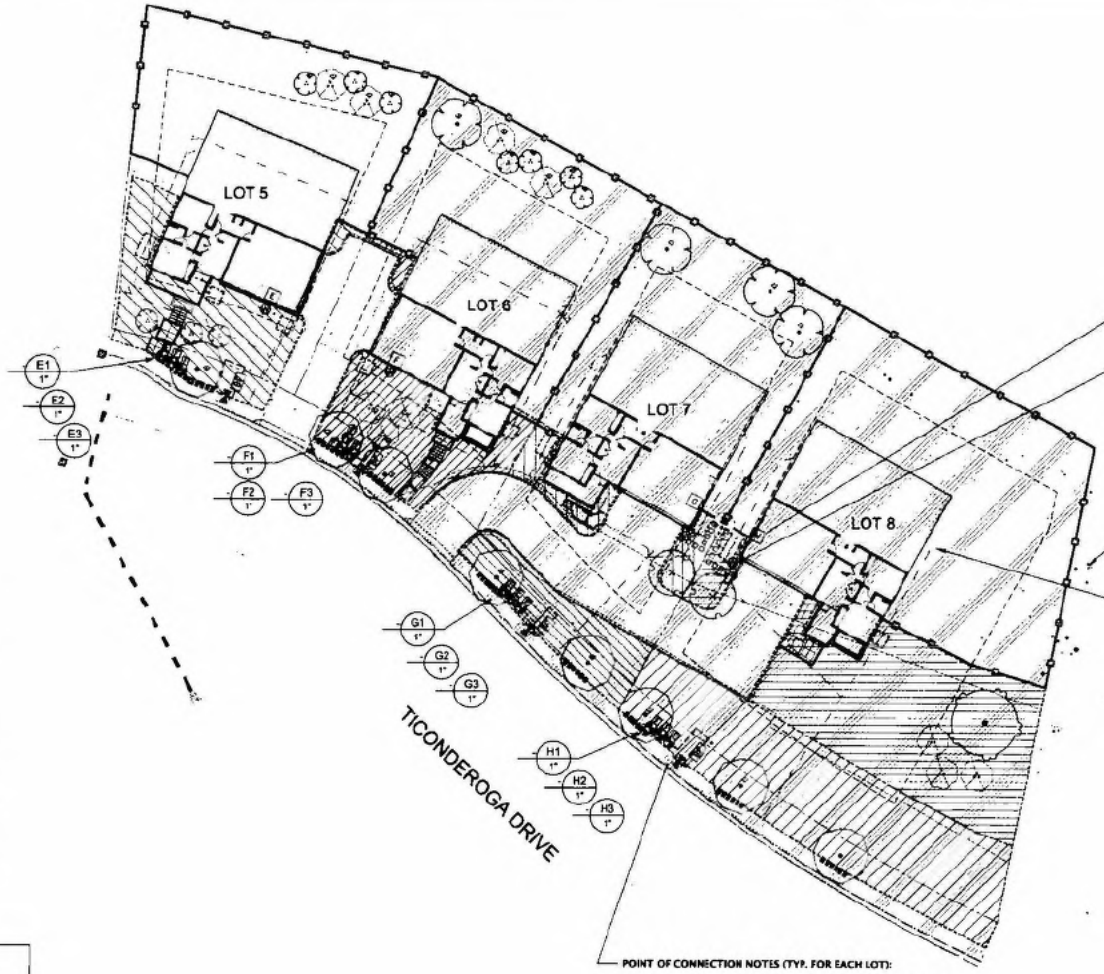
1. CONTRACTOR SHALL VERIFY WATER PRESSURE ON SITE. IF PRESSURE IS 65 PSI OR HIGHER AT P.O.C., CONTRACTOR SHALL INSTALL A PRESSURE REDUCER AS SHOWN, AND SET PRESSURE REDUCER TO 65 PSI. PRESSURE REDUCER SHALL BE 1-1/4" WILKINS LEAD FREE 500XL-975R (INCLUDES PRESSURE REDUCER & FILTER), SEE IRRIGATION DETAILS.
2. IF PRESSURE IS LESS THAN 65 PSI OMIT PRESSURE REDUCER.
3. IF PRESSURE IS LESS THAN 55 PSI NOTIFY OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT FOR CORRECTIVE MEASURES.

SLEEVE NOTES:

1. FOR DESIGN CLARITY, NOT ALL SLEEVES SHOWN. CONTRACTOR SHALL SLEEVE ALL PIPES CROSSING UNDER PAVED AREAS.
2. WHERE LATERAL LINES WITH SLEEVES CROSS ROADS OR DRIVEWAYS, CONTRACTOR SHALL INSTALL ONE SPARE 4" CLASS 315 PVC SLEEVE.
3. WHERE MAIN LINES WITH SLEEVES CROSS ROADS OR DRIVEWAYS, CONTRACTOR SHALL INSTALL ONE SPARE 6" CLASS 315 PVC SLEEVE.

SPECIAL REQUIREMENTS AT EXISTING TREES

1. ALL UNDERGROUND IRRIGATION LINES SHALL BE ROUTED OUTSIDE THE DRIP LINES WHERE POSSIBLE.
2. IF UNDERGROUND IRRIGATION LINES MUST TRAVERSE THROUGH THE DRIP LINE AREA, LOCATION OF IRRIGATION LINES SHALL BE REVIEWED WITH PROJECT ARBORIST AND MODIFIED AS NEEDED PRIOR TO INSTALLATION. WHEN LINES ARE PROPOSED WITHIN A DISTANCE FROM THE TRUNKS OF FIVE (5) TIMES THEIR DIAMETER, THE PROJECT ARBORIST MAY RECOMMEND THAT A PNEUMATIC AIR DEVICE IS USED TO EXCAVATE THE TRENCH.



IRRIGATION CONTROLLER, WALL MOUNT IN GARAGE AS DIRECTED BY OWNER'S REPRESENTATIVE. CONTRACTOR TO PROVIDE 120 VOLT AC POWER TO CONTROLLER, TYP.

WIRELESS WEATHER SENSOR, LOCATE ON EDGE OF ROOF/GUTTER IN AREA OPEN TO SKY WITH FULL SUN EXPOSURE, IN LOCATION APPROVED BY OWNER'S REPRESENTATIVE; INSTALL PER MANUFACTURER'S INSTRUCTIONS, TYP.

EXISTING TREE TO REMAIN, SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.

BIO-RETENTION BOXES, NON-IRRIGATED. CONTRACTOR TO HAND WATER TO ESTABLISH PLANT MATERIALS, TYP.

POINT OF CONNECTION NOTES (TYP. FOR EACH LOT):

P.O.C. IS AT 1" HOUSE WATER METER, SEE P.O.C. DETAIL. WATER METER BY OTHERS, SEE CIVIL PLANS. FIELD VERIFY METER LOCATION & SIZE. CONTRACTOR SHALL VERIFY STATIC & DYNAMIC PRESSURE AND FLOW RATES AVAILABLE AT P.O.C. PRIOR TO BEGINNING WORK (SEE IRRIG. SPECIFICATIONS). SUBMIT TO OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT RESULTS OF PRESSURE AND FLOW TESTS PRIOR TO BEGINNING WORK. IF THERE ARE DISCREPANCIES OF 10 PSI OR MORE OR FLOW RATES LOWER THAN STATED IRRIGATION DEMAND ON PLANS, SYSTEM MAY NOT PERFORM CORRECTLY. SEE "WATER PRESSURE AT P.O.C. NOTES" & IRRIGATION SPECS FOR PRESSURE AND FLOW TEST REQUIREMENTS AND PROCEDURES.

IRRIGATION DEMAND: 6 GPM @ 65 PSI.

SEE "WATER PRESSURE AT P.O.C. NOTES" FOR PRESSURE REDUCER INSTALLATION REQUIREMENTS.

EXISTING OAK TREE NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. **NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY.**
3. **CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.**

NOTE: CONTRACTOR SHALL FIELD STAKE ALL TREE LOCATIONS PRIOR TO INSTALLATION OF IRRIGATION SYSTEM TO AVOID CONFLICTS WITH TREE LOCATIONS AND MAIN LINES/LATERAL LINES. IRRIGATION LATERAL LINES AND MAIN LINES SHALL BE LOCATED 3' MINIMUM HORIZONTALLY FROM TREE LOCATIONS. FIELD ADJUST ROUTING OF IRRIGATION LINES AS NECESSARY TO MEET MINIMUM CLEARANCE NOTED ABOVE.

SAN MATEO COUNTY WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE STATEMENT:

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLANS."

ZEKI ABED - LICENSED LANDSCAPE ARCHITECT

0 10 20 40 60

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LANDSCAPE ARCHITECT
VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.
87 14TH ST. SAN FRANCISCO, CA

PROJECT LOCATION
HIGHLAND ESTATES
SAN MATEO
CALIFORNIA

DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 5

DATE TITLE
IRRIGATION PLAN

SCALE
1" = 20'-0"

ISSUE DATE
02/16/18

PROJECT NO
V0219

SHEET NO
L4.0

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
△	PVC lateral line to drip area with Raindrip 6-outlet emitter units. Route PVC lateral line thru drip area and install required quantity of Drainubblers necessary to irrigate plants in the drip area.
▽	Rain Bird XB1-6 Six multi-outlet drip emitter/bubbler Slit-Outlet, Pressure Compensating, with 1.0 GPH Black Drip Emitters at each emitter outlet. Comes with 1/2" FPT Inlet x Barb Outlet. Install DSC-025 Diffuser Bug Caps at end of each emitters 1/4" distribution line. Install 4 (four) 1/4" distribution lines with Diffuser Bug Caps at 90at & 180at lines; Install 6 (six) 1/4" distribution lines with Diffuser Bug Caps at 24"Box trees. Plug unused emitter outlets.
NOTE: DRIP AREA PATTERNS VARY FOR DESIGN CLARITY	Area to Receive Drip Emitters Rain Bird XBD81-PRS w/XB-10 Xerl-Bird 6 Multi Outlet Emission Device with Ant-Bug emitters at 1gph each, with built-in 200 mesh filter. Pressure Regulator in-stem Emitter Notes: 1 gal plant to receive 1 of OCT8-16 emitter. 5 gal plant to receive 2 of OCT8-16 emitters. 15 gal plant to receive 4 of OCT8-16 emitters. 24"box plant to receive 6 of OC19-16 emitters 2 gal plant to receive 1 of OCT8-16 emitter.
A1 A1 A1 A1 A1 A1 CONTROLLER VALVE CIRCUIT NO.	

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
⊕	Introl 700 with OMR-100 Electric Remote Control Valve, with Omni-Reg 5-100psi regulator. Set pressure regulator at 40 PSI.
⧗	Nibco T-113-LF Lead-free Class 125 bronze gate shut off valve with wheel handle, same size as mainline pipe diameter at valve location. Size Range - 1/4" - 3"
BF	Febco LF825Y 1" Lead Free Reduced Pressure Backflow Preventer
A	Introl TC-08-MOD-R Hybrid Controller, 8- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
B	Introl TC-08-MOD-R Hybrid Controller, 8- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
C	Introl TC-08-MOD-R Hybrid Controller, 8- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
D	Introl TC-08-MOD-R Hybrid Controller, 8- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
W	Introl CL Wireless Weather Sensing System. 100-Receive and Transmitter Kit. Outdoor sensor, and receiver attaches to Introl Controller. Compatible with Rain Bird-R, Total Control-R, KwikSet, and IIC-E controllers. Monitors weather data
Y	Amiad 150 mesh Y-Filter with flush valve, or approved equivalent, at drip remote control valves
———	Irrigation Lateral Line: PVC Class 200 SDR 21 PVC Class 200 irrigation pipe. Only lateral transition pipe sizes 1" and above are indicated on the plan, with all others being 3/4" in size. 12" min. burry.
— — — —	Irrigation Mainline: PVC Schedule 40 PVC Schedule 40 irrigation pipe. 18" min. burry.
- - - - - - - -	Pipe Sleeve. PVC Class 315 SDR 13.5 24" MIN. BURRY.
	Valve Callout Valve Number Valve GPM Valve Size

IRRIGATION RUN TIME SCHEDULE NOTES:

1. IRRIGATION CONTROLLER RUN TIMES ARE NOT INCLUDED ON LANDSCAPE PLANS. IRRIGATION CONTROLLERS ARE ET BASED SMART CONTROLLERS THAT GENERATE OPTIMUM RUN TINE SCHEDULES BASED UPON LOCAL WEATHER CONDITIONS.
2. CONTROLLERS ARE INITIALLY PROGRAMMED WITH IRRIGATION SYSTEM COMPONENT INFORMATION, PLANT MATERIAL WATER USE REQUIREMENTS, SOIL TYPE, AND LOCAL MICRO CLIMATIC INFORMATION. CONTROLLERS AUTOMATICALLY GENERATE RUN TIME SCHEDULES FROM THIS INFORMATION. EACH DAY CONTROLLERS RECEIVES LOCAL WEATHER CONDITION DATA WIRELESS WEATHERS SENSORS, AND AUTOMATICALLY ADJUST THEIR WATERING SCHEDULES FOR OPTIMUM WATER CONSERVATION. EACH CONTROLLER HAS IT'S OWN WIRELESS WEATHER SENSOR, LOCATED ON-SITE.

IRRIGATION SPECIFICATIONS:

1. Irrigation system shall be installed in conformance with all applicable local codes and ordinances by experienced workmen and a licensed Landscape Contractor who shall obtain all necessary permits and pay all required fees.
2. Prior to the start of construction, the Contractor shall verify with the City, Water District, and/or other governing agency(s) if a reclaimed water source will be available in the future for connection to the irrigation system. If local regulations so stipulate, then the Contractor shall follow all requirements, specifications, construction details, codes, etc., for the installation of irrigation systems utilizing reclaimed water sources for irrigation of landscaping.
3. The Contractor shall be responsible for any damage to existing facilities caused by or during the performance of his work. All repairs shall be made at no cost to the Owner.
4. This design is diagrammatic. Install parallel lines in a common trench with minimum horizontal distance of 4" and lines not one above the other. Snake pipe in trenches. All piping, valves, etc., shown within paved areas is for design clarification only and shall be installed in planting areas where possible. Avoid any conflicts between the irrigation system, planting and architectural features.
5. Do not willfully install the irrigation system as shown on the drawings when it is obvious in the field that obstructions, grade differences or differences in the area dimensions exist that might not have been considered in the engineering. Such obstructions or differences should be brought to the attention of the Owner's authorized representative. In the event this notification is not performed, the Contractor shall assume full responsibility for any revisions necessary.
6. It is the responsibility of the Contractor to familiarize himself with all grade differences, location of walls, retaining walls etc. He shall coordinate his work with the General Contractor and other Subcontractors for the location and the installation of pipe sleeves through walls, under roadways, paving, structures, etc.
7. Due to the scale of the drawings, it is not possible to indicate all offsets, fittings, sleeves, etc., which may be required. The Contractor shall carefully investigate the structural and finished conditions affecting all of his work and plan his work accordingly, furnishing such fittings, etc., as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation system, planting, and architectural features.
8. Notify Landscape Architect of any other aspects of layout which will provide incomplete or insufficient water coverage of plant material and do not proceed until his instructions are obtained.
9. Electrical Contractor to supply 120 volt A.C. (2.5 AMP) service to controller location. Contractor to make final connection from electrical stub-out to controller. Paint conduit to controller with 2 coats Rustoleum brown paint if installed outdoors; color to be approved by Owner's representative. 120 volt A.C. J-Box to controller by others. All 120 volt A.C. and 24 volt connections to be made by Contractor.
10. Each controller shall have its own independent ground wire.
11. Program irrigation controller(s) to operate between the hours of 10:00 P.M. and 7:00 A.M.
12. Valve locations shown are diagrammatic. Install in ground cover/shrub areas.
13. Install valve boxes 12" from and perpendicular to walk, curb, building or landscape feature. At multiple valve box groups, each box shall be an equal distance from the walk, curb, lawn, etc., and each box shall be 12" apart. Short side of valve box shall be parallel to walk, curb, lawn, etc.
14. Install U.L. approved direct burial wire #14 minimum and #14 common ground at 18" depth minimum. Splicing of 24 volt wires will not be permitted except in valve boxes. Leave a 24" coil of excess wire at each splice and 100 feet on center along wire run. Tape wires in bundles 10 feet on center. No taping permitted inside sleeves.
15. Install a spare control wire of a different color along the entire main line. Loop 36" excess wire into each single valve box and into one valve box in each group of valves.
16. Prior to trenching, call Underground Service Alert, 1-800-642-2444 to locate all cables, conduits, and other utilities and take proper precautions not to damage or disturb existing utilities.
17. All Main lines and Lateral lines under paving shall be in PVC sleeves which extend 12" into planting areas. All backfill shall be free of rocks greater than 1" diameter. For ring-tite PVC main line piping inside sleeves use 1120-315 PSI PVC plastic pipe with schedule 40 PVC couplings.
18. When applicable, Schedule 80, ASTM D2466 male adapters to be used where mainline connects to copper pipe service lines installed by others.
19. Copper pipe shall be joined to steel or cast iron pipe with a dielectric union.
20. In addition to the sleeves and conduits shown on the plans the Contractor shall be responsible for the installation of sleeves and conduits of sufficient size under all paved areas.
21. Locate quick coupling valve 12" from hardscape area.
22. The irrigation system design is based on the minimum operating Pressure (PSI) and Flow (GPM) shown on the irrigation drawings (see Irrigation Demand at P.O.C.). The Contractor shall verify the Static and Dynamic water pressure (PSI) and Flow Rate (GPM) at the point of connection (P.O.C.) prior to construction as follows:
    A. Static Pressure: take PSI reading at P.O.C. with no water flowing.
    B. Dynamic Pressure: install at P.O.C. a pressure (PSI) and flow gauge (GPM) assembly of suitable size* to take flow (GPM) readings in the range of the stated Irrigation Demand for the irrigation system design. Open valve or meter at P.O.C. until GPM flow reading equals or exceeds irrigation GPM demand. Note dynamic pressure and flow readings. If the GPM flow does not equal or exceed the GPM demand, note highest flow reading possible.
    C. Readings shall be taken at the following times: 1PM, 5PM, 9PM, 1AM, 5AM, 9AM.
    * Irrigation systems with high irrigation demand GPM flow rates, will require large capacity test gauge assemblies.

Submit to Owner's Representative and Landscape Architect results of Pressure and Flow Tests prior to beginning work. Note any discrepancies of 10 PSI or more or flow rates lower than stated Irrigation Demand on plans to Owner's Representative and Landscape Architect. If there are discrepancies of 10 PSI or more or flow rates lower than stated Irrigation Demand on plans, system may not perform correctly - do not proceed with irrigation system installation until corrective measures are determined. Note, Contractor shall be responsible for any corrective measures required to the irrigation system, at no additional cost to the Owner, if irrigation system is installed without required tests, and discrepancies in Pressure and Flow at the P.O.C. are discovered that prevent the irrigation system from functioning correctly.

23. Meter(s) indicated on the Drawing(s) is supplied and installed by others, unless otherwise indicated. The Contractor is responsible for furnishing all proper fittings.
24. All irrigation piping shall be subjected to hydrostatic pressure tests as follows before backfilling trenches: Valves, pumps, and accurately calibrated recording gauges shall be installed in at least two places. Supply lines shall be tested at 125 psi for at least 4 hours with an allowable loss of 5 psi. Laterals lines shall be tested at the existing static psi for at least 1 hour with an allowable loss of 5 psi. Any leaks shall be corrected and piping re-tested until the system meet the requirements. The Contractor shall notify the Owner's Representative at least 3 days in advance of the time that the irrigation system piping is to be tested. Submit written test results to Owner's Representative and Landscape Architect.
30. Contractor to notify all local jurisdictions for inspection and testing of installed backflow prevention device.
31. The entire irrigation system shall be operating properly before any lawn or ground cover is planted.
32. The Contractor shall provide Owner with a clean set of marked prints of "RECORD DRAWINGS" drawings. Reference all trenches, valves, controllers, splice boxes, quick couplers, backflow preventers, water meters, with dimensions to nearest building or paving.
33. The Contractor shall guarantee the irrigation system will be free of defects of workmanship and materials for a period of one year. All repairs necessary shall be made at no cost to the Owner, with the exception of repairs and labor cost made necessary by vandalism.

CLIENT
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850 Boyenton Blvd., Suite 200
San Carlos, CA 94070
(650) 595-5002

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VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.
81 9TH ST. SAN FRANCISCO, CA
27 PACIFIC AVENUE SAN RAFAEL, CA 94901

PROJECT MANAGER
DRAWN BY
CHECKED BY

PROJECT LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 5

NO	DATE
1	
2	
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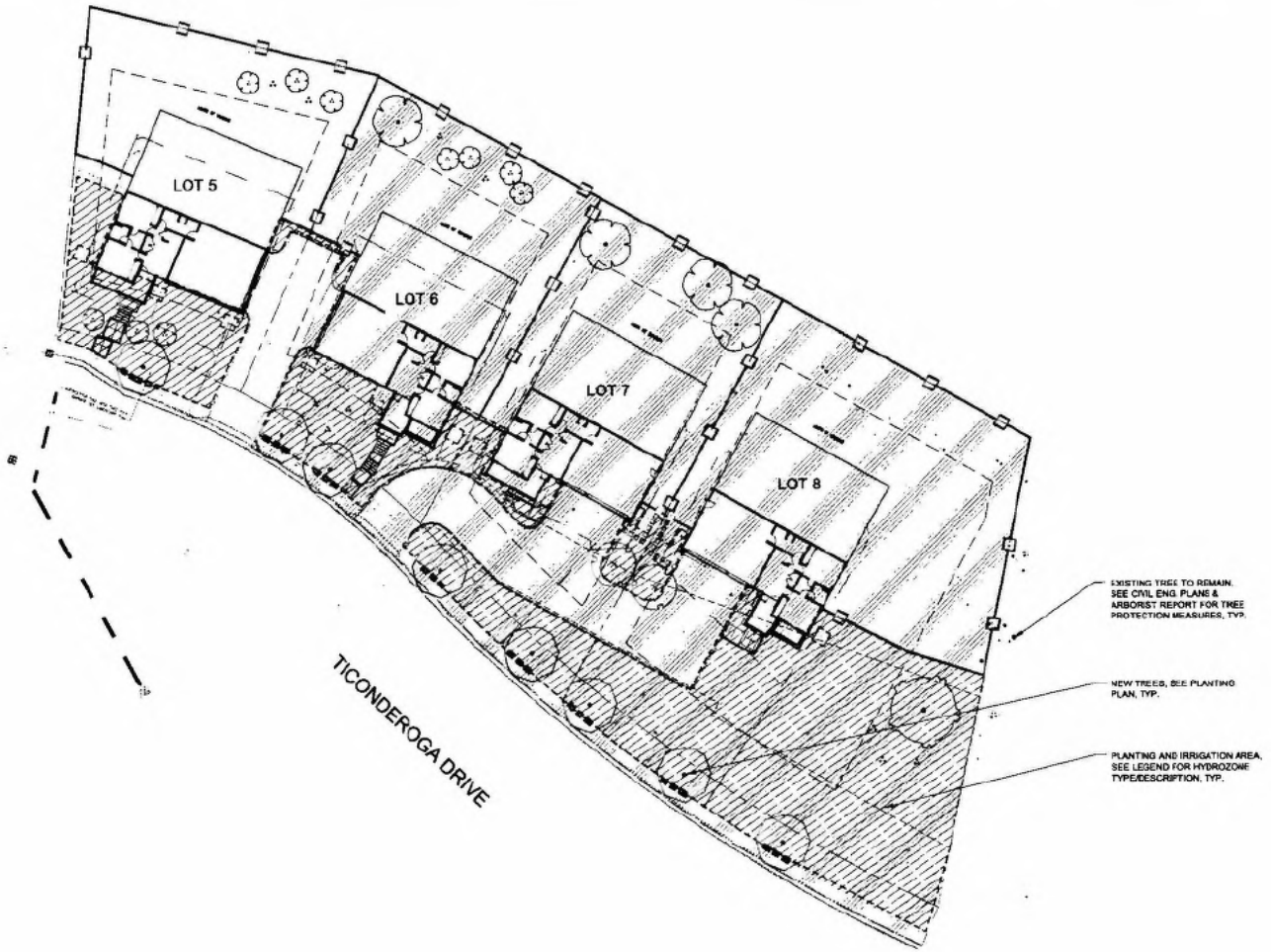
SHEET TITLE
IRRIGATION LEGEND & SPECIFICATIONS
SCALE: NA
ISSUE DATE: 02/18/16
PROJECT NO.: V0219
SHEET NO.: L4.1



HYRDOZONE AREA LEGEND

SYMBOL	HYDROZONE	DESCRIPTION	IRRIG. METHOD	LOT 5 SF	LOT 6 SF	LOT 7 SF	LOT 8 SF	LOT 9 SF	LOT 10 SF	LOT 11 SF	TOTAL AREA SF	%LANDSCAPE AREA
	1	LOW WATER USE, SUN EXPOSURE, DRIP IRRIGATED TREE, SHRUB & GROUND COVER AREAS	DRIP	2,458 SF +	2,051 SF +	2,111 SF +	9,853 SF +	3,379 SF +	3,039 SF +	2,752 SF =	25,643 SF	90.9%
	2	MEDIUM WATER USE, SHADE EXPOSURE, DRIP IRRIGATED TREE, SHRUB & GROUND COVER AREAS	DRIP	0 SF +	0 SF +	0 SF +	0 SF +	1,469 SF +	486 SF +	612 SF =	2,567 SF	9.1%
										TOTAL SITE (ALL LOTS) SF =	28,210 SF	100%

SAN MATEO COUNTY WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE STATEMENT:

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN."

ZEKI ABED - LICENSED LANDSCAPE ARCHITECT

0 10 20 40 60

CLIENT
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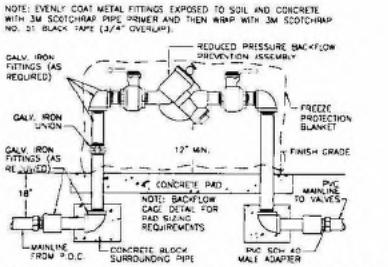
(415) 701-1100 FAX (415) 701-1101

PROJECT MANAGER: ZA
DRAWN BY: ZA
CHECKED BY: ZA

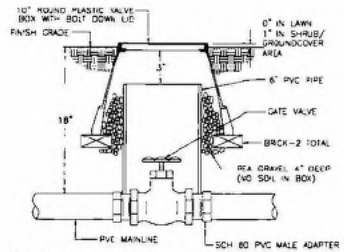
PROJECT LOCATION: HIGHLAND ESTATES
SAN MATEO CALIFORNIA
DRAWING TITLE: LANDSCAPE IMPROVEMENT PLANS
LOT 5

NO	DESCRIPTION	BY	DATE

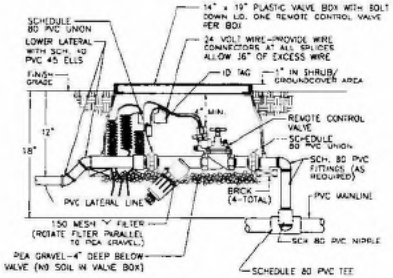
SHEET TITLE: HYDROZONE PLAN
SCALE: 1" = 20'-0"
ISSUE DATE: 02/18/16
PROJECT NO: V0210
SHEET NO: L4.2



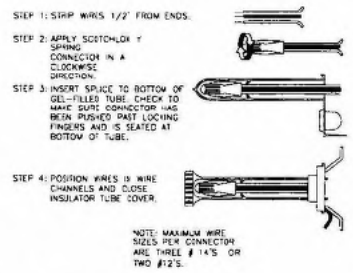
1 REDUCED PRESSURE BACKFLOW PREVENTER DETAIL
NOT TO SCALE



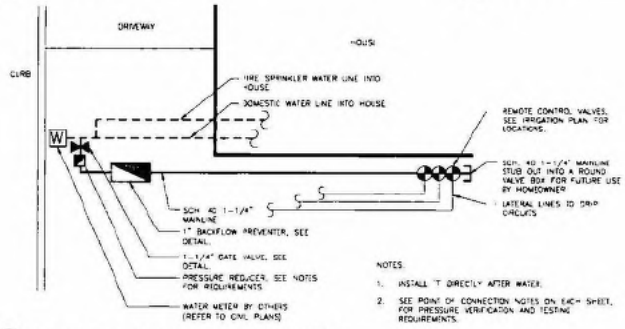
2 GATE VALVE DETAIL
NOT TO SCALE



3 REMOTE CONTROL VALVE & "Y" FILTER DETAIL
NOT TO SCALE



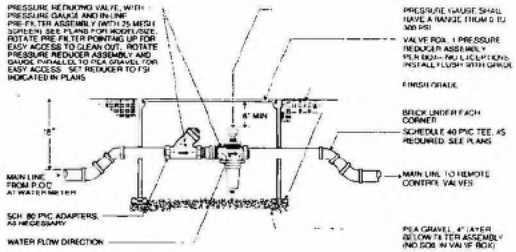
4 WIRE CONNECTION DETAIL
NOT TO SCALE



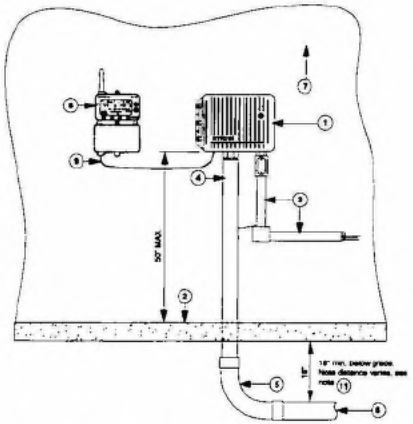
NOTES:
1. INSTALL "T" DIRECTLY AFTER WATER.
2. SEE POINT OF CONNECTION NOTES ON EACH SHEET, FOR PRESSURE VERIFICATION AND TESTING REQUIREMENTS.

5 IRRIGATION SYSTEM P.O.C. AT EACH LOT DETAIL
NOT TO SCALE

NOTES:
PRESSURE REDUCER SHALL BE 1-1/4" LEAD FREE WILKINS 500XL-700R (INCLUDES PRESSURE REDUCER & FILTER), SET AT 50 PSI. SEE NOTES ON IRRIGATION PLANS FOR INSTALLATION REQUIREMENTS.

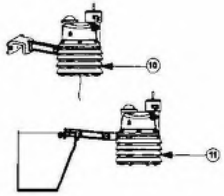


6 PRESSURE REDUCER DETAIL
NOT TO SCALE

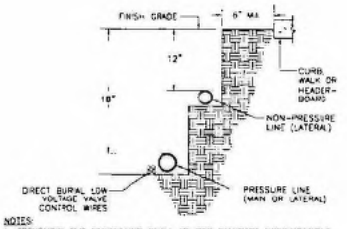


1. Irrigation controller. Install controller in location as directed by Owner's Representative.
2. Garage finish surface.
3. 1/2" UL approved electrical conduit, ring nut and junction box for 120V AC electrical power. Contractor to proved 120 volt AC electrical power to controller, see notes on Irrigation Plans.
4. PVC schedule 40 control wire conduit (size as required)
5. PVC sweep 45 to conduit through bldg. to exterior planting area 18" below grade.
6. End conduit 12" beyond edge of bldg., 18" below grade.
7. Interior wall in garage area.
8. Climate Logic™ receiver module mounted near the compatible controller. Mount with screws at eye level.
9. Single connection cord plugged into controllers remote port.
10. Climate Logic™ weather sensor mounted outdoors on flat surface using screws, , see notes on Irrigation Plans.
11. Climate Logic™ weather sensor mounted on a rain gutter using QuickClip™ guttermount, see notes on Irrigation Plans.
11. Note: at lots where garage areas are elevated above grade, route conduit down side of bldg./structural piers out site where possible, to 18" below grade. Paint exposed conduit to match house color as directed by Owner's Representative.

7 IRRIGATION CONTROLLER & WIRELESS WEATHER SENSOR DETAIL
NOT TO SCALE



NOTES:
1. Irrigation controller is not shown on the irrigation plan. Irrigation controller to be installed in garage as directed by Owner's Representative.
2. 120 volt AC power to controller per Electrical Plans.
3. Wireless weather senior unit to be installed on edge of bldg. in area open to sky with full sun exposure, in location approved by Owner's Representative. Locate sensor unit within radio communication range of controller.
4. All electrical work must conform to local codes. Refer to product literature for additional installation requirements.



NOTES:
1. TRENCHING AND BACKFILLING SHALL BE PER STANDARD SPECIFICATIONS
2. MINIMUM BACKFILL RELATIVE COMPACTION SHALL BE 90%
3. BUNDLE CONTROL WIRES TOGETHER AND TAPE AT 10' INTERVALS.
4. 4" MIN. HORIZONTAL DISTANCE BETWEEN PIPES IN COMMON TRENCH.
5. ALL PLASTIC IRRIGATION PIPING TO BE SNAKED IN TRENCHES.

8 IRRIGATION LINE TRENCHING
NOT TO SCALE

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PROJECT NAME & LOCATION:
HIGHLAND ESTATES
SAN MATEO
CALIFORNIA

LANDSCAPE IMPROVEMENT PLANS
LOT 5

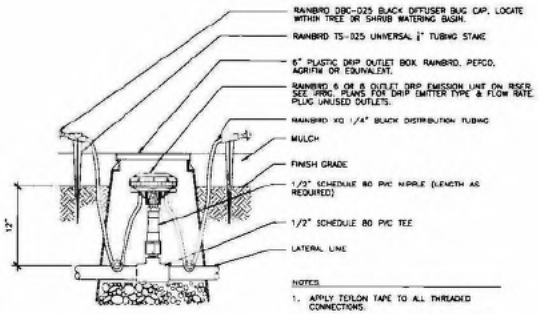
SHEET TITLE:
IRRIGATION DETAILS

SCALE:
AS SHOWN

DATE:
02/18/16

PROJECT NO.:
V0219

SHEET NO.:
L4.3



SECTION

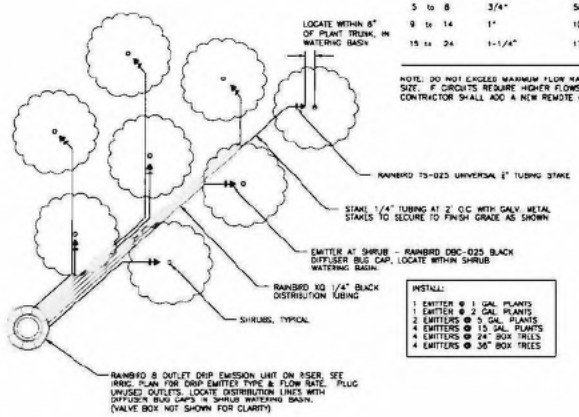
NOTES

1. APPLY TEFLON TAPE TO ALL THREADED CONNECTIONS.
2. SEE DRIP LATERAL PIPE SIZING CHART FOR SIZING LATERAL LINES.
3. 1/4" DISTRIBUTION TUBING MAXIMUM LENGTH SHALL NOT EXCEED 20'.

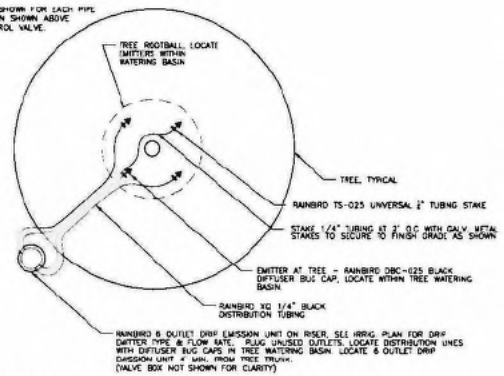
DRIP SHRUB/GC LATERAL PIPE SIZING CHART

GPM FLOW RATES	SIZE OF CLASS 200 PVC PIPE	MAX. QUANTITY OF RAINBIRD 8-OUTLET DRIP EMISSION UNITS (WITH 1.0 GPH EMITTERS)
5 to 8	3/4"	58
9 to 14	1"	102
15 to 24	1-1/4"	178

NOTE: DO NOT EXCEED MAXIMUM FLOW RATES SHOWN FOR EACH PIPE SIZE. IF CIRCUITS REQUIRE HIGHER FLOWS THAN SHOWN ABOVE CONTRACTOR SHALL ADD A NEW REMOTE CONTROL VALVE.



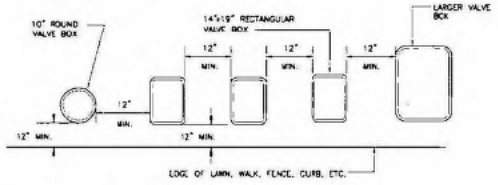
PLAN VIEW – RAINBIRD 8 OUTLET DRIP EMITTER LAYOUT @ SHRUBS/GROUND COVERS



PLAN VIEW – RAINBIRD 6 OUTLET DRIP EMITTER LAYOUT @ TREES

1 8-OUTLET & 6-OUTLET DRIP EMITTER ON RISER DETAIL

NOT TO SCALE



TOP VIEW

NOTES

1. CENTER BOX OVER VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA.
3. SET VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN AREA ONLY IF GROUND COVER/SHRUB AREA DOES NOT EXIST ADJACENT TO LAWN.
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOX EDGES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
6. VALVE BOXES SHALL HAVE BOLT DOWN LIDS WITH BOLTS INSTALLED.
7. VALVE BOXES SHALL BE BY CARSON, OR EQUIVALENT.

2 VALVE BOX LAYOUT DETAIL

NOT TO SCALE

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PROJECT NAME
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

SHEET TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 5

SHEET TITLE
IRRIGATION DETAILS

SCALE
AS SHOWN

ISSUE DATE
02/18/16

PROJECT NO.
Y0219

SHEET NO.
L4.4

GENERAL NOTES:

1. Contractor shall verify all existing site conditions prior to beginning construction. Notify Owner's Representative of any discrepancies.
2. The Contractor shall provide all materials, labor and equipment to complete all landscape work as shown on the plans and specifications.
3. If there is a conflict with the utilities and the planting, the Owner's Representative is to be responsible for spotting new plant locations prior to the planting process.
4. The Contractor shall be responsible for any damage to existing utilities, pavement or improvements. All repairs shall be made at no expense to the Owner.
5. The Contractor shall notify the Owner's Representative prior to beginning construction and shall keep the Owner's Representative informed of progress of work throughout landscape construction.
6. All work shall be installed in conformance with all applicable local codes and ordinances by experienced workmen and a licensed Contractor who shall obtain all necessary permits and pay all required fees.
7. Any requirement in the Plans and / or Notes and Specifications shall be considered binding. In case of discrepancies, the Owner's Representative shall be contacted immediately.
8. It is the Contractor's responsibility to schedule regular site visits by the Owner's Representative/Landscape Architect throughout landscape construction, at the beginning of the maintenance period, and final site review will be required.
9. Execute weekly cleaning of the site throughout the contract period to remove all waste materials, rubbish, plant containers, etc.
10. See Civil Engineer's improvement plans for all general grading information and notes.
11. All written dimensions supersede scaled distances. All dimensions are taken from back of curb, face of building, face of wall finish or face of fence.
12. Upon award of bid and prior to any construction, the Contractor shall perform the Percolation and Soils Testing as specified in the Planting Notes, if these tests have not already been performed. If drainage is found to be insufficient, or soils test results identify conditions requiring extraordinary or corrective measures, the Contractor shall immediately alert the Owner's Representative and Landscape Architect of any such problems, for corrective action and/or additional drainage treatment.

GRADING NOTES:

1. See General Notes and Civil Engineer's Grading Plans for additional information.
2. Rough grading and site drainage shall have been completed prior to Contractor's work. Verify all existing site conditions and report any discrepancies to Owner's Representative.
3. Contractor shall be responsible for finish grading. Verify positive drainage at a minimum 2% slope in landscape areas away from buildings and paved surfaces. Shrub areas shall be 1-1/2" below top of adjacent paving, headers, or curbs. No low spots which hold standing water will be permitted.
4. All salvageable, clean top soil from areas to be paved shall be stockpiled to be used as fill in planting areas.

CONSTRUCTION NOTES:

1. Concrete work: Install concrete work as detailed. Layout of concrete work shall be as shown on construction plans and as specified below.
   A. Layout shall be approved by Owner's representative/Landscape Architect prior to concrete pour. Contact Owner's Representative two days in advance.
2. Paving Installation.
   B. Concrete Materials: For paving, concrete shall be a 5 sack mix producing concrete having a 28 day strength not less than 2500 psi. For walls concrete shall be 6 sack mix.
1. Portland cement: Conforming to ASTM. C150, Type I or II. Total alkali content not to exceed 0.60%. Deliver cement and all materials in labeled, unopened containers.
2. Form coatings: Standard product resin type sealer. Do not use form oil or any oil-bearing material.
3. Concrete aggregates: Conform to ASTM C33. Maximum 3/4" size aggregate.
4. Base course aggregates: Conform to ASTM C33. Maximum 3/4" size aggregate.
5. Water: Clean and potable.
6. Forms: Form material is Sub-contractor's option.
7. Admixtures or finish retardants: For workability, where approved by Owner's representative, and admixture may be added in accordance with manufacture's recommendations. Obtain approval of material prior to use.
8. Expansion joint material: 3/8" thick pre-molded joint filler, conforming to ASTM D1751 or D1752.
9. Reinforcing steel:
   a. Bars: Deformed, intermediate grade, conforming to ASTM A615, Grade 40 for sizes #5 and smaller.
   b. Tie wire. Annealed copper-bearing steel wire, minimum 18 gauge.
10. Welded wire mesh: 6" x 6" x #10.
11. Liquid curing compound as required: Thompson's approved standard product fugitive resin type, or equal conforming to ASTM C309, free of wax or oil, compatible with subsequently applied finishes or coverings, not detrimtous to bond of cementitious materials to aggregate.
12. Patching mortar: One part Portland cement or equal (part white and part grey adjusted to match color of surrounding concrete) and 2-1/2 parts sand with the least water required to produce a workable mass. Rework this mortar until it is the stiffest consistency that will permit placing.
   C. Concrete Installation:
1. Construct the subgrade true to grade and detail as shown. Compact subgrade to 90% maximum density at optimum moisture content.
2. Set forms with upper edges true to line and grade. Properly brace or tie together to maintain position and shape. Remove side forms not sooner than 12 hours after finishing has been completed. Form curves and straight sections for smooth and continuous lines. Secure Owner's representative's approval of subgrade compaction and moisture content and form alignment prior to pouring concrete.
3. Embedded items: Do not place any concrete until all inserted items such as sleeves, anchor bolts, wood, nails, dowels, etc. are installed in their proper locations, secured against displacement, cleaned, inspected and approved. Furnish ties and supports necessary to keep embedded items in place when concrete is placed.
4. Weather: Do not place concrete during rain unless approved measures are taken to prevent damage to concrete.
5. Deposit concrete evenly, consolidate with mechanical vibrators, particularly at side forms and strike-off to indicated elevations and contour.
6. Concrete finishes shall be even surfaces of uniform texture and appearance, free of unsightly bulges, depressions and other imperfections and as follows:

   Medium broom finish: Broom with coarse bristled broom across width of flatwork to a uniformly roughened surface. Finished surface and edges shall be clean with uniform and reasonably straight lines. Submit Sample.

   Light broom finish: Broom with janitor's push broom type, with soft bristles, across width to a uniformly roughened surface. There shall be no deeply incised or obvious lines. Submit sample.

   Steel trowel finish: After floating, and no free water is evident and/or no cement sticks to the finger when touching slab, steel trowel until hard. All trowel marks eliminated. Final trowelling done when a ringing sound is produced as the trowel is moved over the surface.

   Joints. Joints shall be tooled with one-quarter inch (1/4") radius edging tool or as shown on plans.

   Edges: Edge slabs one-half (1/2") inch radius, edge curbs and other structures three-quarters inch (3/4") radius unless otherwise shown.
7. Remove flange marks: Remove flange marks resulting from tooling of edges by carefully trowelling out, unless specifically detailed in plans.

CARPENTRY NOTES:

A. Wood materials: See details for type of wood for each item.

1. Wood shall be selected for straightness and smoothness, size and grade as shown in plans.
   B. Workmanship: Carefully plan and layout the work as required. Properly accommodate the work of other trades. Accurately saw-cut and fit lumber into the respective locations, true to line, grade, and level, as indicated or required, and permanently secure in proper position with spikes, nails, lag screws, bolts, hangers, or other fastenings to make the work substantial and rigid in all parts and connections.
   C. Connections: Make connections between members tight, accurate and secure. Predrill fastenings without splitting wood, predrill when required. Drill bolt holes same size as bolt diameter. Drill holes for lag screws same size as threaded root diameter, and counterbore, same depth and diameter as shank. Turn lag screws into place, do not drive. Provide bolts and lag screws with washers under every head and nut bearing on wood. Tighten bolts and lag screws at installation, carefully retighten just prior to closing in, or at completion of project.
   D. Finishing. As per plan.
   E. Redwood header layout: All curved sections shall be smooth and continuous. Layout shall be approved by Owner's representative.
2. Hardware
   A. All metal bolts, nails, screws and other hardware shall be galvanized steel, sized as shown on the plans.
   B. All visible hardware shall be painted with two coats of black rustproof paint or to match architectural colors. Color to be approved by Owner's representative.
   C. All hardware for metal gates to be approved by Owner's representative.
3. Metal
   A. Provide complete shop drawings for all metal fabrication.
   B. Fabricate all exterior steel work in shop, including all welding. All metal work shall conform to ASTM specifications. Miter corners and angles of moldings or frames unless otherwise noted.
   C. Shop primer: One coat of primer, semi-quick drying. Painting: After material has been properly cleaned, apply shop prime coat of paint to all surfaces. Apply all paint in accordance with manufacturer's directions. Spot paint all abrasions and field connections after assembly.
   D. Installation: Set all work plumb, true, rigid and neatly trimmed out as detailed. Provide all necessary connections, anchor bolts etc. required to fit metal with other work.
   E. Protect all metal from damage to surface, profile or to shape from shop through construction to final acceptance of project.
   F. Color: Color to be approved by Owner's representative, submit sample for approval.
   G. All defective work shall be repaired or replaced as directed Owner's representative.
   H. All exposed site metal for utilities, irrigation, etc., shall be painted with one coat brown rustproof paint.

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PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 5

NO	DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			

SHEET TITLE
LANDSCAPE NOTES & SPECIFICATIONS
SCALE
ISSUE DATE
02/18/16
PROJECT NO.
VE219
SHEET NO.
L5.0

PLANTING NOTES:

1. See General Notes.

2. Submittals: Contractor shall submit the following items to Owner's Representative and Landscape Architect for review/approval prior to beginning planting installation operations:

   A. Soils tests: Initial site soils test & post amendment installation test)

   B. Vendor data for landscape products, including: bark mulch, root barriers, fertilizers, soil amendments, and soil conditioners.

   C. Written results of percolation tests

3. The Contractor shall verify the availability of all landscape plants within 10 days following award of the contract. Discrepancies or other problems and all plant substitutions shall be resolved at the time. If a substitute is authorized by the Owner's Representative, it must be of the same size, value and quality as the original plant.

4. All trees and representative samples of shrubs/ground covers shall be inspected at the site for approval by the Owner's Representative and meet the following standards:

   A. Quality and size shall conform to the State of California Grading Code of Nursery Stock, No. 1 grade and to the current issue of the American Standard for Nursery Stock published by the American Association of Nurserymen. Use only nursery-grown stock. The Owner's Representative will inspect plants for approval prior to any installation.

   B. Plant material must be selected from nurseries that have been inspected by state or federal agencies.

   C. Nomenclature will be in accordance with Hortus III.

   D. Plant materials will not be accepted that are overgrown, root-bound, or too recently canned so that the root system is not thoroughly established throughout the can. Pruning shall not be done prior to delivery except as authorized by the Owner's Representative.

5. Grading and Topsoil:

   A. See Grading Notes.

   B. Soil Test: Contractor shall submit three (3) representative soil samples to Soil and Plant Laboratory, Santa Clara or approved equal to be tested for agricultural suitability and fertility with pre-plant and post-plant recommendations, immediately following the completion of rough grading. Soil samples shall be taken from location determined by the Owner's Representative. Soil shall be certified as clean and free of hazardous material or waste contamination. Notify Owner's Representative of any soils problems noted in the soils test report that could potentially affect/impact plant health, including but not limited to the following: high or low soil pH, poor soil drainage, excessive soil compaction, different soil types in the same test sample, deficient or excess nutrient levels, high salt levels, high boron or other elements and compounds toxic to plants, etc. Submit report to Landscape Architect and Owner's Representative for review and approval prior to beginning work. Do not proceed with any amending operations until soils report has been reviewed and approved.

   C. Compost to be used for soil amendment at the rate indicated by the soil analysis to bring the soil organic matter content to a minimum of 3.5% by dry weight or 2" of compost. Contractor may 1) import topsoil to meet organic matter content listed, or 2) submit soils report that identifies existing topsoil meets or exceeds the specified organic matter content. (Bay-Friendly score card item C.7.e.i)

      Soil amendment to be added as follows in all planting areas: (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purposes until determined by soil tests.)

      Amount per 1000 square feet:

      6 cubic yards Compost

      20 lbs. 5-20-20 fertilizer (Best's Copmeker)

      10 lbs. 0-25-0 Single super phosphate

      10 lbs. iron sulfate

   D. Soil amendment in all planting areas shall be uniformly spread and thoroughly incorporated to a soil depth of 6" minimum by repeated rotary hoe cultivation prior to planting.

   E. Post Amendment Installation Soil Testing for Compliance: After incorporating amendments, fertilizers and conditioners, Contractor shall take three (3) representative soil samples and have samples tested for Agricultural Suitability and Fertility by an approved soils analysis laboratory for compliance with original soil test report recommendations. Add any additional amendments, fertilizers and conditioners recommended by soils analysis laboratory at no cost to Owner. Notify Owner's Representative of any potential soils problems noted in the report. Submit report for amendment/fertilizer/conditioner compliance to Landscape Architect and Owner's Representative prior to beginning planting operations.

6. Tree and Shrub Planting:

   Prior to digging holes for final planting, the Contractor shall spot all trees as shown on the Drawings for approval by the Landscape Architect.

   A. Soil amendments and fertilizer shall have been incorporated into the soil prior to tree and shrub planting.

   B. Dig pits as shown on Drawings.

   C. After pits are dug, break sides and bottom of holes to open wall of pit for root penetration.

   D. Percolation Test: All plant pits shall be tested for sufficient drainage prior to planting. Representative plant pits shall be dug (at least 2) at site upon award of Bid to test for general site subgrade drainage conditions. Individual planting pits shall also be tested again for sufficient drainage prior to planting. Contractor shall fill plant pits with water to see if subsoil conditions will cause retention of water within plant pits overnight. If standing water is still observed after 12 hours, then Contractor shall alert Owner's Representative and Landscape Architect of the problem.

   E. Planting backfill mix for trees and shrubs shall be:

      Amount per Cubic Yard

      3/4 cubic yard On site soil

      1/4 cubic yard compost

      1.5 lbs. 5-20-20 fertilizer (Best's Copmeker)

      2.5 lbs. 0-25-0 Single super phosphate

      1 lb. Iron sulfate

   (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purposes until determined by soil tests)

   F. Fertilize plants at the time of planting with Agriform 21 gram fertilizer packets, 20-10-5: 2 per 1 gallon can; 3 per 5 gallon can; 4 per 15 gallon can; specimen trees-3 per inch of caliper.

   G. Plants shall be erect after planting, and staked or guyed as detailed at the time of planting. Remove nursery stakes.

   H. Rootball crown shall be 2" above finish grade after watering and settling.

   I. Tree and shrub plantings shall be watered and flooded to eliminate air pockets within 2 hours of the time of planting.

   J. All vines shall be trained to posts, fences or walls by tying select individual branches with plastic covered wire ties as follows: ties shall be attached to wood surfaces with 3/4" galvanized iron staples and attached to stucco or masonry surfaces with epoxy as recommended by manufacturer. See planting details.

   K. All trees shall be planted 10'-0" minimum from buildings including overhangs and 5'-0" minimum from curbs, paving, fences, etc. Orient main branches of trees away from building. Should any discrepancies occur between field conditions and planting plans contact Owner's Representative. At trees closer than 5'-0" from curbs, foundations, sidewalks, or other hardscape items, shall be installed with linear root deflector panels protecting adjacent hardscape items, but never fully surrounding rootball. Install a 18 foot by 24 inch deep section of linear interlocking root deflector panels, centered on tree (5 feet on each side), located at curb, foundation, sidewalks, other hardscape items, unless otherwise indicated. See plans for detail.

   L. All trees shall be planted a minimum of 5'-0" away from storm drain, or other underground utility lines (or per code), and 10'-0" away from sanitary sewer lines (or per code), and 15'-0" minimum away from utility poles or light standards (or per code)

   M. All planting areas to recieve 3" layer of bark mulch, natural color, no dyes.

   N. All trees and shrubs shall have watering basins around them. Basin diameters shall be the same size as the tree or shrub's rootball. Basins shall be formed with level bottoms and 3 inch high walls. Planting areas to receive 3" depth of bark mulch unless otherwise indicated. Submit sample for approval.

   O. Soil amendments shall have been incorporated into the soil prior to planting.

   P. Clear planting areas of rocks and debris greater than 1" diameter.

   Q. Apply a pre-emergent herbicide, per manufacturer's directions.

   R. All planting areas with slopes greater than 2:1 shall have jute mesh installed as per detail, or per manufacturer recommendations.

   S. Thirty (30) days after planting, replace all dead plants and fill in bare areas. Top dress with 16-6-8 fertilizer at 7 lbs./1000 sq. ft. when ground is dry and thoroughly irrigate promptly after application.

   (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purposes until determined by soil tests)

7. NOT USED

8. Workmanship:

   Precautions shall be taken to avoid damage to existing plants, turf and structures. Any areas damaged shall be restored to their original condition.

9. Clean-up

   Keep all areas of work clean, neat and orderly at all times. Keep all paved areas clean during planting and maintenance operations.

10. Site Visits and Approvals:

    The Contractor shall contact the Owner's Representative for review and approval of plant materials and plant locations. The maintenance period begins following acceptance of plant installation.

11. Maintenance:

    A. Begin maintenance after each plant is installed and continue until Final Acceptance.

    B. Maintenance Period shall begin upon inspection and approval by Owner's Representative and shall be for 90 calendar days.

    C. Maintenance of new planting shall consist of watering, cultivating, weeding, mulching, re-staking, tightening and repairing of guys, resetting plants to proper grades or upright position, restoration of the planting saucer, and furnishing and applying such sprays and invigorates as are necessary to keep the plantings free of insects and disease and in thriving condition.

    D. Protect planting areas and plants at all times against damage of all kinds, including frost, for duration of maintenance period. Maintenance includes temporary protection fences, barriers, covers during frost and signs as required for protection. If any plants become damaged or injured, treat or replace as directed by Landscape Architect at no additional cost to Owner.

13. Guarantee:

    A. Replacement trees shall be in thriving condition 3 years from the date of final acceptance. Any replacement trees which have lost at least 30% of their normal foliage or are not in vigorous growing condition shall be replaced.

    B. All other trees, shrubs, grasses, ground covers shall be in thriving condition 1 year from the date of final acceptance. Replace any trees which have lost at least 30% of their normal foliage or are not in vigorous growing condition.

CLIENT
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(P 650) 64-1621 (650) 864-4761

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 5

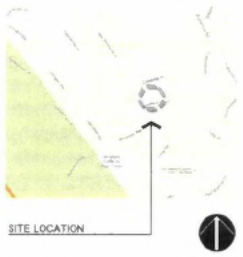
NO	DESCRIPTION	BY	DATE
1	---	---	---
2	---	---	---
3	---	---	---
4	---	---	---
5	---	---	---

SHEET TITLE
LANDSCAPE NOTES & SPECIFICATIONS
SCALE
DATE
02/18/16
PROJECT NO
V0219
SHEET NO
L5.1

HIGHLAND ESTATES

LOT 6 – LANDSCAPE PLANS

VICINITY MAP



SITE MAP

SHEET INDEX

REVISION LOG

DATE	SHEET NUMBER	DESCRIPTION

CLIENT
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VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.

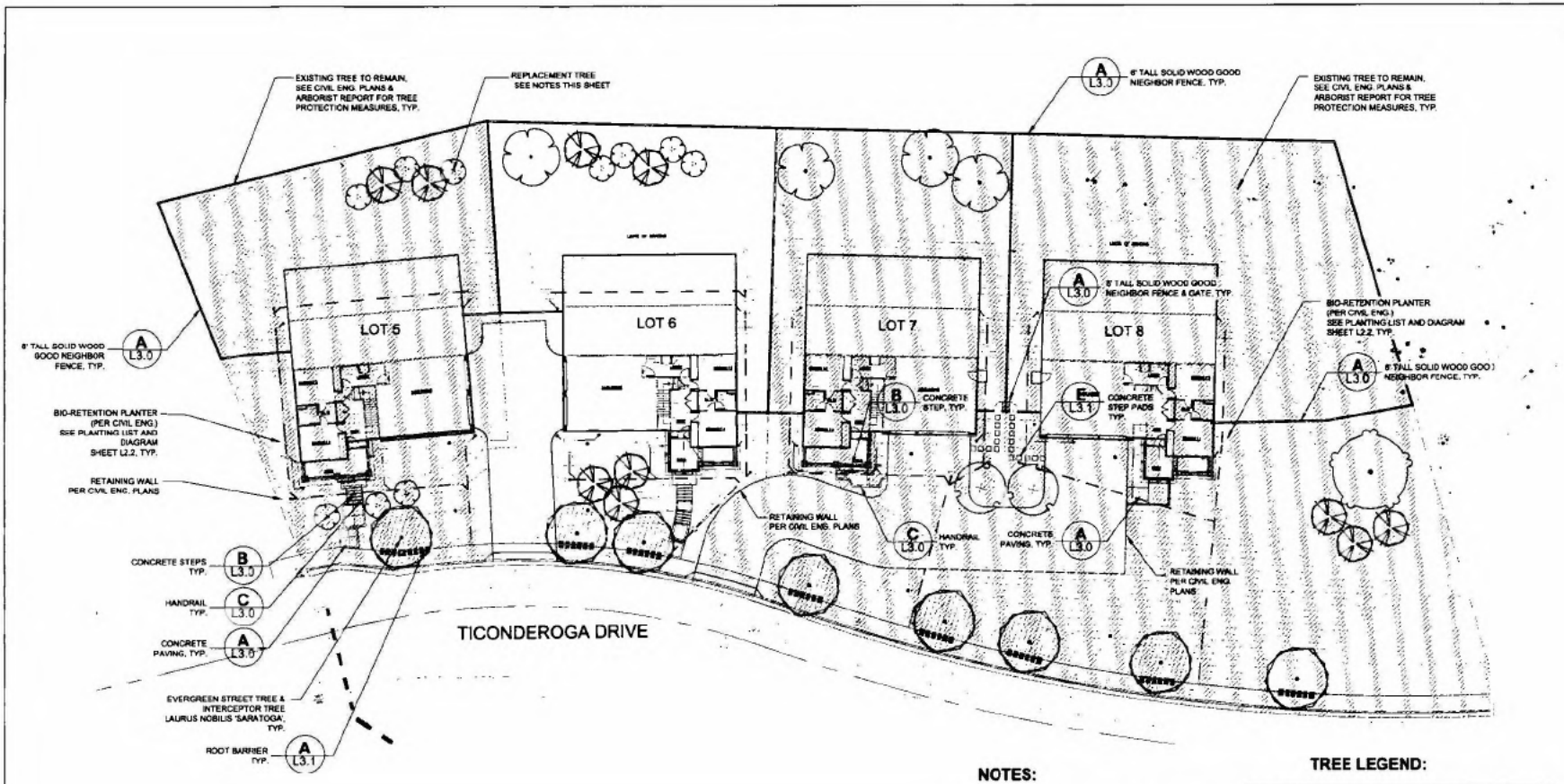
PROJECT NAME / LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 6

REVISIONS
NO. | DESCRIPTION | BY | DATE

SHEET TITLE
COVER SHEET

SCALE: NTS
ISSUE DATE: 02/18/16
PROJECT NO.: V0219
SHEET NO.: L0.0



NOTES:

1. NO PLANTING OR IRRIGATION SHALL OCCUR UNDER THE CANOPIES OF THE EXISTING OAK TREES. FIELD ADJUST NEW REPLACEMENT TREES AS NEEDED.

TREE LEGEND:

	STORMWATER CREDIT/EVERGREEN INTERCEPTOR TREES LAURUS NOBILIS 'SARATOGA' 11 TOTAL WITHIN 25' OF IMPERVIOUS SURFACE.
	PROPOSED REPLACEMENT TREES - SEE L2.2 FOR COMPLETE TREE SPECIES/LEGEND TOTAL SITE: 23 REPLACEMENT TREES REQUIRED 33 REPLACEMENT TREES PROVIDED LOT 6 10 REPLACEMENT TREES PROVIDED
•	EXISTING TREES TO REMAIN, TYP. SEE CIVIL PLANS AND ARBORISTS REPORT FOR TREE PROTECTION MEASURES

0 8 16 32 64

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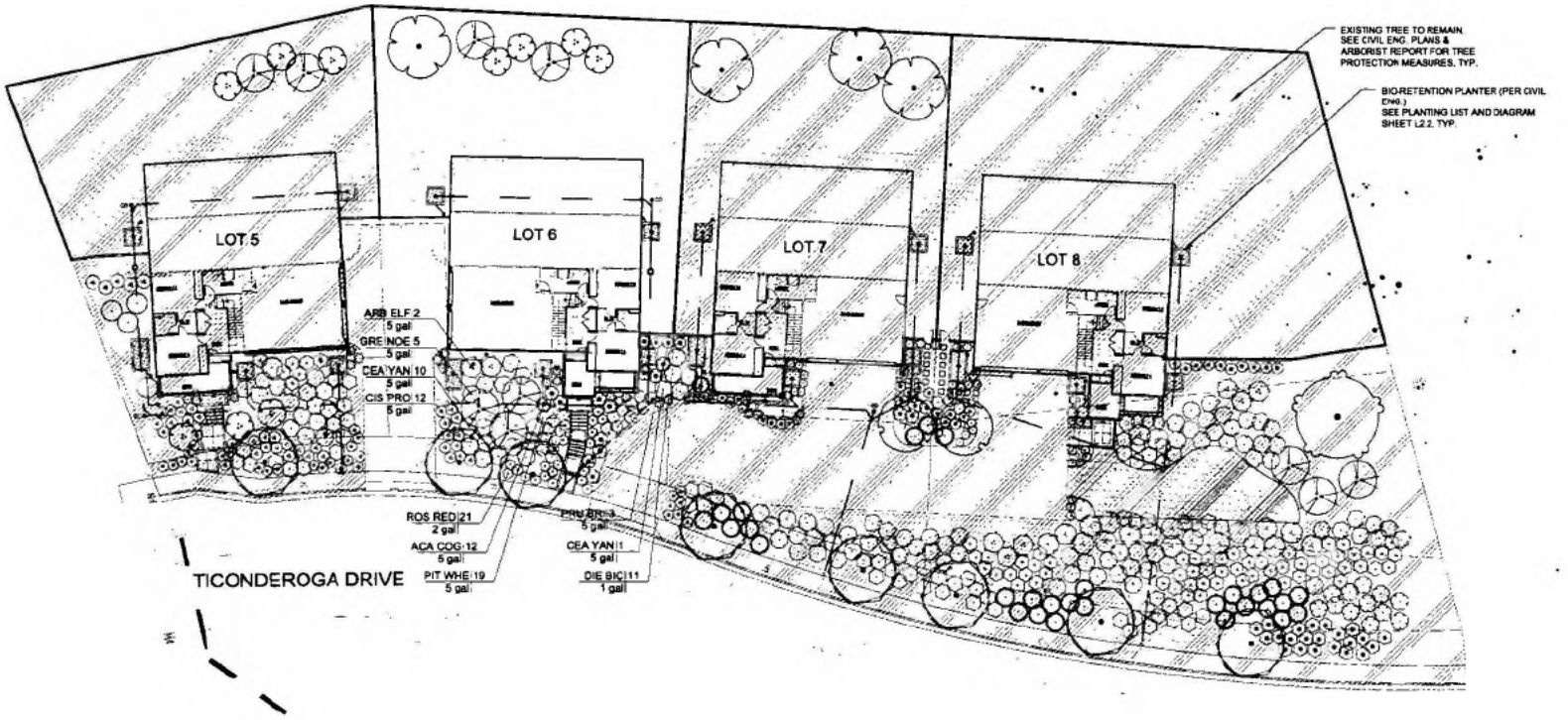
HIGHLAND ESTATES
SAN MATEO
CALIFORNIA

LANDSCAPE IMPROVEMENT PLANS
LOT 6

CALLOUT & LAYOUT PLAN

SCALE: 1/16" = 1'-0"
ISSUE DATE: 02/18/16
PROJECT NO: V0219
SHEET NO: L1.0



PLANTING NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. **NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY**
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.
4. IRRIGATION DRIP SYSTEM SHALL BE ADJUSTED AS REQ'D FOR OPTIMUM WATER SAVINGS AND NO RUN OFF.

EROSION CONTROL NOTES:

1. LEAVE EROSION CONTROL JUTE MESH ON ALL SLOPES. CUT HOLES FOR NEW SHRUBS AS NEEDED.

EXISTING OAK TREE NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY.
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.

SAN MATEO COUNTY WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE STATEMENT:

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN."

ZIKI ABED - LICENSED LANDSCAPE ARCHITECT

0 8 16 32 64

OWNER
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850 Skyway, Suite 350
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800.227.2600

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San Mateo, CA 94402 (650) 344-1412

PROJECT MANAGER
DESIGNED BY
DRAWN BY
CHECKED BY

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 6

REVISIONS	NO	DESCRIPTION	BY	DATE

SHEET TITLE
PLANTING PLAN

SCALE
1/16" = 1'-0"
ISSUE DATE
02/16/16
PROJECT NO
V0219
SHEET NO
L2.0
OF

BIO-RETENTION PLANTERS ON THE NORTH & NORTHEAST SIDES OF BUILDINGS

5 GAL	CORNUS SERICEA "ISANTI"	QTY: 1
1 GAL	CAREX PRAEGRACILUS	QTY: CAN-TO-CAN FULL

ALTERNATIVE:

5 GAL	CARPENTERIA CALIFORNICA	QTY: 1
1 GAL	CAREX PRAEGRACILUS	QTY: CAN-TO-CAN FULL

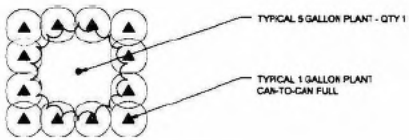
BIO-RETENTION PLANTERS ON THE SOUTH & SOUTHWEST SIDES OF BUILDINGS

5 GAL	MUHLENBERGIA RIGENS	QTY: 1
1 GAL	MIMULUS AURANTIACUS & CAREX PRAEGRACILUS (ALTERNATING)	QTY: CAN-TO-CAN FULL

NOTES:

1. CONTRACTOR TO HAND WATER PLANTS IN BIO-RETENTION PLANTERS UNTIL ESTABLISHED.
2. SEE CIVIL ENGINEER'S PLANS AND SPECIFICATIONS FOR BIO-RETENTION SOIL MIX.
3. PLANT SPECIES LISTED ABOVE ARE APPROVED FOR USE IN BIO-PLANTERS PER THE SAN MATEO COUNTY STORMWATER MEASURES PLANT LIST

PLANTING DIAGRAM:



PLANTING LIST

TREES	CODE	BOTANICAL NAME	COMMON NAME	CONT	QTY	REMARKS
	ARB HYB	Arbutus x 'Marina'	Arbutus Standard	15 gal	2	Replacement Tree
	ARC MAN	Arctostaphylos manzanita MULTI-TRUNK	Manzanita	15 gal	10	Multi-Trunk Replacement Tree
	CER OCC	Cercis occidentalis - MULTI-TRUNK	Western Redbud	15 gal	15	Multi-trunk Replacement Tree
	LAU SAR	Laurus nobilis 'Saratoga'	Sweet Bay	15 gal	12	Street Tree/Interceptor Tree Evergreen
	QUE AGR	Quercus agrifolia	Coast Live Oak	15 gal	1	Replacement tree
	SAM MEX	Sambucus mexicana - MULTI-TRUNK	Mexican Elderberry	15 gal	5	Multi-Trunk Replacement tree

PLANTING LIST (cont.)

SHRUBS	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
	ACA COG	Acacia cognata 'Cousin Itt'	River Wattle	5 gal	17
	ALY MON	Alyogyne huegelii 'Monterey Bay'	Blue Hibiscus	5 gal	11
	ARB ELF	Arbutus unedo 'Elfin King'	Dwarf Strawberry Tree	5 gal	8
	ARC EME	Arctostaphylos x 'Emerald Carpet'	Emerald Carpet Manzanita	1 gal	121
	CEA YAN	Ceanothus griseus horizontalis 'Yankee Point'	California Lilac	5 gal	100
	CEA CON	Ceanothus x 'Concha'	California Lilac	5 gal	7
	CIS LAD	Cistus ladanifer	Crimson Spot Rockrose	5 gal	31
	CIS PUL	Cistus pulverulentus 'Sunset'	Rockrose	5 gal	34
	CIS PRO	Cistus salvifolius 'Prostratus'	Sageleef Rockrose	5 gal	54
	CIS HYB	Cistus x hybridus	White Rockrose	5 gal	58
	CIT MEY	Citrus x meyeri	Meyer Lemon	5 gal	3
	DIE BIC	Dietes bicolor	Fortnight Lily	1 gal	47
	ERI WAY	Erigeron glaucus 'Wayne Roderick'	Seaside Daisy	1 gal	36
	GRE NOE	Grevillea x 'Noelii'	Grevillea	5 gal	45
	LAV ASS	Lavatera assurgentiflora	Mallow	5 gal	9
	PEN FAR	Pennisetum x 'Fairy Tails'	Evergreen Fountain Grass	5 gal	12
	PIT TEN	Pittosporum tenuifolium 'Marjorie Channon'	Tawhiwhi	5 gal	30
	PIT CRE	Pittosporum tobira 'Cream De Mint' TM	Cream De Mint Dwarf Mock Orange	5 gal	15
	PIT WHE	Pittosporum tobira 'Wheelers Dwarf'	Wheeler's Dwarf Mock Orange	5 gal	34
	PRU BRI	Prunus caroliniana 'Bright 'N Tight' TM	Bright 'N Tight Carolina Laurel	5 gal	44
	RHA MOU	Rhamnus californica 'Mound San Bruno'	California Coffeeberry	5 gal	120
	RHA SEA	Rhamnus californica 'Seaview'	California Coffee Berry	5 gal	22
	ROS AMB	Rosa x 'Flower Carpet Amber'	Amber Carpet Rose	2 gal	55
	ROS RED	Rosa x 'Flower Carpet Red'	Rose	2 gal	35
	WES MOR	Westringia fruticosa 'Morning Light'	Morning Light Coast Rosemary	5 gal	11

GRASSES	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
	FES IDA	Festuca idahoensis	Idaho Fescue	1 gal	64

GROUND COVERS	CODE	BOTANICAL NAME	COMMON NAME	CONT	SPACING	QTY
	CAR PAN	Carex pansa	Sanddune Sedge	4" pot	8" o.c.	13 sf

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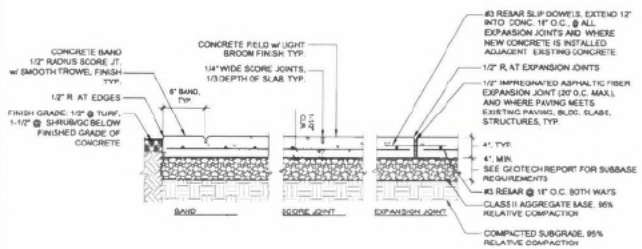
TEL (650) 364-8484 FAX (650) 364-0764

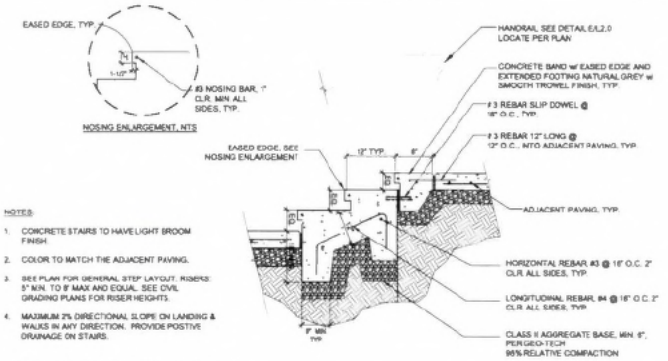
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 6

PLANTING LEGEND

SCALE: NTS
ISSUE DATE: 02/18/16
PROJECT NO: V0219
SHEET NO: L2.1



A CONCRETE PAVING
1" = 1'-0"



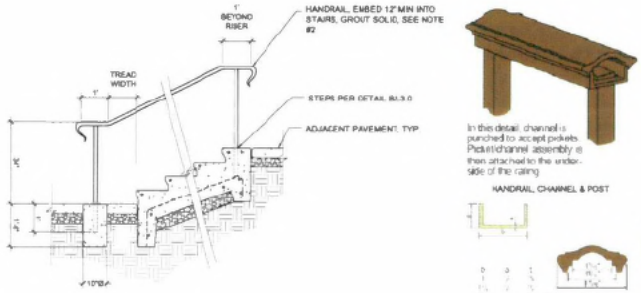
NOTES:

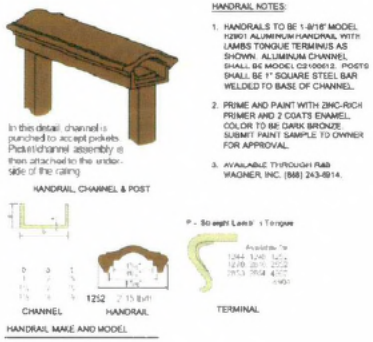
1. CONCRETE STAIRS TO HAVE LIGHT BROOM FINISH.
2. COLOR TO MATCH THE ADJACENT PAVING.
3. SEE PLAN FOR GENERAL STEP LAYOUT. RISERS: 5" MIN. TO 8" MAX AND EQUAL. SEE CIVIL GRADING PLANS FOR RISER HEIGHTS.
4. MAXIMUM 2% DIRECTIONAL SLOPE ON LANDING & WALKS IN ANY DIRECTION. PROVIDE POSITIVE DRAINAGE ON STAIRS.

B CONCRETE STEPS
3/4" = 1'-0"

CONCRETE NOTES:

1. SCORING PATTERN TO MEET ALL ACI INTERNATIONAL GUIDELINES.
2. ALL FORMWORK/SCORING/PROPOSED JOINT SPACING TO BE APPROVED AND REVIEWED BY OWNERS' REPRESENTATIVE PRIOR TO POURING.
3. ALL SCORING/CONTRACTION JOINTS TO BE MINIMUM 1/3 DEPTH OF SLAB.
4. DISTANCE BETWEEN CONTRACTION JTS TO BE MAXIMUM 24 TIMES SLAB THICKNESS. ALL CONTRACTION JTS TO BE CONTINUOUS, NOT STAGGERED OR OFFSET. REFER TO ACI INTL CCS-1 SERIES GUIDELINES FOR ALL CONCRETE WORK. ANY DISCREPANCIES WITH DRAWINGS TO BE BROUGHT TO ATTENTION OF OWNER/ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
5. CONCRETE PANELS TO BE AS SQUARE AS PRACTICAL. NEVER MAKE LONG SIDE MORE THAN 1-1/2 TIMES LENGTH OF SHORT SIDE. NO ONE PANEL TO BE MORE THAN 100 SQ. FT.
6. INSTALL EXPANSION JOINTS WHERE NEW PAVING MEETS EXISTING PAVING, WALLS, CURBS, FOUNDATIONS, OR OTHER FIXED OBJECTS, AND CHANGES IN WALK DIRECTIONS.
7. CONCRETE COLOR TO BE NATURAL GRAY.
8. BROOM FINISH SHALL BE PERPENDICULAR TO PATH OF TRAVEL.
9. CONTRACTOR SHALL COORDINATE INSTALLATION OF REBAR SLIP DOWELS WHERE DRIVEWAY MEETS GARAGE CONCRETE PAD WITH OWNER'S REPRESENTATIVE AND PROJECT STRUCTURAL ENGINEER. DOWELS SHALL BE #4 REBAR SPACED 24" O.C. EXTENDING 12" INTO DRIVEWAY AND GARAGE PAD, OR AS SPECIFIED BY STRUCTURAL ENGINEER. CONTRACTOR SHALL ONLY INSTALL REBAR DOWELS IF APPROVED BY OWNER'S REPRESENTATIVE AND PROJECT STRUCTURAL ENGINEER. SUBMIT TO OWNER'S REPRESENTATIVE PROPOSED DOWEL LOCATIONS.
10. FOR ALL PAVING DETAILS SHOWN, THE PAVING PROFILE, AGGREGATE, SUBBASE PREPARATION & COMPACTION PER GEOTECH ENGINEER, TYP. PROFILES ARE SHOWN FOR DESIGN INTENT & BIDDING PURPOSES ONLY. SEE GEOTECH REPORT FOR PAVING & SUBBASE REQUIREMENTS.





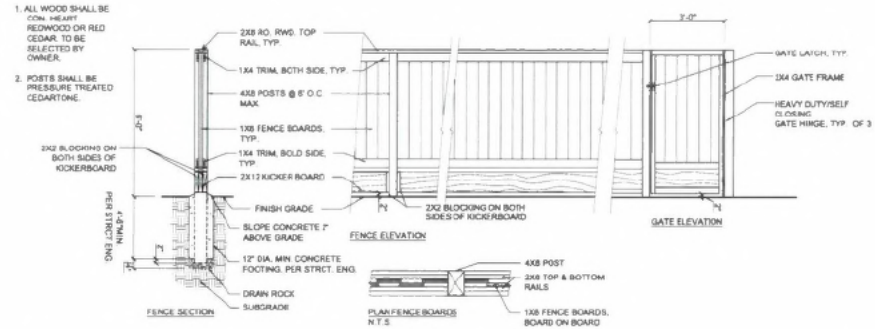
HANDRAIL NOTES:

1. HANDRAILS TO BE 1-5/16" MODEL H2901 ALUMINUM HANDRAIL WITH LAMBS TONGUE TERMINUS AS SHOWN. ALUMINUM CHANNEL SHALL BE MODEL C2100612. POSTS SHALL BE 1" SQUARE STEEL BAR WELDED TO BASE OF CHANNEL.
2. PRIME AND PAINT WITH ZINC-RICH PRIMER AND 2 COATS ENAMEL, COLOR TO BE DARK BRONZE. SUBMIT PAINT SAMPLE TO OWNER FOR APPROVAL.
3. AVAILABLE THROUGH R&B WAGNER, INC. (888) 243-6914.

C HANDRAIL
1/2" = 1'-0"

NOTES:

1. ALL WOOD SHALL BE CON. HEART REDWOOD OR RED CEDAR. TO BE SELECTED BY OWNER.
2. POSTS SHALL BE PRESSURE TREATED CEDARTONE.



D 6' TALL WOOD FENCE & GATE
NTS

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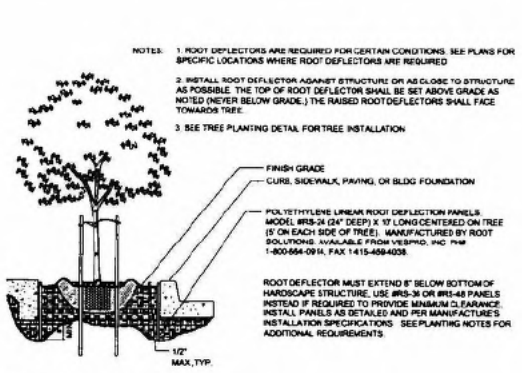
PROJECT MANAGER
DRAWN BY
CHECKED BY

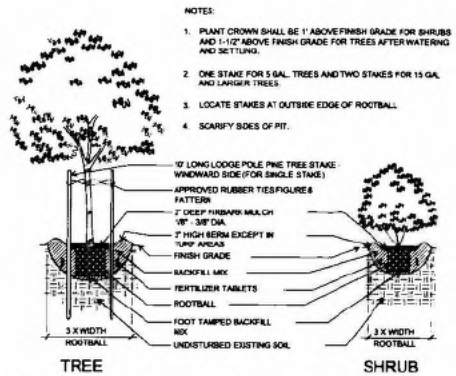
PROJECT LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 6

REVISIONS
NO. DESCRIPTION DATE BY

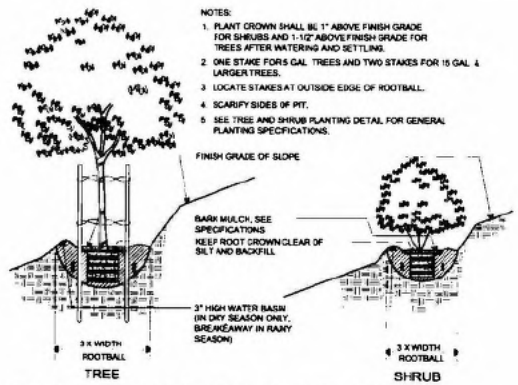
SHEET TITLE
LANDSCAPE DETAILS
SCALE
AS NOTED
ISSUE DATE
02/18/16
PROJECT NO.
V0219
SHEET NO.
L3.0



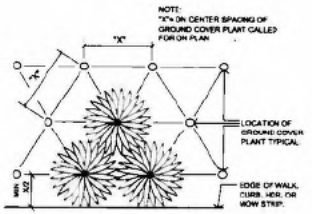
A ROOT DEFLECTOR
NTS



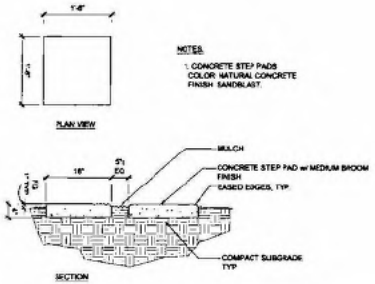
B TREE AND SHRUB PLANTING
NTS



C HILLSIDE TREE AND SHRUB PLANTING
NTS



D GROUNDCOVER PLANTING
NTS



E CONCRETE STEP PADS
3/4" = 1'-0"

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(650) 595.5582

800.227.2600

VAN DORN ABED LANDSCAPE ARCHITECTS, INC.
[illegible]

HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
LANDSCAPE IMPROVEMENT PLANS
LOT 6

LANDSCAPE DETAILS
SCALE: AS NOTED
ISSUE DATE: 02/18/16
PROJECT NO: V0219
SHEET NO: L3.1

GENERAL NOTES:

1. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC., SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE, UNLESS OTHERWISE NOTED. AVOID ANY CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING AND ARCHITECTURAL FEATURES.
2. CONTRACTOR SHALL PERFORM PRESSURE TESTS (STATIC & DYNAMIC) AND FLOW TESTS (GPM) AT POINT OF CONNECTION (P.O.C.) PRIOR TO BEGINNING WORK. SEE IRRIGATION NOTES FOR PRESSURE AND FLOW TEST REQUIREMENTS AND PROCEDURES. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CORRECTIVE MEASURES REQUIRED TO IRRIGATION SYSTEM, AT NO ADDITIONAL COST TO THE OWNER, IF IRRIGATION SYSTEM IS INSTALLED WITHOUT REQUIRED TESTS, AND DISCREPANCIES IN PRESSURE AND FLOW AT THE P.O.C. ARE DISCOVERED THAT PREVENT THE IRRIGATION SYSTEM FROM FUNCTIONING CORRECTLY.

WATER PRESSURE AT P.O.C. NOTES:

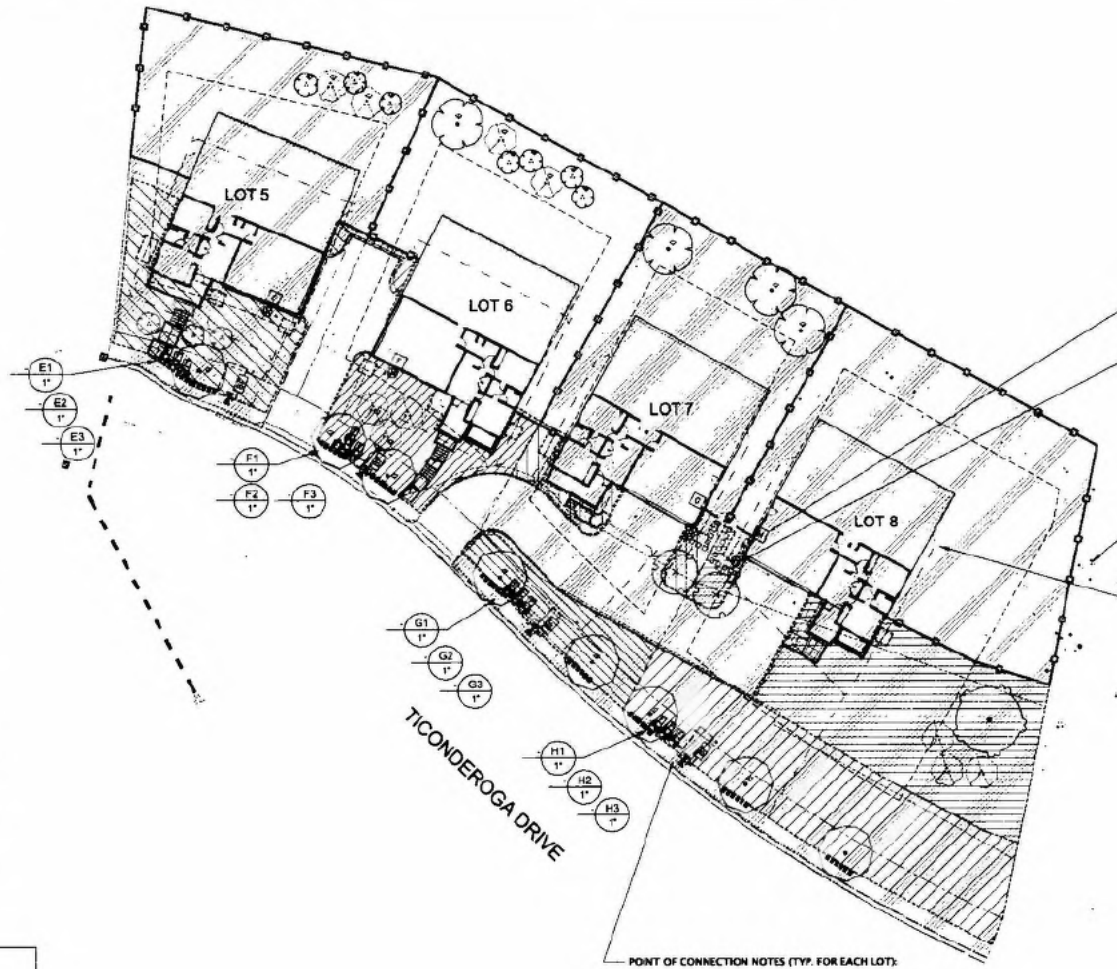
1. CONTRACTOR SHALL VERIFY WATER PRESSURE ON SITE. IF PRESSURE IS 65 PSI OR HIGHER AT P.O.C., CONTRACTOR SHALL INSTALL A PRESSURE REDUCER AS SHOWN, AND SET PRESSURE REDUCER TO 65 PSI. PRESSURE REDUCER SHALL BE 1-1/4" WILKINS LEAD FREE 500XL YSBR (INCLUDES PRESSURE REDUCER & FILTER). SEE IRRIGATION DETAILS.
2. IF PRESSURE IS LESS THAN 65 PSI OMIT PRESSURE REDUCER.
3. IF PRESSURE IS LESS THAN 55 PSI NOTIFY OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT FOR CORRECTIVE MEASURES.

SLEEVE NOTES:

1. FOR DESIGN CLARITY, NOT ALL SLEEVES SHOWN. CONTRACTOR SHALL SLEEVE ALL PIPES CROSSING UNDER PAVED AREAS.
2. WHERE LATERAL LINES WITH SLEEVES CROSS ROADS OR DRIVEWAYS, CONTRACTOR SHALL INSTALL ONE SPARE 4" CLASS 315 PVC SLEEVE.
3. WHERE MAIN LINES WITH SLEEVES CROSS ROADS OR DRIVEWAYS, CONTRACTOR SHALL INSTALL ONE SPARE 6" CLASS 315 PVC SLEEVE.

SPECIAL REQUIREMENTS AT EXISTING TREES

1. ALL UNDERGROUND IRRIGATION LINES SHALL BE ROUTED OUTSIDE THE DRIP LINES WHERE POSSIBLE.
2. IF UNDERGROUND IRRIGATION LINES MUST TRAVERSE THROUGH THE DRIP LINE AREA, LOCATION OF IRRIGATION LINES SHALL BE REVIEWED WITH PROJECT ARBORIST AND MODIFIED AS NEEDED PRIOR TO INSTALLATION. WHEN LINES ARE PROPOSED WITHIN A DISTANCE FROM THE TRUNKS OF FIVE (5) TIMES THEIR DIAMETER, THE PROJECT ARBORIST MAY RECOMMEND THAT A PNEUMATIC AIR DEVICE IS USED TO EXCAVATE THE TRENCH.



IRRIGATION CONTROLLER, WALL MOUNT IN GARAGE AS DIRECTED BY OWNER'S REPRESENTATIVE. CONTRACTOR TO PROVIDE 120 VOLT AC POWER TO CONTROLLER, TYP.

WIRELESS WEATHER SENSOR, LOCATE ON EDGE OF ROOF/GUTTER IN AREA OPEN TO SKY WITH FULL SUN EXPOSURE, IN LOCATION APPROVED BY OWNER'S REPRESENTATIVE; INSTALL PER MANUFACTURER'S INSTRUCTIONS, TYP.

EXISTING TREE TO REMAIN, SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.

BIO-RETENTION BOXES, NON-IRRIGATED. CONTRACTOR TO HAND WATER TO ESTABLISH PLANT MATERIALS, TYP.

POINT OF CONNECTION NOTES (TYP. FOR EACH LOT):

P.O.C. IS AT 1" HOUSE WATER METER, SEE P.O.C. DETAIL. WATER METER BY OTHERS, SEE CIVIL PLANS. FIELD VERIFY METER LOCATION & SIZE. CONTRACTOR SHALL VERIFY STATIC & DYNAMIC PRESSURE AND FLOW RATES AVAILABLE AT P.O.C. PRIOR TO BEGINNING WORK (SEE IRRIG. SPECIFICATIONS). SUBMIT TO OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT RESULTS OF PRESSURE AND FLOW TESTS PRIOR TO BEGINNING WORK. IF THERE ARE DISCREPANCIES OF 10 PSI OR MORE OR FLOW RATES LOWER THAN STATED IRRIGATION DEMAND ON PLANS, SYSTEM MAY NOT PERFORM CORRECTLY. SEE "WATER PRESSURE AT P.O.C. NOTES" & IRRIGATION SPECS FOR PRESSURE AND FLOW TEST REQUIREMENTS AND PROCEDURES.

IRRIGATION DEMAND: 6 GPM @ 65 PSI.

SEE "WATER PRESSURE AT P.O.C. NOTES" FOR PRESSURE REDUCER INSTALLATION REQUIREMENTS.

EXISTING OAK TREE NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY.
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.

NOTE: CONTRACTOR SHALL FIELD STAKE ALL TREE LOCATIONS PRIOR TO INSTALLATION OF IRRIGATION SYSTEM TO AVOID CONFLICTS WITH TREE LOCATIONS AND MAIN LINES/LATERAL LINES. IRRIGATION LATERAL LINES AND MAIN LINES SHALL BE LOCATED 3' MINIMUM HORIZONTALLY FROM TREE LOCATIONS. FIELD ADJUST ROUTING OF IRRIGATION LINES AS NECESSARY TO MEET MINIMUM CLEARANCE NOTED ABOVE.

SAN MATEO COUNTY WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE STATEMENT:

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN."

ZOKI ABED - LICENSED LANDSCAPE ARCHITECT

0 10 20 40 60

DESIGN: CHAMBERLAIN GROUP
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San Carlos, CA 94070
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800.227.2600

LANDSCAPE ARCHITECT: VAN DORN ABED LANDSCAPE ARCHITECTS, INC.
99 MEDINA ROAD, SAN RAFAEL, CA
(415) 479-1160 FAX (415) 479-1161

PROJECT: HIGHLAND ESTATES
SAN MATEO, CALIFORNIA
DRAWING TITLE: LANDSCAPE IMPROVEMENT PLANS
LOT 6

SHEET TITLE: IRRIGATION PLAN

SCALE: 1" = 20'-0"
ISSUE DATE: 02/18/16
PROJECT NO: V0219
SHEET NO: L4.0

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
△	PVC lateral line to drip area with Rainbird Xerublet emitter units. Route PVC lateral line thru drip area and install required quantity of Octabubblers necessary to irrigate plants in the drip area.
◇ 'x'	Rain Bird XBT-4 Six multi-outlet drip emitter/bubbler Six-Outlet, Pressure Compensating, with 1.0 GPH Black Drip Emitters at each emitter outlet. Comes with 1/2" FIPT Inlet x Barb Outlet. Install DBC-026 Diffuser Bug Caps at end of each emitters 1/4" distribution line. Install 4 (four) 1/4" distribution lines with Diffuser Bug Caps at 5Gal & 15Gal trees. Install 6 (six) 1/4" distribution lines with Diffuser Bug Caps at 24"Box. trees. Plug unused emitter outlets.

NOTE: DRIP AREA PATTERNS FOR DESIGN CLARITY

A1 A1 A1

A1 A1 A1

CONTROLLER

VALVE CIRCUIT NO.

Area to Receive Drip Emitters
Rain Bird XB06PRS w/XB-10
Xeri-Bird 8 Multi Outlet Emission Device with Xeri-Bug emitters at 1gph each, with built-in 200 mesh filter, Pressure Regulator in-stem
Emitter Notes:
1 gal plant to receive 1 of OCT8-18 emitter.
5 gal plant to receive 2 of OCT8-18 emitters.
15 gal plant to receive 4 of OCT8-18 emitters.
24"box plant to receive 6 of OCT8-18 emitters
2 gal plant to receive 1 of OCT8-18 emitter.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Irritrol 700 with DMR-100 Electric Remote Control Valve, with Omni-Reg S-100pa regulator. Set pressure regulator at 40 PSI.
	Nibco T-113-LF Lead free Class 125 bronze gate shut off valve with wheel handle, same size as mainline pipe diameter at valve location. Size Range - 1/4" - 3"
PRV	Febco LF825Y 1" Lead Free Reduced Pressure Backflow Preventer
A	Irritrol TC-08-MOD-R Hydrol Controller, 6- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
B	Irritrol TC-06-MOD-R Hydrol Controller, 6- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
C	Irritrol TC-06-MOD-R Hydrol Controller, 6- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
D	Irritrol TC-06-MOD-R Hydrol Controller, 6- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
	Irritrol CL Wireless Weather Sensing System. 100-Receive and Transmitter Kit. Outdoor sensor, and receiver attaches to Irritrol Controller. Compatible with Rain Dial-R, Total Control-R, KwikDial, adn MC-E controllers. Monitors weather data.
	Amiad 150 mesh Y-Filter with flush valve, or approved equivalent, at drip remote control valves
	Irrigation Lateral Line. PVC Class 200 SDR 21 PVC Class 200 irrigation pipe. Only lateral transition pipe sizes 1" and above are indicated on the plan, with all others being 3/4" in size. 12" min. burry.
— — —	Irrigation Mainline. PVC Schedule 40 PVC Schedule 40 irrigation pipe. 18" min. burry.
- - - - -	Pipe Sleeve. PVC Class 315 SDR 13.5 24" MIN. BURRY.

Valve Callout
- #" — Valve Number
- #" — Valve GPM
- #" — Valve Size

IRRIGATION RUN TIME SCHEDULE NOTES:

1. IRRIGATION CONTROLLER RUN TIMES ARE NOT INCLUDED ON LANDSCAPE PLANS. IRRIGATION CONTROLLERS ARE ET BASED SMART CONTROLLERS THAT GENERATE OPTIMUM RUN TIME SCHEDULES BASED UPON LOCAL WEATHER CONDITIONS.
2. CONTROLLERS ARE INITIALLY PROGRAMMED WITH IRRIGATION SYSTEM COMPONENT INFORMATION, PLANT MATERIAL WATER USE REQUIREMENTS, SOIL TYPE, AND LOCAL MICRO CLIMATIC INFORMATION. CONTROLLERS AUTOMATICALLY GENERATE RUN TIME SCHEDULES FROM THIS INFORMATION. EACH DAY CONTROLLERS RECEIVES LOCAL WEATHER CONDITION DATA WIRELESS WEATHERS SENSORS, AND AUTOMATICALLY ADJUST THEIR WATERING SCHEDULES FOR OPTIMUM WATER CONSERVATION. EACH CONTROLLER HAS IT'S OWN WIRELESS WEATHER SENSOR, LOCATED ON-SITE.

IRRIGATION SPECIFICATIONS:

1. Irrigation system shall be installed in conformance with all applicable local codes and ordinances by experienced workmen and a licensed Landscape Contractor who shall obtain all necessary permits and pay all required fees.
2. Prior to the start of construction, the Contractor shall verify with the City, Water District, and/or other governing agency(s) if a reclaimed water source will be available in the future for connection to the irrigation system. If local regulations so stipulate, then the Contractor shall follow all requirements, specifications, construction details, codes,etc., for the installation of irrigation systems utilizing reclaimed water sources for irrigation of landscaping.
3. The Contractor shall be responsible for any damage to existing facilities caused by or during the performance of his work. All repairs shall be made at no cost to the Owner.
4. This design is diagrammatic: install parallel lines in a common trench with minimum horizontal distance of 4" and lines not one above the other. Snake pipe in trenches. All piping, valves, etc., shown within paved areas is for design clarification only and shall be installed in planting areas where possible. Avoid any conflicts between the irrigation system, planting and architectural features.
5. Do not willfully install the irrigation system as shown on the drawings when it is obvious in the field that obstructions, grade differences or differences in the area dimensions exist that might not have been considered in the engineering. Such obstructions or differences should be brought to the attention of the Owner's authorized representative. In the event this notification is not performed, the Contractor shall assume full responsibility for any revisions necessary.
6. It is the responsibility of the Contractor to familiarize himself with all grade differences, location of walls, retaining walls etc. He shall coordinate his work with the General Contractor and other Subcontractors for the location and the installation of pipe sleeves through walls, under roadways, paving, structures, etc.
7. Due to the scale of the drawings, it is not possible to indicate all offsets, fittings, sleeves, etc., which may be required. The Contractor shall carefully investigate the structural and finished conditions affecting all of his work and plan his work accordingly, furnishing such fittings, etc., as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation system, planting, and architectural features.
8. Notify Landscape Architect of any other aspects of layout which will provide incomplete or insufficient water coverage of plant material and do not proceed until his instructions are obtained.
9. Electrical Contractor to supply 120 volt A.C. (2.5 AMP) service to controller location. Contractor to make final connection from electrical stub-out to controller. Paint conduit to controller with 2 coats Rustoleum brown paint if installed outdoors; color to be approved by Owner's representative. 120 volt A.C. J-Box to controller by others. All 120 volt A.C. and 24 volt connections to be made by Contractor.
10. Each controller shall have its own independent ground wire.
11. Program irrigation controller(s) to operate between the hours of 10:00 P.M. and 7:00 A.M.
12. Valve locations shown are diagrammatic. Install in ground cover/shrub areas.
13. Install valve boxes 12" from and perpendicular to walk, curb, building or landscape feature. At multiple valve box groups, each box shall be an equal distance from the walk, curb, lawn, etc., and each box shall be 12" apart. Short side of valve box shall be parallel to walk, curb, lawn, etc.
14. Install U.L. approved direct-burial wire #14 minimum and #14 common ground at 18" depth minimum. Splicing of 24 volt wires will not be permitted except in valve boxes. Leave a 24" coil of excess wire at each splice and 100 feet on center along wire run. Tape wire in bundles 10 feet on center. No taping permitted inside sleeves.
15. Install a spare control wire of a different color along the entire main line. Loop 36" excess wire into each single valve box and into one valve box in each group of valves.
16. Prior to trenching, call Underground Service Alert, 1-800-642-2444 to locate all cables, conduits, and other utilities and take proper precautions not to damage or disturb existing utilities.
17. All Main lines and Lateral lines under paving shall be in PVC sleeves which extend 12" into planting areas. All backfill shall be free of rocks greater than 1" diameter. For ring-tite PVC main line piping inside sleeves use 1120-315 PSI PVC plastic pipe with schedule 40 PVC couplings.
18. When applicable, Schedule 80, ASTM D2466 male adapters to be used where mainline connects to copper pipe service lines installed by others.
19. Copper pipe shall be joined to steel or cast iron pipe with a dielectric union.
20. In addition to the sleeves and conduits shown on the plans the Contractor shall be responsible for the installation of sleeves and conduits of sufficient size under all paved areas.
21. Locate quick coupling valve 12" from hardscape area.
22. The irrigation system design is based on the minimum operating Pressure (PSI) and Flow (GPM) shown on the irrigation drawings (see Irrigation Demand at P.O.C.). The Contractor shall verify the Static and Dynamic water pressure (PSI) and Flow Rate (GPM) at the point of connection (P.O.C.) prior to construction as follows:
    A. Static Pressure: Take PSI reading at P.O.C. with no water flowing.
    B. Dynamic Pressure: Install at P.O.C. a pressure (PSI) and flow gauge (GPM) assembly of suitable size* to take flow (GPM) readings in the range of the stated Irrigation Demand for the irrigation system design. Open valve or meter at P.O.C. until GPM flow reading equals or exceeds irrigation GPM demand. Note dynamic pressure and flow readings. If the GPM flow does not equal or exceed the GPM demand, note highest flow reading possible.
    C. Readings shall be taken at the following times: 1PM, 5PM, 9PM, 1AM, 5AM, 9AM.
    * Irrigation systems with high irrigation demand GPM flow rates, will require large capacity test gauge assemblies.

Submit to Owner's Representative and Landscape Architect results of Pressure and Flow Tests prior to beginning work. Note any discrepancies of 10 PSI or more or flow rates lower than stated Irrigation Demand on plans to Owner's Representative and Landscape Architect. If there are discrepancies of 10 PSI or more or flow rates lower than stated Irrigation Demand on plans, system may not perform correctly - do not proceed with irrigation system installation until corrective measures are determined. Note, Contractor shall be responsible for any corrective measures required to the irrigation system, at no additional cost to the Owner. If irrigation system is installed without required tests, and discrepancies in Pressure and Flow at the P.O.C. are discovered that prevent the irrigation system from functioning correctly.

23. Meter(s) indicated on the Drawing(s) is supplied and installed by others, unless otherwise indicated. The Contractor is responsible for furnishing all proper fittings.
24. All irrigation piping shall be subjected to hydrostatic pressure tests as follows before backfilling trenches: Valves, pumps, and accurately calibrated recording gauges shall be installed in at least two places. Supply lines shall be tested at 125 psi for at least 4 hours with an allowable loss of 5 psi. Laterals lines shall be tested at the existing static psi for at least 1 hour with an allowable loss of 5 psi. Any leaks shall be corrected and piping re-tested until the system meet the requirements. The Contractor shall notify the Owner's Representative at least 3 days in advance of the time that the irrigation system piping is to be tested. Submit written test results to Owner's Representative and Landscape Architect.
25. Contractor to notify all local jurisdictions for inspection and testing of installed backflow prevention device.
26. The entire irrigation system shall be operating properly before any lawn or ground cover is planted.
27. The Contractor shall provide Owner with a clean set of marked prints of "RECORD DRAWINGS" drawings. Reference all trenches, valves, controllers, splice boxes, quick couplers, backflow preventers, water meters, with dimensions to nearest building or paving.
28. The Contractor shall guarantee the irrigation system will be free of defects of workmanship and materials for a period of one year. All repairs necessary shall be made at no cost to the Owner, with the exception of repairs and labor cost made necessary by vandalism.

CLIENT
CUMBERLAIN GROUP
868 Stevens, Suite 200
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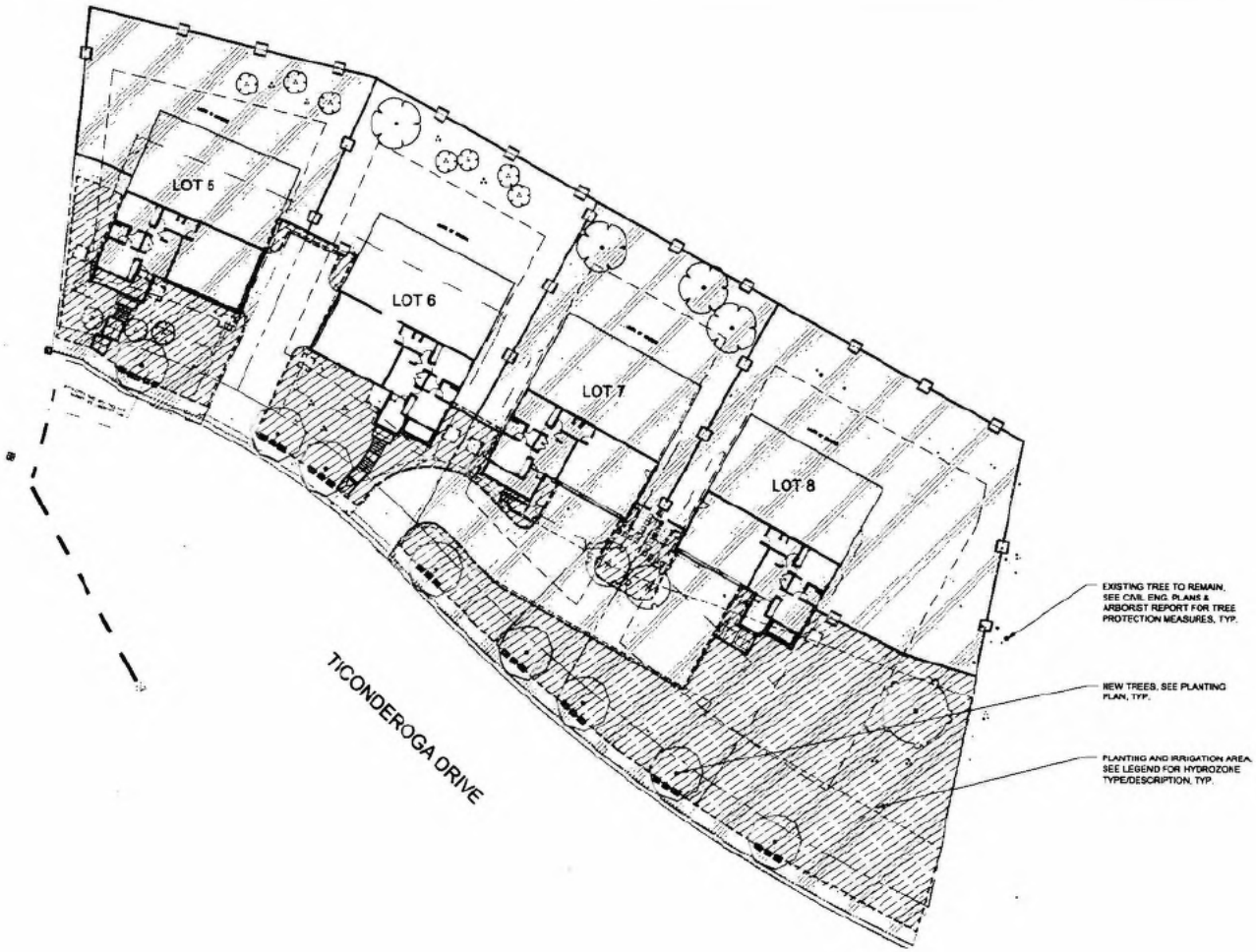
81 14TH ST. SAN FRANCISCO, CA
ZIP 94103 PH (415) 864-1821 FAX (415) 864-1476

PROJECT MANAGER: DWV
DESIGNED BY: BEO
DRAWN BY: EA

PROJECT NAME: HIGHLAND ESTATES
CITY: SAN MATEO
STATE: CALIFORNIA
DRAWING TITLE: LANDSCAPE IMPROVEMENT PLANS
LOT 6

REVISIONS NO	DESCRIPTION	BY	DATE

SHEET TITLE: IRRIGATION LEGEND & SPECIFICATIONS
SCALE: NA
ISSUE DATE: 02/18/16
PROJECT NO: Y0219
SHEET NO: L4.1



HYRDOZONE AREA LEGEND

SYMBOL	HYDROZONE	DESCRIPTION	IRRIG. METHOD	LOT 5 SF	LOT 6 SF	LOT 7 SF	LOT 8 SF	LOT 9 SF	LOT 10 SF	LOT 11 SF	TOTAL AREA SF	%LANDSCAPE AREA
	1	LOW WATER USE, SUN EXPOSURE, DRIP IRRIGATED TREE, SHRUB & GROUND COVER AREAS	DRIP	2,458 SF +	2,051 SF +	2,111 SF +	9,853 SF +	3,379 SF +	3,039 SF +	2,752 SF =	25,643 SF	90.9%
	2	MEDIUM WATER USE, SHADE EXPOSURE, DRIP IRRIGATED TREE, SHRUB & GROUND COVER AREAS	DRIP	0 SF +	0 SF +	0 SF +	0 SF +	1,469 SF +	486 SF +	612 SF =	2,567 SF	9.1%
										TOTAL SITE (ALL LOTS) SF =	28,210 SF	100%

SAN MATEO COUNTY WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE STATEMENT:

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN."

ZEKI ABED - LICENSED LANDSCAPE ARCHITECT

0 10 20 40 60

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VAN DORN ABED LANDSCAPE ARCHITECTS, INC.
81 NEW ST. SAN FRANCISCO, CA

HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
LANDSCAPE IMPROVEMENT PLANS
LOT 6

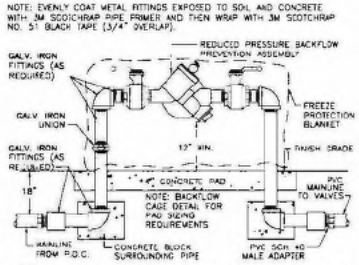
SHEET TITLE
HYDROZONE PLAN

SCALE
1" = 20'-0"

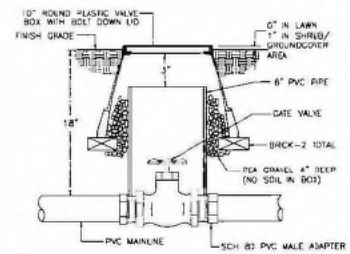
ISSUE DATE
02/18/16

PROJECT NO.
V0219

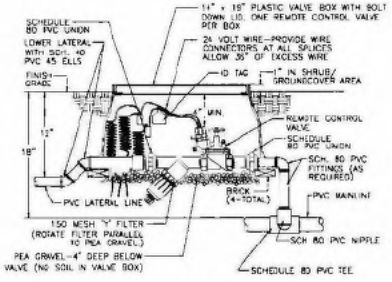
SHEET NO.
L4.2



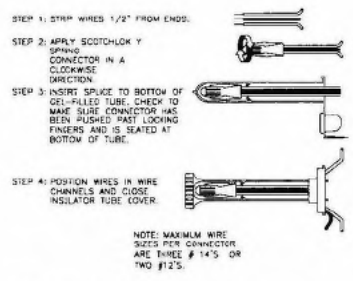
1 REDUCED PRESSURE BACKFLOW PREVENTER DETAIL
NOT TO SCALE



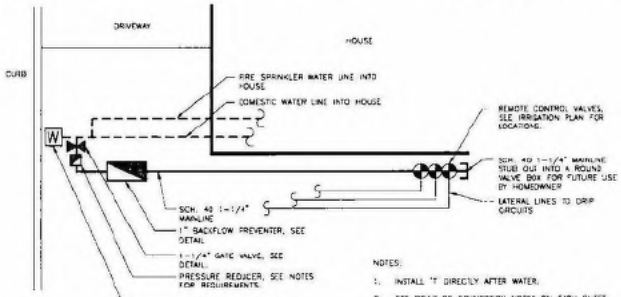
2 GATE VALVE DETAIL
NOT TO SCALE



3 REMOTE CONTROL VALVE & "Y" FILTER DETAIL
NOT TO SCALE



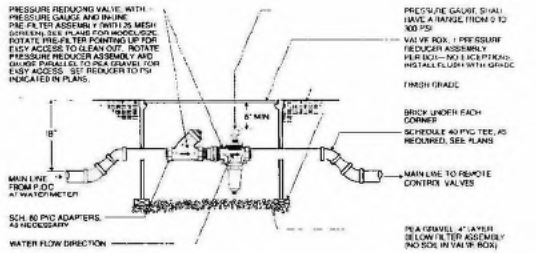
4 WIRE CONNECTION DETAIL
NOT TO SCALE



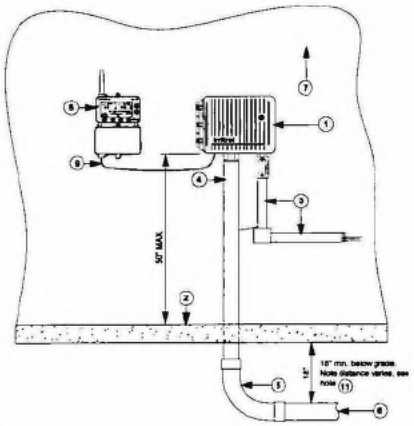
NOTES:
1. INSTALL "T" DIRECTLY AFTER WATER.
2. SEE POINT OF CONNECTION NOTES ON EACH SHEET, FOR PRESSURE VERIFICATION AND TESTING REQUIREMENTS.

5 IRRIGATION SYSTEM P.O.C. AT EACH LOT DETAIL
NOT TO SCALE

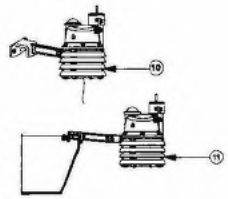
NOTES
PRESSURE REDUCER SHALL BE 1-1/4" LEAD FREE WILKINS 500XLYSHR (INCLUDES PRESSURE REDUCER & FILTER), SET AT 50 PSI. SEE NOTES ON IRRIGATION PLANS FOR INSTALLATION REQUIREMENTS.



6 PRESSURE REDUCER DETAIL
NOT TO SCALE

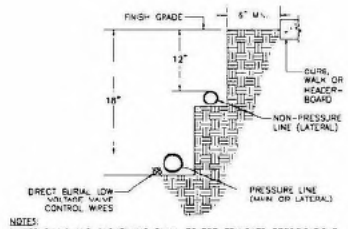


1. Irrigation controller. Install controller in location as directed by Owner's Representative.
2. Garage finish surface.
3. 1/2" UL approved electrical conduit, ring nut and junction box for 120V AC electrical power. Contractor to proved 120 volt AC electrical power to controller, see notes on Irrigation Plans.
4. PVC schedule 40 control wire conduit (size as required)
5. PVC sweep ell to conduit through bldg to exterior planting area 18" below grade.
6. End conduit 12" beyond edge of bldg., 18" below grade.
7. Interior wall in garage area.
8. Climate Logic™ receiver module mounted near the compatible controller. Mount with screws at eye level.
9. Single connection cord plugged into controllers remote port.
10. Climate Logic™ weather sensor mounted outdoors on flat surface using screws, , see notes on Irrigation Plans.
11. Climate Logic™ weather sensor mounted on a rain gutter using QuickClip™ guttermount, see notes on Irrigation Plans.
11. Note: at lots where garage areas are elevated above grade, route conduit down side of bldg./structural piers out site where possible, to 18" below grade. Paint exposed conduit to match house color as directed by Owner's Representative.



NOTES:
1. Irrigation controller is not shown on the irrigation plan. Irrigation controller to be installed in garage as directed by Owner's Representative.
2. 120 volt AC power to controller per Electrical Plans.
3. Wireless weather sensor unit to be installed on edge of bldg. in area open to sky with full sun exposure, in location approved by Owner's Representative. Locate sensor unit within radio communication range of controller.
4. All electrical work must conform to local codes. Refer to product literature for additional installation requirements.

7 IRRIGATION CONTROLLER & WIRELESS WEATHER SENSOR DETAIL
NOT TO SCALE



NOTES:
1. TRENCHING AND BACKFILLING SHALL BE PER STANDARD SPECIFICATIONS
2. MINIMUM BACKFILL RELATIVE COMPACTION SHALL BE 90%.
3. BUNDLE CONTROL WIRES TOGETHER AND TAPE AT 10' INTERVALS.
4. 4" MIN. HORIZONTAL DISTANCE BETWEEN PIPES IN COMMON TRENCH.
5. ALL PLASTIC IRRIGATION PIPING TO BE SNAKED IN TRENCHES.

8 IRRIGATION LINE TRENCHING
NOT TO SCALE

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925.979.1778 FAX 925.979.1779

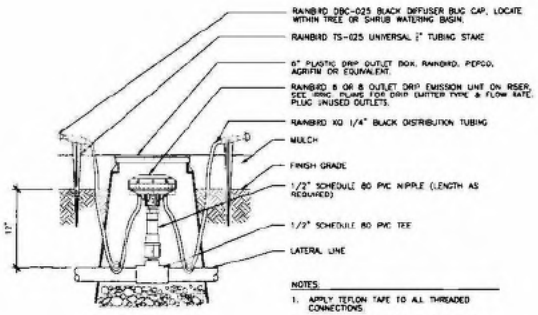
PROJECT MANAGER:
DRAWN BY:
CHECKED BY:

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO
SANTA CLARA COUNTY — CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 6

NO.	DESCRIPTION	DATE

SHEET TITLE
IRRIGATION DETAILS

SCALE
AS SHOWN
DATE
02/16/16
PROJECT NO.
Y0219
SHEET NO.
L4.3

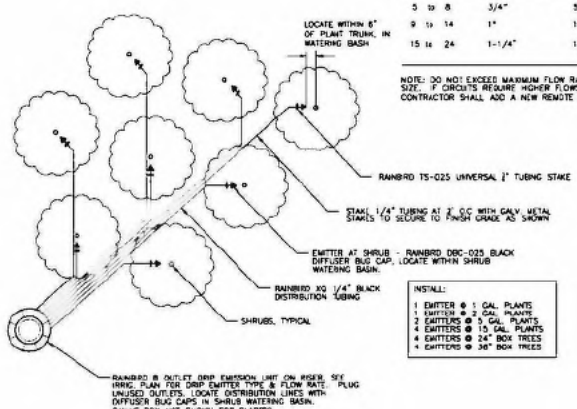


SECTION

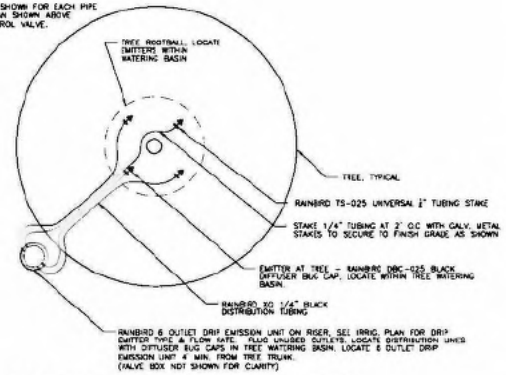
DRIP SHRUB/GC LATERAL PIPE SIZING CHART

GPM FLOW RATES	SIZE OF CLASS 200 PVC PIPE	MAX. QUANTITY OF RAINBIRD 8-OUTLET DRIP EMISSION UNITS (WITH 1.0 GPH EMITTERS)
5 to 8	3/4"	58
9 to 14	1"	102
15 to 24	1-1/4"	178

NOTE: DO NOT EXCEED MAXIMUM FLOW RATES SHOWN FOR EACH PIPE SIZE. IF CIRCUITS REQUIRE HIGHER FLOWS THAN SHOWN ABOVE CONTRACTOR SHALL ADD A NEW REMOTE CONTROL VALVE.



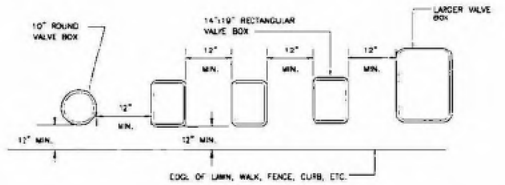
PLAN VIEW - RAINBIRD 8 OUTLET DRIP EMITTER LAYOUT @ SHRUBS/GROUND COVERS



PLAN VIEW - RAINBIRD 6 OUTLET DRIP EMITTER LAYOUT @ TREES

1 8-OUTLET & 6-OUTLET DRIP EMITTER ON RISER DETAIL

NOT TO SCALE



TOP VIEW

NOTES

1. CENTER BOX OVER VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA.
3. SET VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN AREA ONLY IF GROUND COVER/SHRUB AREA DOES NOT EXIST ADJACENT TO LAWN.
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOX EDGES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
6. VALVE BOXES SHALL HAVE BOLT DOWN LIDS WITH BOLTS INSTALLED.
7. VALVE BOXES SHALL BE BY CARSON, OR EQUIVALENT.

2 VALVE BOX LAYOUT DETAIL

NOT TO SCALE

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81 14TH ST. SAN FRANCISCO, CA.
ZIP 9403 PH 650-863-1600/863-864-476

NO	DATE	BY	DESCRIPTION

PROJECT NAME
HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 6

SHEET TITLE
IRRIGATION DETAILS

SCALE
AS SHOWN
ISSUE DATE
02/18/16
PROJECT NO
V0219
SHEET NO
L4.4
OF

GENERAL NOTES:

1. Contractor shall verify all existing site conditions prior to beginning construction. Notify Owner's Representative of any discrepancies.
2. The Contractor shall provide all materials, labor and equipment to complete all landscape work as shown on the plans and specifications.
3. If there is a conflict with the utilities and the planting, the Owner's Representative is to be responsible for spotting new plant locations prior to the planting process.
4. The Contractor shall be responsible for any damage to existing utilities, pavement or improvements. All repairs shall be made at no expense to the Owner.
5. The Contractor shall notify the Owner's Representative prior to beginning construction and shall keep the Owner's Representative informed of progress of work throughout landscape construction.
6. All work shall be installed in conformance with all applicable local codes and ordinances by experienced workmen and a licensed Contractor who shall obtain all necessary permits and pay all required fees.
7. Any requirement in the Plans and / or Notes and Specifications shall be considered binding. In case of discrepancies, the Owner's Representative shall be contacted immediately.
8. It is the Contractor's responsibility to schedule regular site visits by the Owner's Representative/Landscape Architect throughout landscape construction, at the beginning of the maintenance period, and final site review will be required.
9. Execute weekly cleaning of the site throughout the contract period to remove all waste materials, rubbish, plant containers, etc.
10. See Civil Engineer's improvement plans for all general grading information and notes.
11. All written dimensions supersede scaled distances. All dimensions are taken from back of curb, face of building, face of wall finish or face of fence.
12. Upon award of bid and prior to any construction, the Contractor shall perform the Percolation and Soils Testing as specified in the Planting Notes. If these tests have not already been performed. If drainage is found to be insufficient, or soils test results identify conditions requiring extraordinary or corrective measures, the Contractor shall immediately alert the Owner's Representative and Landscape Architect of any such problems, for corrective action and/or additional drainage treatment.

GRADING NOTES:

1. See General Notes and Civil Engineer's Grading Plans for additional information.
2. Rough grading and site drainage shall have been completed prior to Contractor's work. Verify all existing site conditions and report any discrepancies to Owner's Representative.
3. Contractor shall be responsible for finish grading. Verify positive drainage at a minimum 2% slope in landscape areas away from buildings and paved surfaces. Shrub areas shall be 1-1/2" below top of adjacent paving, headers, or curbs. No low spots which hold standing water will be permitted.
4. All salvageable, clean top soil from areas to be paved shall be stockpiled to be used as fill in planting areas.

CONSTRUCTION NOTES:

1. Concrete work: Install concrete work as detailed. Layout of concrete work shall be as shown on construction plans and as specified below.
   A. Layout shall be approved by Owner's representative/Landscape Architect prior to concrete pour. Contact Owner's Representative two days in advance.
2. Paving Installation
   B. Concrete Materials: For paving, concrete shall be a 5 sack mix producing concrete having a 28 day strength not less than 2500 psi. For walls concrete shall be 6 sack mix.
1. Portland cement: Conforming to ASTM. C150, Type I or II. Total alkali content not to exceed 0.60%. Deliver cement and all materials in labeled, unopened containers.
2. Form coatings: Standard product resin type sealer. Do not use form oil or any oil-bearing material.
3. Concrete aggregates: Conform to ASTM C33. Maximum 3/4" size aggregate.
4. Base course aggregates: Conform to ASTM C33. Maximum 3/4" size aggregate.
5. Water: Clean and potable.
6. Forms: Form material is Sub-contractor's option.
7. Admixtures or finish retardants: For workability, where approved by Owner's representative, and admixture may be added in accordance with manufacturer's recommendations. Obtain approval of material prior to use.
8. Expansion joint material: 3/8" thick pre-molded joint filler, conforming to ASTM D1751 or D1752.
9. Reinforcing steel:
   a. Bars: Deformed, intermediate grade, conforming to ASTM A615, Grade 40 for sizes #5 and smaller.
   b. Tie wire: Annealed copper-bearing steel wire, minimum 16 gauge.
10. Welded wire mesh: 6" x 6" x #10.
11. Liquid curing compound as required: Thompson's approved standard product fugitive resin type, or equal conforming to ASTM C309, free of wax or oil, compatible with subsequently applied finishes or coverings, not deleterious to bond of cementitious materials to aggregate.
12. Patching mortar: One part Portland cement or equal (part white and part gray adjusted to match color of surrounding concrete) and 2-1/2 parts sand with the least water required to produce a workable mass. Rework this mortar until it is the stiffest consistency that will permit placing.
   C. Concrete Installation.
1. Construct the subgrade true to grade and detail as shown. Compact subgrade to 90% maximum density at optimum moisture content.
2. Set forms with upper edges true to line and grade. Properly brace or tie together to maintain position and shape. Remove side forms not sooner than 12 hours after finishing has been completed. Form curves and straight sections for smooth and continuous lines. Secure Owner's representative's approval of subgrade compaction and moisture content and form alignment prior to pouring concrete.
3. Embedded items: Do not place any concrete until all inserted items such as sleeves, anchor bolts, wood, nails, dowels, etc. are installed in their proper locations, secured against displacement, cleaned, inspected and approved. Furnish ties and supports necessary to keep embedded items in place when concrete is placed.
4. Weather: Do not place concrete during rain unless approved measures are taken to prevent damage to concrete.
5. Deposit concrete evenly, consolidate with mechanical vibrators, particularly at side forms and strike off to indicated elevations and contour.
6. Concrete finishes shall be even surfaces of uniform texture and appearance, free of unsightly bulges, depressions and other imperfections and as follows:

   Medium broom finish: Broom with coarse bristled broom across width of flatwork to a uniformly roughened surface. Finished surface and edges shall be clean with uniform and reasonably straight lines. Submit Sample.

   Light broom finish: Broom with janitor's push broom type, with soft bristles, across width to a uniformly roughened surface. There shall be no deeply incised or obvious lines. Submit sample.

   Steel trowel finish: After floating, and no free water is evident and/or no cement sticks to the finger when touching slab, steel trowel until hard. All trowel marks eliminated. Final trowelling done when a ringing sound is produced as the trowel is moved over the surface.

   Joints: Joints shall be tooled with one-quarter inch (1/4") radius edging tool or as shown on plans.

   Edges: Edge slabs one-half (1/2") inch radius, edge curbs and other structures three-quarters inch (3/4") radius unless otherwise shown.
7. Remove flange marks: Remove flange marks resulting from tooling of edges by carefully trowelling out, unless specifically detailed in plans.

CARPENTRY NOTES:

A. Wood materials: See details for type of wood for each item.

1. Wood shall be selected for straightness and smoothness, size and grade as shown in plans.
   B. Workmanship: Carefully plan and layout the work as required. Properly accommodate the work of other trades. Accurately saw-cut and fit lumber into the respective locations, true to line, grade, and level, as indicated or required, and permanently secure in proper position with spikes, nails, lag screws, bolts, hangers, or other fastenings to make the work substantial and rigid in all parts and connections.
   C. Connections: Make connections between members tight, accurate and secure. Place fastenings without splitting wood, predrill when required. Drill bolt holes same size as bolt diameter. Drill holes for lag screws same size as thread root diameter; and counterbore, same depth and diameter as shank. Turn lag screws into place, do not drive. Provide bolts and lag screws with washers under every head and nut bearing on wood. Tighten bolts and lag screws at installation, carefully retighten just prior to closing in, or at completion of project.
   D. Finishing: As per plan.
   E. Redwood header layout: All curved sections shall be smooth and contanuous. Layout shall be approved by Owner's representative.
2. Hardware
   A. All metal bolts, nails, screws and other hardware shall be galvanized steel, sized as shown on the plans.
   B. All visible hardware shall be painted with two coats of black rustproof paint or to match architectural colors. Color to be approved by Owner's representative.
   C. All hardware for metal gates to be approved by Owner's representative.
3. Metal:
   A. Provide complete shop drawings for all metal fabrication.
   B. Fabricate all exterior steel work in shop, including all welding. All metal work shall conform to ASTM specifications. Miter corners and angles of moldings or frames unless otherwise noted.
   C. Shop primer: One coat of primer, semi-quick drying. Painting: After material has been properly cleaned, apply shop prime coat of paint to all surfaces. Apply all paint in accordance with manufacturer's directions. Spot paint all abrasions and field connections after assembly.
   D. Installation. Set all work plumb, true, rigid and neatly trimmed out as detailed. Provide all necessary connections, anchor bolts etc. required to fit metal with other work.
   E. Protect all metal from damage to surface, profile or to shape from shop through construction to final acceptance of project.
   F. Color: Color to be approved by Owner's representative, submit sample for approval.
   G. All defective work shall be repaired or replaced as directed Owner's representative.
   H. All exposed site metal for utilities, irrigation, etc., shall be painted with one coat brown rustproof paint.

OWNER
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PROJECT MANAGER
DRAWN BY
CHECKED BY

NO.	DESCRIPTION	BY	DATE
1			

PROJECT TITLE
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 6

SHEET TITLE
LANDSCAPE NOTES & SPECIFICATIONS
SCALE

ISSUE DATE
02/18/16
PROJECT NO.
V0219
SHEET NO.
L5.0

PLANTING NOTES:

1. See General Notes.

2. Submittals: Contractor shall submit the following items to Owner's Representative and Landscape Architect for review/approval prior to beginning planting installation operations:

   A. Soils tests: Initial site soils test & post amendment installation test)

   B. Vender data for landscape products, including: bark mulch, root barriers, fertilizers, soil amendments, and soil conditioners.

   C. Written results of percolation tests.

3. The Contractor shall verify the availability of all landscape plants within 10 days following award of the contract. Discrepancies or other problems and all plant substitutions shall be resolved at this time. If a substitute is authorized by the Owner's Representative, it must be of the same size, value and quality as the original plant.

4. All trees and representative samples of shrub/ground covers shall be inspected at the site for approval by the Owner's Representative and meet the following standards:

   A. Quality and size shall conform to the State of California Grading Code of Nursery Stock, No. 1 grade and to the current issue of the American Standard for Nursery Stock published by the American Association of Nurserymen. Use only nursery-grown stock. The Owner's Representative will inspect plants for approval prior to any installation.

   B. Plant material must be selected from nurseries that have been inspected by state or federal agencies.

   C. Nomenclature will be in accordance with Hortus III.

   D. Plant materials will not be accepted that are overgrown, root bound, or too recently cleaned so that the root system is not thoroughly established throughout the can. Pruning shall not be done prior to delivery except as authorized by the Owner's Representative.

5. Grading and Topsoil:

   A. See Grading Notes.

   B. Soil Test: Contractor shall submit three (3) representative soil samples to Soil and Plant Laboratory, Santa Clara or approved equal to be tested for agricultural suitability and fertility with pre-plant and post-plant recommendations, immediately following the completion of rough grading. Soil samples shall be taken from location determined by the Owner's Representative. Soil shall be certified as clean and free of hazardous materials or waste contamination. Notify Owner's Representative of any soils problems noted in the soils test report that could potentially effect/impact plant health, including but not limited to the following: high or low soil pH, poor soil drainage, excessive soil compaction, different soil types in the same test samples, deficient or excess nutrient levels, high salt levels, high boron or other elements and compounds toxic to plants, etc. Submit report to Landscape Architect and Owner's Representative for review and approval prior to beginning work. Do not proceed with any amending operations until soils report has been reviewed and approved.

   C. Compost to be used for soil amendment at the rate indicated by the soil analysis to bring the soil organic matter content to a minimum of 3.5% by dry weight or 2" of compost. Contractor may 1) import topsoil to meet organic matter content tested, or 2) submit soils report that identifies existing topsoil meets or exceeds the specified organic matter content. (Bay-Friendly score card item C.7.a.i)

      Soil amendment to be added as follows in all planting areas (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purposes until determined by soil tests.)

      Amount per 1000 square feet:

      6 cubic yards Compost

      20 lbs. 8-20-20 fertilizer (Best's Copmeker)

      10 lbs. 0-25-0 Single super phosphate

      10 lbs. iron sulfate

   D. Soil amendment in all planting areas shall be uniformly spread and thoroughly incorporated to a soil depth of 6" minimum by repeated rotary hoe cultivation prior to planting.

   E. Post Amendment Installation Soil Testing for Compliance: After incorporating amendments, fertilizers and conditioners, Contractor shall take three (3) representative soil samples and have samples tested for Agricultural Suitability and Fertility by an approved soils analysis laboratory for compliance with original soil test report recommendations. Add any additional amendments, fertilizers and conditioners recommended by soils analysis laboratory at no cost to Owner. Notify Owner's Representative of any potential soils problems noted in the report. Submit report for amendment/fertilizer/conditioner compliance to Landscape Architect and Owner's Representative prior to beginning planting operations.

6. Tree and Shrub Planting:

   Prior to digging holes for final planting, the Contractor shall spot all trees as shown on the Drawings for approval by the Landscape Architect.

   A. Soil amendments and fertilizer shall have been incorporated into the soil prior to tree and shrub planting.

   B. Dig pits as shown on Drawings.

   C. After pits are dug, break sides and bottom of holes to open wall of pit for root penetration.

   D. Percolation Test: All plant pits shall be tested for sufficient drainage prior to planting. Representative plant pits shall be dug (at least 2) at site upon award of Bid to test for general site subgrade drainage conditions. Individual planting pits shall also be tested again for sufficient drainage prior to planting. Contractor shall fill plant pits with water, to see if subsoil conditions will cause retention of water within plant pits overnight. If standing water is still observed after 12 hours, then Contractor shall alert Owner's Representative and Landscape Architect of the problem.

   E. Planting backfill mix for trees and shrubs shall be:

      Amount per Cubic Yard

      3/4 cubic yard On site soil

      1/4 cubic yard compost

      1.5 lbs. 8-20-20 fertilizer (Best's Copmeker)

      2.5 lbs. 0-25-0 Single super phosphate

      1 lb. iron sulfate

   (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purposes until determined by soil tests)

   F. Fertilize plants at the time of planting with Agriform 21-gram fertilizer packets, 20-10-5: 2 per 1 gallon can; 3 per 5 gallon can; 4 per 15 gallon can; specimen trees-3 per inch of caliper.

   G. Plants shall be erect after planting, and staked or guyed as detailed at the time of planting. Remove nursery stakes.

   H. Rootball crown shall be 2" above finish grade after watering and settling.

   I. Tree and shrub plantings shall be watered and flooded to eliminate air pockets within 2 hours of the time of planting.

   J. All vines shall be trained to posts, fences or walls by tying select individual branches with plastic covered wire ties as follows: ties shall be attached to wood surfaces with 3/4" galvanized iron staples and attached to stucco or masonry surfaces with epoxy as recommended by manufacturer. See planting details.

   K. All trees shall be planted 10'-0" minimum from buildings including overhangs and 5'-0" minimum from curbs, paving, fences, etc. Orient main branches of trees away from building. Should any discrepancies occur between field conditions and planting plans contact Owner's Representative. All trees closer than 5'-0" from curbs, foundations, sidewalks, or other hardscape items, shall be installed with linear root deflector panels protecting adjacent hardscape items, but never fully surrounding rootball. Install a 10 foot by 24 inch deep section of linear interlocking root deflector panels, centered on tree (5 feet on each side), located at curb, foundation, sidewalks, other hardscape items, unless otherwise indicated. See plans for detail.

   L. All trees shall be planted a minimum of 5'-0" away from storm drain, or other underground utility lines (or per code), and 10'-0" away from sanitary sewer lines (or per code), and 15'-0" minimum away from utility poles or light standards (or per code).

   M. All planting areas to receive 3" layer of bark mulch, natural color, no dyes.

   N. All trees and shrubs shall have watering basins around them. Basin diameters shall be the same size as the tree or shrub's rootball. Basins shall be formed with level bottoms and 3 inch high walls. Planting areas to receive 3" depth of bark mulch unless otherwise indicated. Submit sample for approval.

   O. Soil amendments shall have been incorporated into the soil prior to planting.

   P. Clear planting areas of rocks and debris greater than 1" diameter.

   Q. Apply a pre-emergent herbicide, per manufacturer's directions.

   R. All planting areas with slopes greater than 2:1 shall have jute mesh installed as per detail, or per manufacturer recommendations.

   S. Thirty (30) days after planting, replace all dead plants and fill in bare areas. Top dress with 16-6-8 fertilizer at 7 lbs./1000 sq. ft. when ground is dry and thoroughly irrigate promptly after application.

   (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purposes until determined by soil tests)

7. NOT USED

8. Workmanship:

   Precautions shall be taken to avoid damage to existing plants, turf and structures. Any areas damaged shall be restored to their original condition.

9. Clean-up

   Keep all areas of work clean, neat and orderly at all times. Keep all paved areas clear during planting and maintenance operations.

10. Site Visits and Approvals:

    The Contractor shall contact the Owner's Representative for review and approval of plant materials and plant locations. The maintenance period begins following acceptance of plant installation.

11. Maintenance:

    A. Begin maintenance after each plant is installed and continue until Final Acceptance.

    B. Maintenance Period shall begin upon inspection and approval by Owners Representative and shall be for 60 calendar days.

    C. Maintenance of new planting shall consist of watering, cultivating, weeding, mulching, re-staking, tightening and repairing of guys, resetting plants to proper grades or upright position, restoration of the planting saucer, and furnishing and applying such sprays and irrigantes as are necessary to keep the plantings free of insects and diseases and in thriving condition.

    D. Protect planting areas and plants at all times against damage of all kinds, including frost, for duration of maintenance period. Maintenance includes temporary protection fences, barriers, covers during frost and alerts as required for protection. If any plants become damaged or injured, treat or replace as directed by Landscape Architect at no additional cost to Owner.

13. Guarantee

    A. Replacement trees shall be in thriving condition 3 years from the date of final acceptance. Any replacement trees which have lost at least 30% of their normal foliage or are not in vigorous growing condition shall be replaced.

    B. All other trees, shrubs, grasses, ground covers shall be in thriving condition 1 year from the date of final acceptance. Replace any trees which have lost at least 30% of their normal foliage or are not in vigorous growing condition.

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PROJECT MANAGER
DRAWN BY
CHECKED BY

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 6

SHEET TITLE
LANDSCAPE NOTES & SPECIFICATIONS
SCALE

ISSUE DATE
02/18/16
PROJECT NO
V0219
SHEET NO
L5.1

HIGHLAND ESTATES

LOT 7 – LANDSCAPE PLANS

VICINITY MAP

SITE MAP

SHEET INDEX

REVISION LOG

DATE	SHEET NUMBER	DESCRIPTION

CLIENT
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BY PHD N 148 84 RD 15405 854-978

PROJECT LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

LANDSCAPE IMPROVEMENT PLANS
LOT 7

REVISIONS
NO | DESCRIPTION | BY | DATE

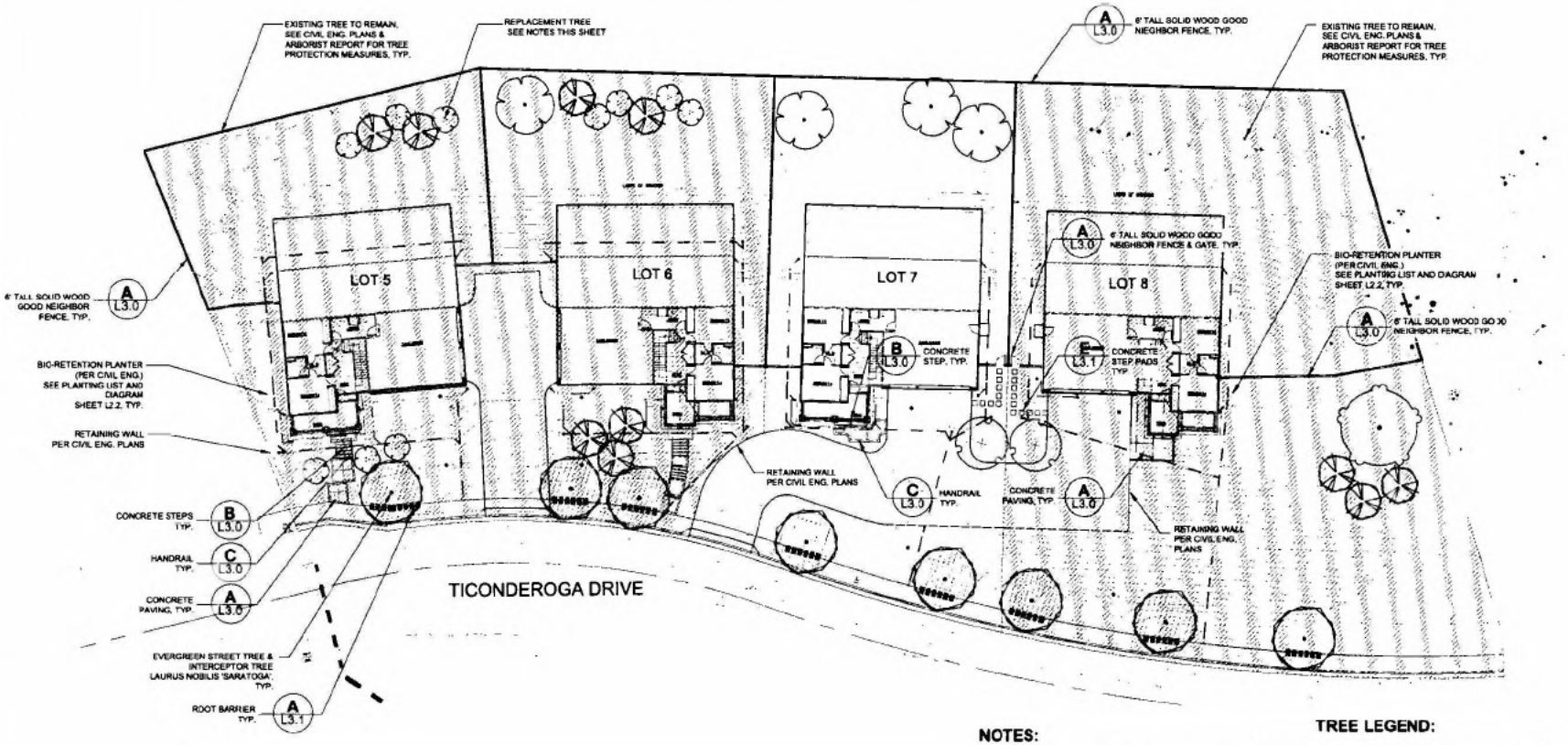
SHEET TITLE
COVER SHEET

SCALE
NTS

DRAWN DATE
02/18/18

PROJECT NO
Y0219

SHEET NO
L0.0



NOTES:

1. NO PLANTING OR IRRIGATION SHALL OCCUR UNDER THE CANOPIES OF THE EXISTING OAK TREES. FIELD ADJUST NEW REPLACEMENT TREES AS NEEDED.

TREE LEGEND:

	STORMWATER CREDIT/EVERGREEN INTERCEPTOR TREES LAURUS NOBILIS 'SARATOGA' 11 TOTAL WITHIN 25' OF IMPERVIOUS SURFACE
	PROPOSED REPLACEMENT TREES - SEE L2.2 FOR COMPLETE TREE SPECIES/LEGEND TOTAL SITE: 23 REPLACEMENT TREES REQUIRED 33 REPLACEMENT TREES PROVIDED LOT 7: 4 REPLACEMENT TREES PROVIDED
*	EXISTING TREES TO REMAIN, TYP. SEE CIVIL PLANS AND ARBORISTS REPORT FOR TREE PROTECTION MEASURES.

0 8 16 32 64

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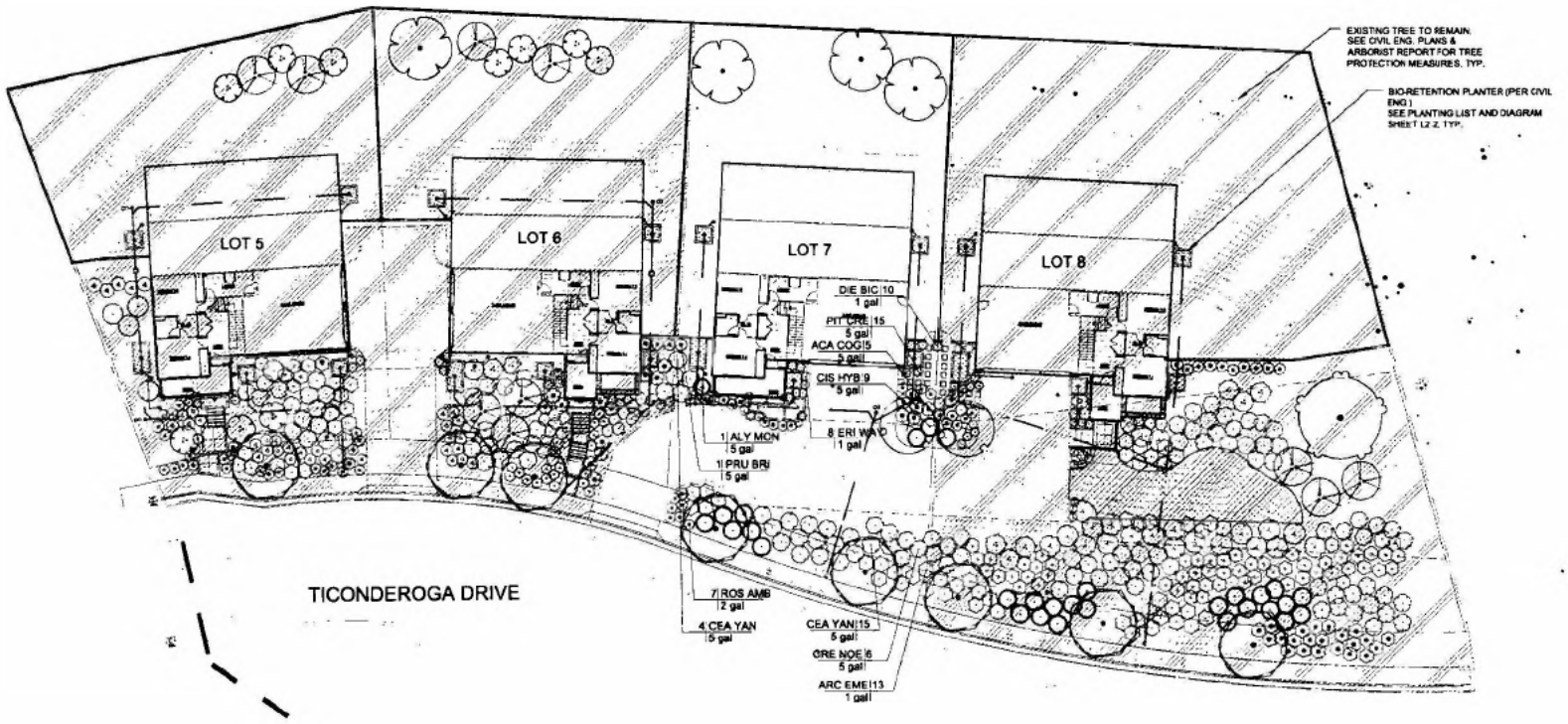
94103 (415) 626-8474

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 7

DATE
BY
DESCRIPTION

SHEET TITLE
CALLOUT & LAYOUT PLAN
SCALE
1/16" = 1'-0"
ISSUE DATE
02/18/16
PROJECT NO
V0219
SHEET NO
L1.0



PLANTING NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. **NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY.**
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.
4. IRRIGATION DRIP SYSTEM SHALL BE ADJUSTED AS REQ'D FOR OPTIMUM WATER SAVINGS AND NO RUN OFF.

EROSION CONTROL NOTES:

1. LEAVE EROSION CONTROL JUTE MESH ON ALL SLOPES. CUT HOLES FOR NEW SHRUBS AS NEEDED.

EXISTING OAK TREE NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY.
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.

SAN MATEO COUNTY WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE STATEMENT:

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN."

ZIKI ABED - LICENSED LANDSCAPE ARCHITECT

0 8 16 32 64

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850 Bigway, Suite 150
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VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.
[illegible]

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO
CALIFORNIA

DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 7

REVISIONS NO	DESCRIPTION	BY	DATE

SHEET TITLE
PLANTING PLAN

SCALE
1/16" = 1'-0"

ISSUE DATE
02/18/16

PROJECT NO.
V0219

SHEET NO.
L2.0

BIO-RETENTION PLANTERS ON THE
NORTH & NORTHEAST SIDES OF BUILDINGS

5 GAL	CORNUS SERICEA "ISANTI"	QTY: 1
1 GAL	CAREX PRAEGRACILUS	QTY: CAN-TO-CAN FULL

ALTERNATIVE:

5 GAL	CARPENTERIA CALIFORNICA	QTY: 1
1 GAL	CAREX PRAEGRACILUS	QTY: CAN-TO-CAN FULL

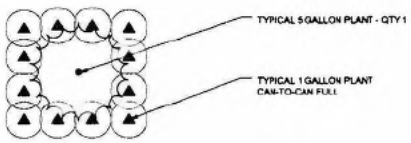
BIO-RETENTION PLANTERS ON THE
SOUTH & SOUTHWEST SIDES OF BUILDINGS

5 GAL	MUHLENBERGIA RIGENS	QTY: 1
1 GAL	MIMULUS AURANTIACUS & CAREX PRAEGRACILUS (ALTERNATING)	QTY: CAN-TO-CAN FULL

NOTES:

1. CONTRACTOR TO HAND WATER PLANTS IN BIO-RETENTION PLANTERS UNTIL ESTABLISHED.
2. SEE CIVIL ENGINEER'S PLANS AND SPECIFICATIONS FOR BIO-RETENTION SOIL MIX.
3. PLANT SPECIES LISTED ABOVE ARE APPROVED FOR USE IN BIO-PLANTERS PER THE SAN MATEO COUNTY STORMWATER MEASURES PLANT LIST

PLANTING DIAGRAM:



PLANTING LIST

TREES	CODE	BOTANICAL NAME	COMMON NAME	CONT	QTY	REMARKS
	ARB HYB	Arbutus x 'Marina'	Arbutus Standard	15 gal	2	Replacement Tree
	ARC MAN	Arctostaphylos manzanita MULTI-TRUNK	Manzanita	15 gal	10	Multi-Trunk Replacement Tree
	CER OCC	Cercis occidentalis - MULTI-TRUNK	Western Redbud	15 gal	15	Multi-trunk Replacement Tree
	LAU SAR	Laurus nobilis 'Saratoga'	Sweet Bay	15 gal	12	Street Tree/Interceptor Tree Evergreen
	QUE AGR	Quercus agrifolia	Coast Live Oak	15 gal	1	Replacement tree
	SAM MEX	Sambucus mexicana - MULTI-TRUNK	Mexican Elderberry	15 gal	5	Multi-Trunk Replacement tree

PLANTING LIST (cont.)

SHRUBS	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
	ACA COG	Acacia cognata 'Cousin Itt'	River Wattle	5 gal	17
	ALY MON	Alyogyne huegelii 'Monterey Bay'	Blue Hibiscus	5 gal	11
	ARB ELF	Arbutus unedo 'Elfin King'	Dwarf Strawberry Tree	5 gal	8
	ARC EME	Arctostaphylos x 'Emerald Carpet'	Emerald Carpet Manzanita	1 gal	121
	CEA YAN	Ceanothus griseus horizontalis 'Yankee Point'	California Lilac	5 gal	100
	CEA CON	Ceanothus x 'Concha'	California Lilac	5 gal	7
	CIS LAD	Cistus ladanifer	Crimson Spot Rockrose	5 gal	31
	CIS PUL	Cistus pulverulentus 'Sunset'	Rockrose	5 gal	34
	CIS PRO	Cistus salvifolius 'Prostratus'	Sageleaf Rockrose	5 gal	54
	CIS HYB	Cistus x hybridus	White Rockrose	5 gal	58
	CIT MEY	Citrus x meyeri	Meyer Lemon	5 gal	3
	DIE BIC	Dietes bicolor	Fortnight Lily	1 gal	47
	ERI WAY	Erigeron glaucus 'Wayne Roderick'	Seaside Daisy	1 gal	36
	GRE NOE	Grevillea x 'Noelii'	Grevillea	5 gal	45
	LAV ASS	Lavatera assurgentiflora	Mallow	5 gal	9
	PEN FAR	Pennisetum x 'Fairy Tails'	Evergreen Fountain Grass	5 gal	12
	PIT TEN	Pittosporum tenuifolium 'Marjorie Channon'	Tawhiwhi	5 gal	30
	PIT CRE	Pittosporum tobira 'Cream De Mint' TM	Cream De Mint Dwarf Mock Orange	5 gal	15
	PIT WHE	Pittosporum tobira 'Wheelers Dwarf'	Wheeler's Dwarf Mock Orange	5 gal	34
	PRU BRI	Prunus caroliniana 'Bright 'N Tight' TM	Bright 'N Tight Carolina Laurel	5 gal	44
	RHA MOU	Rhamnus californica 'Mound San Bruno'	California Coffeeberry	5 gal	120
	RHA SEA	Rhamnus californica 'Seaview'	California Coffee Berry	5 gal	22
	ROS AMB	Rosa x 'Flower Carpet Amber'	Amber Carpet Rose	2 gal	65
	ROS RED	Rosa x 'Flower Carpet Red'	Rose	2 gal	35
	WES MOR	Westringia fruticosa 'Morning Light'	Morning Light Coast Rosemary	5 gal	11

GRASSES	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
	FES IDA	Festuca idahoensis	Idaho Fescue	1 gal	64

GROUND COVERS	CODE	BOTANICAL NAME	COMMON NAME	CONT	SPACING	QTY
	CAR PAN	Carex pansa	Sanddune Sedge	4" pot	8" o.c.	13 sf

CHAMBERLAIN GROUP
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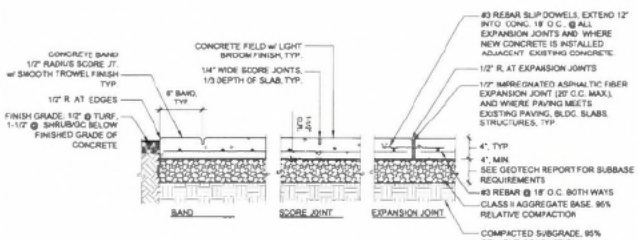
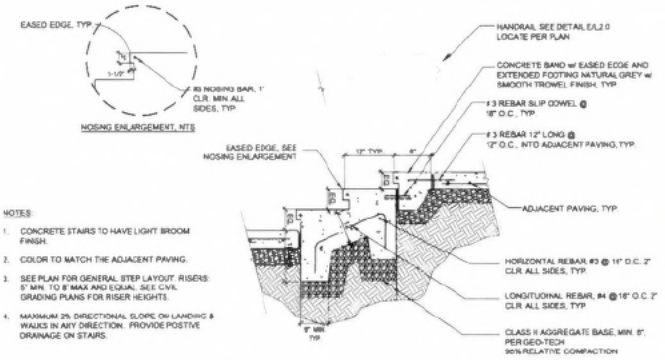
81 84TH ST., SAN FRANCISCO, CA
(P) (415) 974-1400 (F) (415) 974-1408

PROJECT ADDRESS
HIGHLAND ESTATES
SAN MATEO
CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 7

PLANTING LEGEND
SCALE: NTS
ISSUE DATE: 02/18/18
PROJECT NO: VD219
SHEET NO: L2.1



A CONCRETE PAVING
1" = 1'-0"



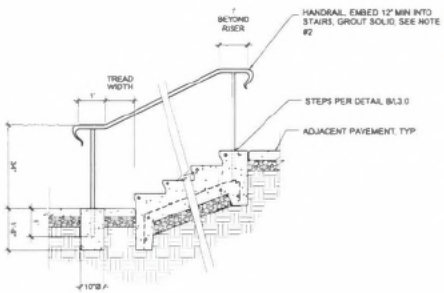
NOTES:

1. CONCRETE STAIRS TO HAVE LIGHT BROOM FINISH.
2. COLOR TO MATCH THE ADJACENT PAVING.
3. SEE PLAN FOR GENERAL STEP LAYOUT. RISERS: 5" MIN. TO 8" MAX AND EQUAL. SEE CIVIL GRADING PLANS FOR RISER HEIGHTS.
4. MAXIMUM 2% DIRECTIONAL SLOPE ON LANDING & WALKS IN ANY DIRECTION. PROVIDE POSITIVE DRAINAGE ON STAIRS.

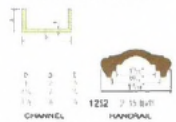
B CONCRETE STEPS
3/4" = 1'-0"

CONCRETE NOTES:

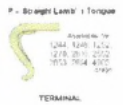
1. SCORING PATTERN TO MEET ALL ACI INTERNATIONAL GUIDELINES.
2. ALL FORMWORK/SCORING/PROPOSED JOINT SPACING TO BE APPROVED AND REVIEWED BY OWNERS' REPRESENTATIVE PRIOR TO POURING.
3. ALL SCORING/CONTRACTION JOINTS TO BE MINIMUM 1/3 DEPTH OF SLAB.
4. DISTANCE BETWEEN CONTRACTION JTS TO BE MAXIMUM 24 TIMES SLAB THICKNESS. ALL CONTRACTION JTS TO BE CONTINUOUS,NOT STAGGERED OR OFFSET. REFER TO ACI INTL CCS-1 SERIES GUIDELINES FOR ALL CONCRETE WORK. ANY DISCREPANCIES WITH DRAWINGS TO BE BROUGHT TO ATTENTION OF OWNER/ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
5. CONCRETE PANELS TO BE AS SQUARE AS PRACTICAL. NEVER MAKE LONG SIDE MORE THAN 1-1/2 TIMES LENGTH OF SHORT SIDE. NO ONE PANEL TO BE MORE THAN 150 SQ. FT.
6. INSTALL EXPANSION JOINTS WHERE NEW PAVING MEETS EXISTING PAVING WALLS, CURBS, FOUNDATIONS, OR OTHER FIXED OBJECTS, AND CHANGES IN WALK DIRECTIONS.
7. CONCRETE COLOR TO BE NATURAL GRAY.
8. BROOM FINISH SHALL BE PERPENDICULAR TO PATH OF TRAVEL.
9. CONTRACTOR SHALL COORDINATE INSTALLATION OF REBAR SLIP DOWELS WHERE DRIVEWAY MEETS GARAGE CONCRETE PAD WITH OWNER'S REPRESENTATIVE AND PROJECT STRUCTURAL ENGINEER. DOWELS SHALL BE #4 REBAR SPACED 24" O.C. EXTENDING 12" INTO DRIVEWAY AND GARAGE PAD, OR AS SPECIFIED BY STRUCTURAL ENGINEER. CONTRACTOR SHALL ONLY INSTALL REBAR DOWELS IF APPROVED BY OWNER'S REPRESENTATIVE AND PROJECT STRUCTURAL ENGINEER. SUBMIT TO OWNER'S REPRESENTATIVE PROPOSED DOWEL LOCATIONS.
10. FOR ALL PAVING DETAILS SHOWN, THE PAVING PROFILE, AGGREGATE, SUBBASE PREPARATION & COMPACTION PER GEOTECH ENGINEER, TYP. PROFILES ARE SHOWN FOR DESIGN INTENT & BIDDING PURPOSES ONLY. SEE GEOTECH REPORT FOR PAVING & SUBBASE REQUIREMENTS.



HANDRAIL, CHANNEL & POST



HANDRAIL MAKE AND MODEL



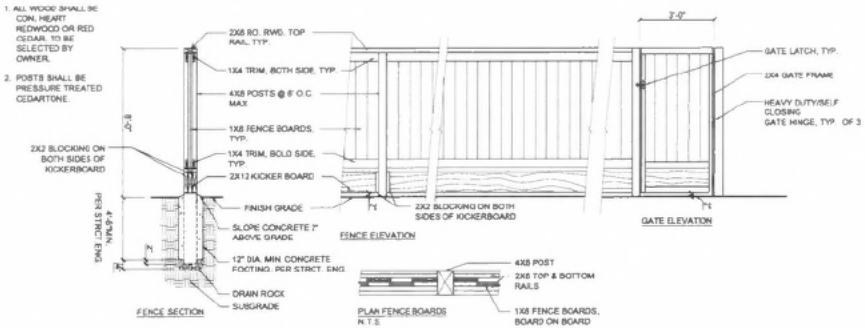
HANDRAIL NOTES:

1. HANDRAILS TO BE 1-9/16" MODEL H2901 ALUMINUM HANDRAIL WITH LAMBS TONGUE TERMINUS AS SHOWN. ALUMINUM CHANNEL SHALL BE MODEL C2100512. POSTS SHALL BE 1" SQUARE STEEL BAR WELDED TO BASE OF CHANNEL.
2. PRIME AND PAINT WITH ZINC-RICH PRIMER AND 2 COATS ENAMEL. COLOR TO BE DARK BRONZE. SUBMIT PAINT SAMPLE TO OWNER FOR APPROVAL.
3. AVAILABLE THROUGH R&B WAGNER, INC. (844) 243-6914.

C HANDRAIL
1/2" = 1'-0"

NOTES:

1. ALL WOOD SHALL BE CDN. HEART REDWOOD OR RED CEDAR, TO BE SELECTED BY OWNER.
2. POSTS SHALL BE PRESSURE TREATED CEDARTONE.



D 6' TALL WOOD FENCE & GATE
NTS

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855 Brown, Suite 350
San Carlos, CA 94070
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800.227.2600

VAN DORN ABED
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39 West Mission Street, Suite 3
Santa Barbara, California 93101
(805) 884-0678

PROJECT LOCATION
HIGHLAND ESTATES
SAN MATEO
CALIFORNIA

LANDSCAPE IMPROVEMENT PLANS
LOT 7

NO.	DESCRIPTION	BY	DATE

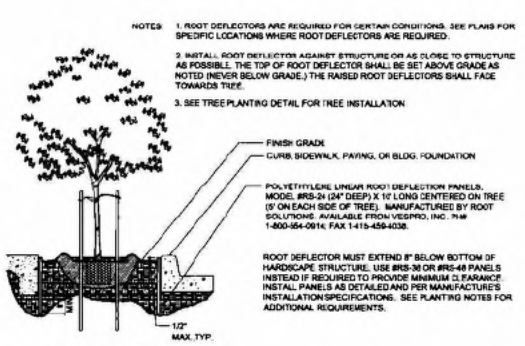
SHEET TITLE
LANDSCAPE DETAILS

SCALE
AS NOTED

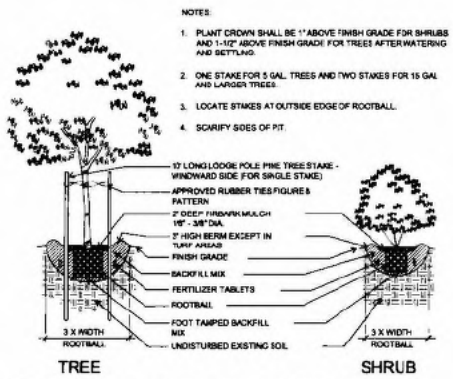
ISSUE DATE
02/18/16

PROJECT NO.
V0219

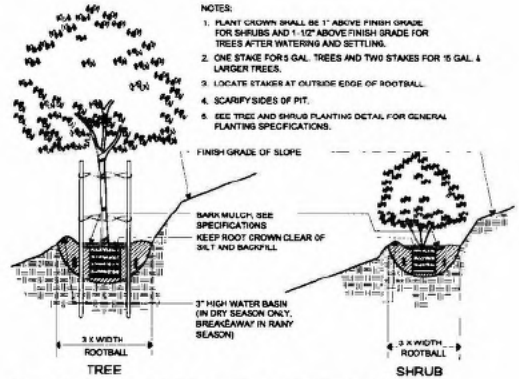
SHEET NO.
L3.0



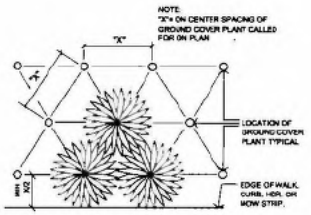
A ROOT DEFLECTOR
NTS



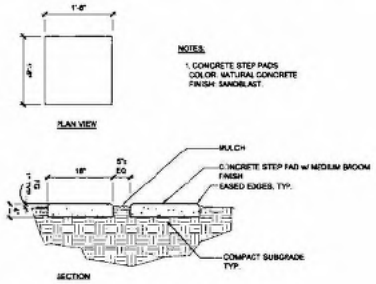
B TREE AND SHRUB PLANTING
NTS



C HILLSIDE TREE AND SHRUB PLANTING
NTS



D GROUNDCOVER PLANTING
NTS



E CONCRETE STEP PADS
3/4" = 1'-0"

OWNER:
CRAMER/ABAN GROUP
655 Ygnacio Valley Road, Suite 250
San Carlos, CA 94070
(650) 960-5562

800.227.2600

VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.

PROJECT MANAGER: MW
DRAWN BY: MW
CHECKED BY: MW

PROJECT ADDRESS AND LOCATION:
HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
DRAWING TITLE:
LANDSCAPE IMPROVEMENT PLANS
LOT 7

NO.	REVISIONS	BY	DATE

SHEET TITLE:
LANDSCAPE DETAILS

SCALE: AS NOTED
ISSUE DATE: 02/16/16
PROJECT NO.: VC219
SHEET NO.: L3.1

GENERAL NOTES:

1. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC., SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE, UNLESS OTHERWISE NOTED. AVOID ANY CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING AND ARCHITECTURAL FEATURES.
2. CONTRACTOR SHALL PERFORM PRESSURE TESTS (STATIC & DYNAMIC) AND FLOW TESTS (GPM) AT POINT OF CONNECTION (P.O.C.) PRIOR TO BEGINNING WORK. SEE IRRIGATION NOTES FOR PRESSURE AND FLOW TEST REQUIREMENTS AND PROCEDURES. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CORRECTIVE MEASURES REQUIRED TO IRRIGATION SYSTEM, AT NO ADDITIONAL COST TO THE OWNER, IF IRRIGATION SYSTEM IS INSTALLED WITHOUT REQUIRED TESTS, AND DISCREPANCIES IN PRESSURE AND FLOW AT THE P.O.C. ARE DISCOVERED THAT PREVENT THE IRRIGATION SYSTEM FROM FUNCTIONING CORRECTLY.

WATER PRESSURE AT P.O.C. NOTES:

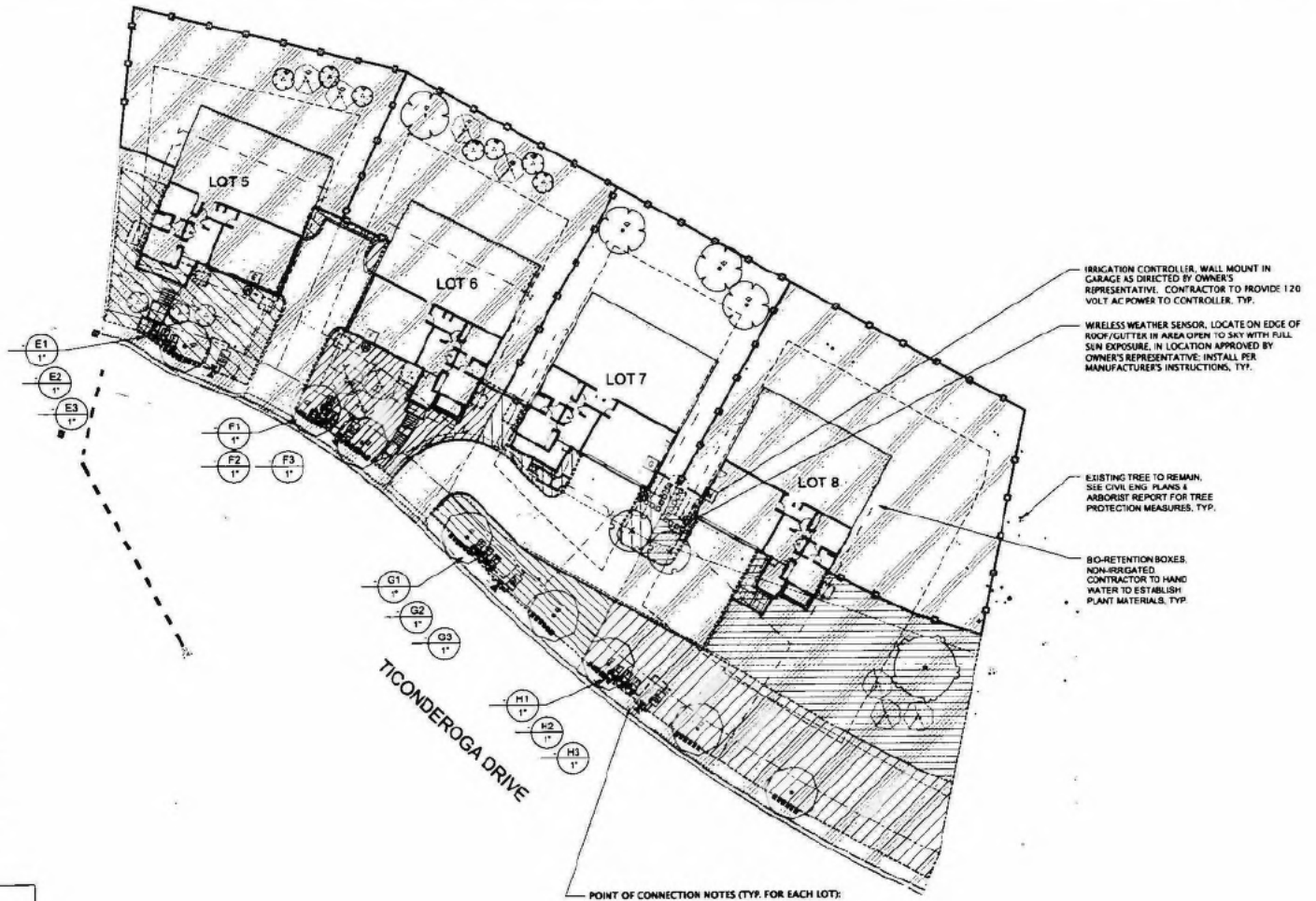
1. CONTRACTOR SHALL VERIFY WATER PRESSURE ON SITE. IF PRESSURE IS 65 PSI OR HIGHER AT P.O.C., CONTRACTOR SHALL INSTALL A PRESSURE REDUCER AS SHOWN, AND SET PRESSURE REDUCER TO 65 PSI. PRESSURE REDUCER SHALL BE 1-1/4" WILKINS LEAD FREE 500XL-975BR (INCLUDES PRESSURE REDUCER & FILTER). SEE IRRIGATION DETAILS.
2. IF PRESSURE IS LESS THAN 65 PSI OMIT PRESSURE REDUCER.
3. IF PRESSURE IS LESS THAN 55 PSI NOTIFY OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT FOR CORRECTIVE MEASURES.

SLEEVE NOTES:

1. FOR DESIGN CLARITY, NOT ALL SLEEVES SHOWN. CONTRACTOR SHALL SLEEVE ALL PIPES CROSSING UNDER PAVED AREAS.
2. WHERE LATERAL LINES WITH SLEEVES CROSS ROADS OR DRIVEWAYS, CONTRACTOR SHALL INSTALL ONE SPARE 4" CLASS 315 PVC SLEEVE.
3. WHERE MAIN LINES WITH SLEEVES CROSS ROADS OR DRIVEWAYS, CONTRACTOR SHALL INSTALL ONE SPARE 6" CLASS 315 PVC SLEEVE.

SPECIAL REQUIREMENTS AT EXISTING TREES

1. ALL UNDERGROUND IRRIGATION LINES SHALL BE ROUTED OUTSIDE THE DRIP LINES WHERE POSSIBLE.
2. IF UNDERGROUND IRRIGATION LINES MUST TRAVERSE THROUGH THE DRIP LINE AREA, LOCATION OF IRRIGATION LINES SHALL BE REVIEWED WITH PROJECT ARBORIST AND MODIFIED AS NEEDED PRIOR TO INSTALLATION. WHEN LINES ARE PROPOSED WITHIN A DISTANCE FROM THE TRUNKS OF FIVE (5) TIMES THEIR DIAMETER, THE PROJECT ARBORIST MAY RECOMMEND THAT A PNEUMATIC AIR DEVICE IS USED TO EXCAVATE THE TRENCH.



IRRIGATION CONTROLLER, WALL MOUNT IN GARAGE AS DIRECTED BY OWNER'S REPRESENTATIVE. CONTRACTOR TO PROVIDE 120 VOLT AC POWER TO CONTROLLER. TYP.

WIRELESS WEATHER SENSOR, LOCATE ON EDGE OF ROOF/GUTTER IN AREA OPEN TO SKY WITH FULL SUN EXPOSURE, IN LOCATION APPROVED BY OWNER'S REPRESENTATIVE. INSTALL PER MANUFACTURER'S INSTRUCTIONS, TYP.

EXISTING TREE TO REMAIN. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.

BIO-RETENTION BOXES. NON-IRRIGATED. CONTRACTOR TO HAND WATER TO ESTABLISH PLANT MATERIALS, TYP.

POINT OF CONNECTION NOTES (TYP. FOR EACH LOT):

P.O.C. IS AT 1" HOUSE WATER METER, SEE P.O.C. DETAIL. WATER METER BY OTHERS, SEE CIVIL PLANS. FIELD VERIFY METER LOCATION & SIZE. CONTRACTOR SHALL VERIFY STATIC & DYNAMIC PRESSURE AND FLOW RATES AVAILABLE AT P.O.C. PRIOR TO BEGINNING WORK (SEE IRRIG. SPECIFICATIONS). SUBMIT TO OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT RESULTS OF PRESSURE AND FLOW TESTS PRIOR TO BEGINNING WORK. IF THERE ARE DISCREPANCIES OF 10 PSI OR MORE OR FLOW RATES LOWER THAN STATED IRRIGATION DEMAND ON PLANS, SYSTEM MAY NOT PERFORM CORRECTLY. SEE "WATER PRESSURE AT P.O.C. NOTES" & IRRIGATION SPECS FOR PRESSURE AND FLOW TEST REQUIREMENTS AND PROCEDURES.

IRRIGATION DEMAND: 6 GPM @ 65 PSI

SEE "WATER PRESSURE AT P.O.C. NOTES" FOR PRESSURE REDUCER INSTALLATION REQUIREMENTS.

EXISTING OAK TREE NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY.
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.

NOTE: CONTRACTOR SHALL FIELD STAKE ALL TREE LOCATIONS PRIOR TO INSTALLATION OF IRRIGATION SYSTEM TO AVOID CONFLICTS WITH TREE LOCATIONS AND MAIN LINES/LATERAL LINES. IRRIGATION LATERAL LINES AND MAIN LINES SHALL BE LOCATED 3' MINIMUM HORIZONTALLY FROM TREE LOCATIONS. FIELD ADJUST ROUTING OF IRRIGATION LINES AS NECESSARY TO MEET MINIMUM CLEARANCE NOTED ABOVE.

SAN MATEO COUNTY WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE STATEMENT:

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN."

ZEKI ABED - LICENSED LANDSCAPE ARCHITECT _____

0 10 20 40 60

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San Carlos, CA 94070
(650) 595.5582

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VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.
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PROJECT MANAGER
DRAWN BY
CHECKED BY

PROJECT INFORMATION
HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
LANDSCAPE IMPROVEMENT PLANS
LOT 7

NO.	REVISIONS	DATE
1		
2		
3		

SHEET TITLE
IRRIGATION PLAN

SCALE
1" = 20'-0"
DATE
02/18/18
PROJECT NO.
V0819
SHEET NO.
L4.0

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
△	PVC lateral line to drip area with Rainbird Sxx-dist emitter units. Route PVC lateral line thru drip area and install required quantity of Octabubblers necessary to irrigate plants in the drip area.
▽	Rain Bird XBT-6 Six multi-outlet drip emitter/bubbler Six-Outlet, Pressure Compensating, with 1.0 GPH Black Drip Emitters at each emitter outlet. Comes with 1/2" FPT Inlet x Barb Outlet. Install DBC-025 Diffuser Bug Caps at end of each emitters 1/4" distribution line. Install 4 (four) 1/4" distribution lines with Diffuser Bug Caps at 5Gal & 15Gal trees; install 6 (six) 1/4" distribution lines with Diffuser Bug Caps at 24"Box trees. Plug unused emitter outlets.
NOTE: DRIP AREA PATTERNS VARY FOR DESIGN CLARITY	Area to Receive Drip Emitters Rain Bird XB0601-PRS wXB-10 Xerl-Bird 6 Multi Outlet Emission Device with Xerl-Bug emitters at 1gph each, with built-in 200 mesh filter. Pressure Regulator in-stem. Emitter Notes: 1 gal plant to receive 1 of OCT8-16 emitter. 5 gal plant to receive 2 of OCT8-16 emitters. 15 gal plant to receive 4 of OCT8-16 emitters. 24"box plant to receive 6 of OCT8-16 emitters. 2 gal plant to receive 1 of OCT8-16 emitter.
A1 A1 A1 A1 A1 A1	CONTROLLER VALVE CIRCUIT NO.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
◉	Irritrol 700 with DMR-106 Electric Remote Control Valve, with Omni-Reg 5-100psi regulator. Set pressure regulator at 40 PSI.
⧗	Nibco T-113-LF Lead free Class 125 bronze gate shut off valve with wheel handle, same size as mainline pipe diameter at valve location Size Range - 1/4" - 2"
BF	Febco LF825Y 1" Lead Free Reduced Pressure Backflow Preventer
A	Irritrol TC-06-MOD-R Hybrid Controller, 6- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
B	Irritrol TC-06-MOD-R Hybrid Controller, 6- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready
C	Irritrol TC-06-MOD-R Hybrid Controller, 6- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
D	Irritrol TC-06-MOD-R Hybrid Controller, 6- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
W	Irritrol DL Wireless Weather Sensing System. 100-Receive and Transmitter Kit. Outdoor sensor, and receiver attaches to Irritrol Controller. Compatible with Rain Bird-ET, Total Control-R, KwikDial, adn MC-E controllers. Monitors weather data.
F	Amiad 150 mesh Y-Filter with flush valve, or approved equivalent, at drip remote control valves
———	Irrigation Lateral Line: PVC Class 200 SDR21 PVC Class 200 irrigation pipe. Only lateral transition pipe sizes 1" and above are indicated on the plan, with all others being 3/4" in size. 12" min. burry.
— — — —	Irrigation Mainline: PVC Schedule 40 PVC Schedule 40 irrigation pipe. 18" min. burry.
- - - - - - - -	Pipe Sleeve: PVC Class 315 SDR 13.5 24" MIN. BURRY.

Valve Callout
- Valve Number
- Valve GPM
- Valve Size

IRRIGATION RUN TIME SCHEDULE NOTES:

1. IRRIGATION CONTROLLER RUN TIMES ARE NOT INCLUDED ON LANDSCAPE PLANS. IRRIGATION CONTROLLERS ARE ET BASED SMART CONTROLLERS THAT GENERATE OPTIMUM RUN TIME SCHEDULES BASED UPON LOCAL WEATHER CONDITIONS.
2. CONTROLLERS ARE INITIALLY PROGRAMMED WITH IRRIGATION SYSTEM COMPONENT INFORMATION, PLANT MATERIAL WATER USE REQUIREMENTS, SOIL TYPE, AND LOCAL MICRO CLIMATIC INFORMATION. CONTROLLERS AUTOMATICALLY GENERATE RUN TIME SCHEDULES FROM THIS INFORMATION. EACH DAY CONTROLLERS RECEIVES LOCAL WEATHER CONDITION DATA WIRELESS WEATHERS SENSORS, AND AUTOMATICALLY ADJUST THEIR WATERING SCHEDULES FOR OPTIMUM WATER CONSERVATION. EACH CONTROLLER HAS IT'S OWN WIRELESS WEATHER SENSOR, LOCATED ON-SITE.

IRRIGATION SPECIFICATIONS:

1. Irrigation system shall be installed in conformance with all applicable local codes and ordinances by experienced workmen and a licensed Landscape Contractor who shall obtain all necessary permits and pay all required fees.
2. Prior to the start of construction, the Contractor shall verify with the City, Water District, and/or other governing agency(s) if a reclaimed water source will be available in the future for connection to the irrigation system. If local regulations so stipulate, then the Contractor shall follow all requirements, specifications, construction details, codes, etc., for the installation of irrigation systems utilizing reclaimed water sources for irrigation of landscaping.
3. The Contractor shall be responsible for any damage to existing facilities caused by or during the performance of his work. All repairs shall be made at no cost to the Owner.
4. This design is diagrammatic: install parallel lines in a common trench with minimum horizontal distance of 4" and lines not one above the other. Snake pipe in trenches. All piping, valves, etc., shown within paved areas is for design clarification only and shall be installed in planting areas where possible. Avoid any conflicts between the irrigation system, planting and architectural features.
5. Do not willfully install the irrigation system as shown on the drawings when it is obvious in the field that obstructions, grade differences or differences in the area dimensions exist that might not have been considered in the engineering. Such obstructions or differences should be brought to the attention of the Owner's authorized representative. In the event this notification is not performed, the Contractor shall assume full responsibility for any revisions necessary.
6. It is the responsibility of the Contractor to familarize himself with all grade differences, location of walls, retaining walls etc. He shall coordinate his work with the General Contractor and other Subcontractors for the location and the installation of pipe sleeves through walls, under roadways, paving, structures, etc.
7. Due to the scale of the drawings, it is not possible to indicate all offsets, fittings, sleeves, etc., which may be required. The Contractor shall carefully investigate the structural and finished conditions affecting all of his work and plan his work accordingly, furnishing such fittings, etc. as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation system, planting, and architectural features.
8. Notify Landscape Architect of any other aspects of layout which will provide incomplete or insufficient water coverage of plant material and do not proceed until his instructions are obtained.
9. Electrical Contractor to supply 120 volt A.C. (2.5 AMP) service to controller location. Contractor to make final connection from electrical stub-out to controller. Paint conduit to controller with 2 coats Rustoleum brown paint if installed outdoors; color to be approved by Owner's representative. 120 volt A.C. J-Box to controller by others. All 120 volt A.C. and 24 volt connections to be made by Contractor.
10. Each controller shall have its own independant ground wire.
11. Program irrigation controller(s) to operate between the hours of 10:00 P.M. and 7:00 A.M.
12. Valve locations shown are diagrammatic. Install in ground cover/shrub areas.
13. Install valve boxes 12" from and perpendicular to walk, curb, building or landscape feature. At multiple valve box groups, each box shall be an equal distance from the walk, curb, lawn, etc., and each box shall be 12" apart. Short side of valve box shall be parallel to walk, curb, lawn, etc.
14. Install U.L. approved direct-burial wire #14 minimum and #14 common ground at 18" depth minimum. Splicing of 24 volt wires will not be permitted except in valve boxes. Leave a 24" coil of excess wire at each splice and 100 feet on center along wire run. Tape wire in bundles 10 feet on center. No taping permitted inside sleeves.
15. Install a spare control wire of a different color along the entire main line. Loop 36" excess wire into each single valve box and into one valve box in each group of valves.
16. Prior to trenching, call Underground Service Alert, 1-800-642-2444 to locate all cables, conduits, and other utilities and take proper precautions not to damage or disturb existing utilities.
17. All Main lines and Lateral lines under paving shall be in PVC sleeves which extend 12" into planting areas. All backfill shall be free of rocks greater than 1" diameter. For ring-tite PVC main line piping inside sleeves use 1120-315 PSI PVC plastic pipe with schedule 40 PVC couplings.
18. When applicable, Schedule 80, ASTM D2466 male adapters to be used where mainline connects to copper pipe service lines installed by others.
19. Copper pipe shall be joined to steel or cast iron pipe with a dielectric union.
20. In addition to the sleeves and conduits shown on the plans the Contractor shall be responsible for the installation of sleeves and conduits of sufficient size under all paved areas.
21. Locate quick coupling valve 12" from hardscape area.
22. The irrigation system design is based on the minimum operating Pressure (PSI) and Flow (GPM) shown on the irrigation drawings (see Irrigation Demand at P.O.C.). The Contractor shall verify the Static and Dynamic water pressure (PSI) and Flow Rate (GPM) at the point of connection (P.O.C.) prior to construction as follows:
    A. Static Pressure: take PSI reading at P.O.C. with no water flowing.
    B. Dynamic Pressure: Install at P.O.C. a pressure (PSI) and flow gauge (GPM) assembly of suitable size* to take flow (GPM) readings in the range of the stated Irrigation Demand for the irrigation system design. Open valve or meter at P.O.C. until GPM flow reading equals or exceeds irrigation GPM demand. Note dynamic pressure and flow readings. If the GPM flow does not equal or exceed the GPM demand, note highest flow reading possible.
    C. Readings shall be taken at the following times: 1PM, 5PM, 9PM, 1AM, 5AM, 9AM.
    * Irrigation systems with high irrigation demand GPM flow rates, will require large capacity test gauge assemblies.

Submit to Owner's Representative and Landscape Architect results of Pressure and Flow Tests prior to beginning work. Note any discrepancies of 10 PSI or more or flow rates lower than stated Irrigation Demand on plans to Owner's Representative and Landscape Architect. If there are discrepancies of 10 PSI or more or flow rates lower than stated Irrigation Demand on plans, system may not perform correctly - do not proceed with irrigation system installation until corrective measures are determined. Note, Contractor shall be responsible for any corrective measures required to the irrigation system, at no additional cost to the Owner, if irrigation system is installed without required tests, and discrepancies in Pressure and Flow at the P.O.C. are discovered that prevent the irrigation system from functioning correctly.

23. Meter(s) indicated on the Drawing(s) is supplied and installed by others, unless otherwise indicated. The Contractor is responsible for furnishing all proper fittings.
24. All irrigation piping shall be subjected to hydrostatic pressure tests as follows before backfilling trenches: Valves, pumps, and accurately calibrated recording gauges shall be installed in at least two places. Supply lines shall be tested at 125 psi for at least 4 hours with an allowable loss of 5 psi. Laterals lines shall be tested at the existing static psi for at least 1 hour with an allowable loss of 5 psi. Any leaks shall be corrected and piping re-tested until the system meet the requirements. The Contractor shall notify the Owner's Representative at least 3 days in advance of the time that the irrigation system piping is to be tested. Submit written test results to Owner's Representative and Landscape Architect.
30. Contractor to notify all local jurisdictions for inspection and testing of installed backflow prevention device.
31. The entire irrigation system shall be operating properly before any lawn or ground cover is planted.
32. The Contractor shall provide Owner with a clean set of marked prints of "RECORD DRAWINGS" drawings. Reference all trenches, valves, controllers, splice boxes, quick couplers, backflow preventers, water meters, with dimensions to nearest building or paving.
33. The Contractor shall guarantee the irrigation system will be free of defects of workmanship and materials for a period of one year. All repairs necessary shall be made at no cost to the Owner, with the exception of repairs and labor cost made necessary by vandalism.

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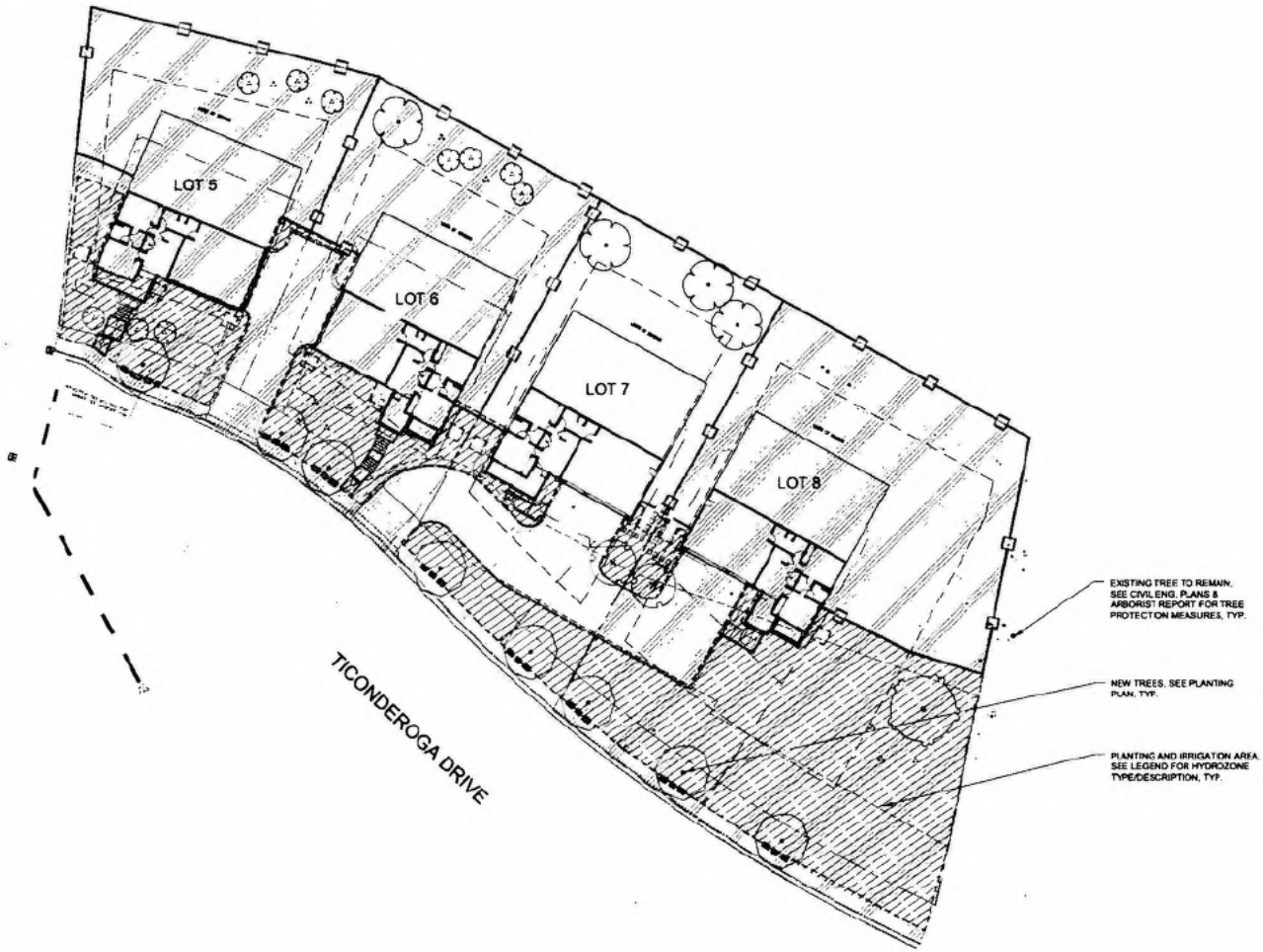
PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO
CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 7

NO.	DESCRIPTION	BY	DATE

SHEET TITLE
IRRIGATION LEGEND & SPECIFICATIONS
SCALE
NA
ISSUE DATE
02/18/16
PROJECT NO.
V0210
SHEET NO.
L4.1



HYRDOZONE AREA LEGEND

SYMBOL	HYDROZONE	DESCRIPTION	IRRIG. METHOD	LOT 5 SF	LOT 6 SF	LOT 7 SF	LOT 8 SF	LOT 9 SF	LOT 10 SF	LOT 11 SF	TOTAL AREA SF	%LANDSCAPE AREA
	1	LOW WATER USE, SUN EXPOSURE, DRIP IRRIGATED TREE, SHRUB & GROUND COVER AREAS	DRIP	2,458 SF +	2,051 SF +	2,111 SF +	9,853 SF +	3,379 SF +	3,039 SF +	2,752 SF =	25,643 SF	90.9%
	2	MEDIUM WATER USE, SHADE EXPOSURE, DRIP IRRIGATED TREE, SHRUB & GROUND COVER AREAS	DRIP	0 SF +	0 SF +	0 SF +	0 SF +	1,469 SF +	486 SF +	612 SF =	2,567 SF	9.1%
										TOTAL SITE (ALL LOTS) SF =	28,210 SF	100%

SAN MATEO COUNTY WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE STATEMENT:

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN."

ZIBI ABED - LICENSED LANDSCAPE ARCHITECT

0 10 20 40 60

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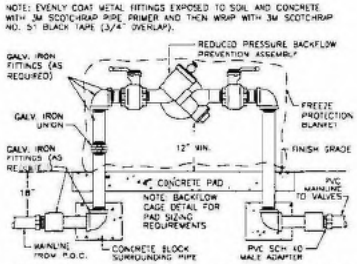
PROJECT MANAGER
DRAWN BY
CHECKED BY

PROJECT NAME
HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 7

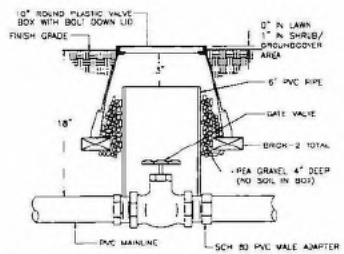
NO	DESCRIPTION	BY	DATE

SHEET TITLE
HYDROZONE PLAN

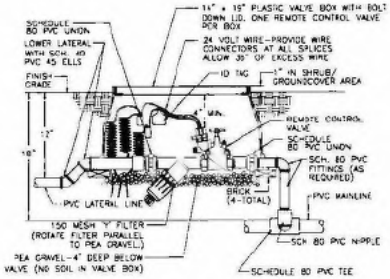
SCALE
1" = 20'-0"
ISSUE DATE
02/18/16
PROJECT NO.
V0219
SHEET NO.
L4.2



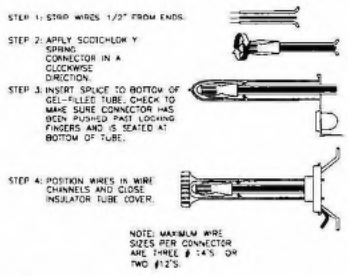
1 REDUCED PRESSURE BACKFLOW PREVENTER DETAIL
NOT TO SCALE



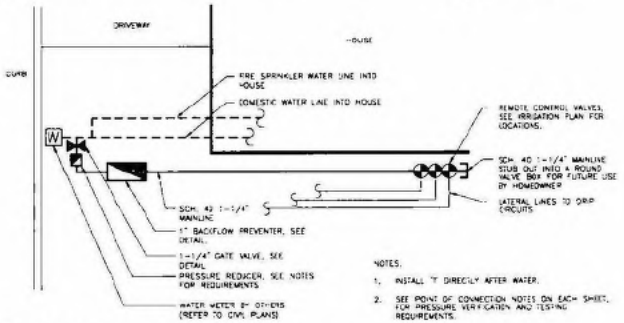
2 GATE VALVE DETAIL
NOT TO SCALE



3 REMOTE CONTROL VALVE & "Y" FILTER DETAIL
NOT TO SCALE



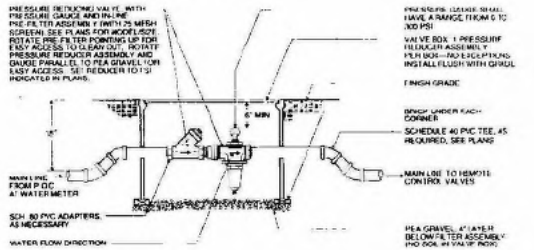
4 WIRE CONNECTION DETAIL
NOT TO SCALE



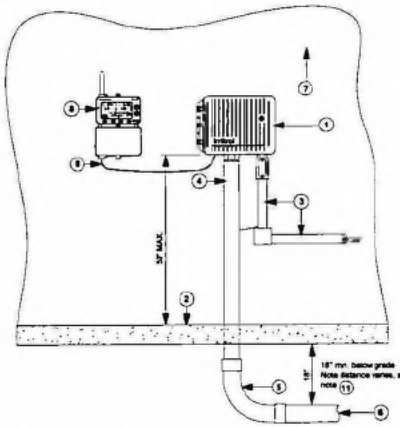
NOTES:
1. INSTALL "Y" DIRECTLY AFTER WATER.
2. SEE POINT OF CONNECTION NOTES ON EACH SHEET FOR PRESSURE VERIFICATION AND TESTING REQUIREMENTS.

5 IRRIGATION SYSTEM P.O.C. AT EACH LOT DETAIL
NOT TO SCALE

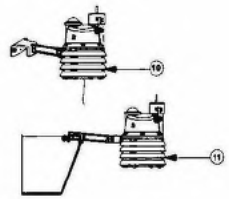
NOTES
PRESSURE REDUCER SHALL BE 1-1/4" LEAD FREE WILKINS 500XLYSBR (INCLUDES PRESSURE REDUCER & FILTER), SET AT 50 PSI. SEE NOTES ON IRRIGATION PLANS FOR INSTALLATION REQUIREMENTS.



6 PRESSURE REDUCER DETAIL
NOT TO SCALE

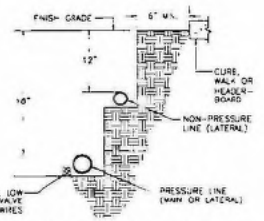


1. Irrigation controller. Install controller in location as directed by Owner's Representative.
2. Garage finish surface.
3. 1/2" UL approved electrical conduit, ring nut and junction box for 120V AC electrical power. Contractor to proved 120 volt AC electrical power to controller, see notes on Irrigation Plans.
4. PVC schedule 40 control wire conduit (size as required)
5. PVC sweep ell to conduit through bldg. to exterior planting area 18" below grade.
6. End conduit 12" beyond edge of bldg., 18" below grade.
7. Interior wall in garage area.
8. Climate Logic™ receiver module mounted near the compatible controller. Mount with screws at eye level.
9. Single connection cord plugged into controllers remote port.
10. Climate Logic™ weather sensor mounted outdoors on flat surface using screws, , see notes on Irrigation Plans.
11. Climate Logic™ weather sensor mounted on a rain gutter using QuickClip™ guttermount, see notes on Irrigation Plans.
11. Note: at lots where garage areas are elevated above grade, route conduit down side of bldg./structural piers out site where possible, to 18" below grade. Paint exposed conduit to match house color as directed by Owner's Representative.



NOTES
1. Irrigation controller is not shown on the irrigation plan. Irrigation controller to be installed in garage as directed by Owner's Representative.
2. 120 volt AC power to controller per Electrical Plans.
3. Wireless weather sensor unit to be installed on edge of bldg. in area open to sky with full sun exposure. In location approved by Owner's Representative. Locate sensor unit within radio communication range of controller.
4. All electrical work must conform to local codes. Refer to product literature for additional installation requirements.

7 IRRIGATION CONTROLLER & WIRELESS WEATHER SENSOR DETAIL
NOT TO SCALE



NOTES
1. TRENCHING AND BACKFILLING SHALL BE PER STANDARD SPECIFICATIONS.
2. MINIMUM BACKFILL RELATIVE COMPACTION SHALL BE 90%.
3. BUNDLE CONTROL WIRES TOGETHER AND TAPE AT 10' INTERVALS.
4. 4" MIN. HORIZONTAL DISTANCE BETWEEN PIPES IN COMMON TRENCH.
5. ALL PLASTIC IRRIGATION PIPING TO BE SNAKED IN TRENCHES.

8 IRRIGATION LINE TRENCHING
NOT TO SCALE

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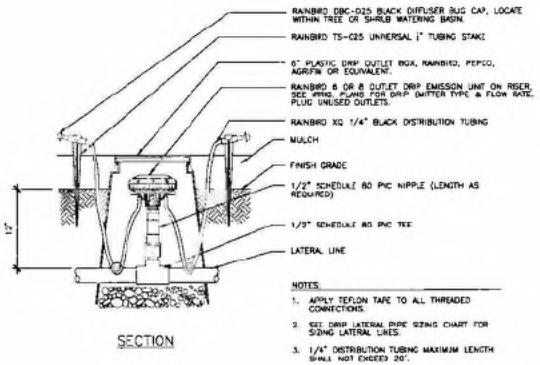
PROJECT MANAGER
DRAWN BY
CHECKED BY

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO, CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 7

NO.	DESCRIPTION	DATE
1		
2		
3		

SHEET TITLE
IRRIGATION DETAILS

SCALE
AS SHOWN
ISSUE DATE
02/18/16
PROJECT NO.
V9219
SHEET NO.
L4.3



SECTION

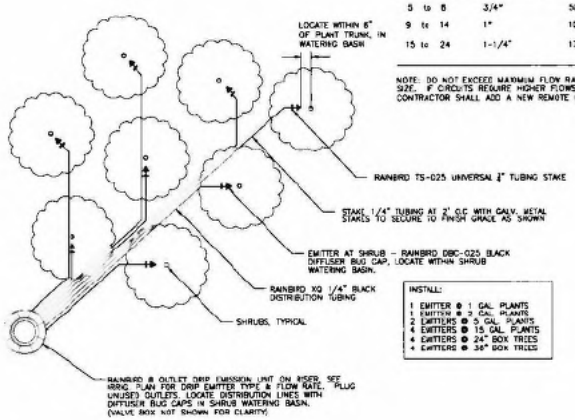
NOTES:

1. APPLY TEFLON TAPE TO ALL THREADED CONNECTIONS.
2. SEE DRIP LATERAL PIPE SIZING CHART FOR SIZING LATERAL LINES.
3. 1/4" DISTRIBUTION TUBING MAXIMUM LENGTH SHALL NOT EXCEED 20'.

DRIP SHRUB/GC LATERAL PIPE SIZING CHART

GPM FLOW RATES	SIZE OF CLASS 200 PVC PIPE	MAX. QUANTITY OF RAINBIRD 6-OUTLET DRIP EMISSION UNITS (WITH 1.0 GPM EMITTERS)
5 to 8	3/4"	58
9 to 14	1"	102
15 to 24	1-1/4"	178

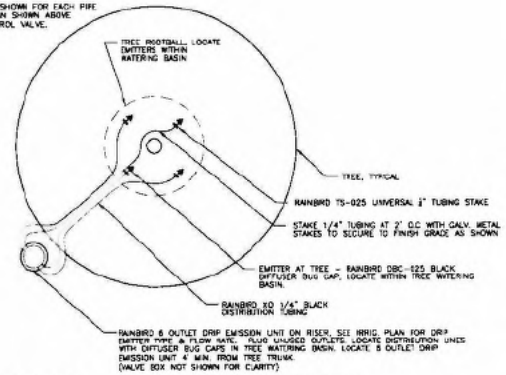
NOTE: DO NOT EXCEED MAXIMUM FLOW RATES SHOWN FOR EACH PIPE SIZE. IF CIRCUITS REQUIRE HIGHER FLOWS THAN SHOWN ABOVE CONTRACTOR SHALL ADD A NEW REMOTE CONTROL VALVE.



INSTALL:

1 EMITTER @ 1 GAL. PLANTS
1 EMITTER @ 2 GAL. PLANTS
2 EMITTERS @ 5 GAL. PLANTS
4 EMITTERS @ 15 GAL. PLANTS
4 EMITTERS @ 24" BOX TREES
4 EMITTERS @ 36" BOX TREES

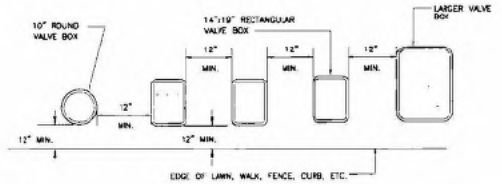
PLAN VIEW – RAINBIRD 8 OUTLET DRIP EMITTER LAYOUT @ SHRUBS/GROUND COVERS



PLAN VIEW – RAINBIRD 6 OUTLET DRIP EMITTER LAYOUT @ TREES

1 8-OUTLET & 6-OUTLET DRIP EMITTER ON RISER DETAIL

NOT TO SCALE



TOP VIEW

NOTES

1. CENTER BOX OVER VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA.
3. SET VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN AREA ONLY IF GROUND COVER/SHRUB AREA DOES NOT EXIST ADJACENT TO LAWN.
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOX EDGES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
6. VALVE BOXES SHALL HAVE BOLT DOWN LIDS WITH BOLTS INSTALLED.
7. VALVE BOXES SHALL BE CARSON, OR EQUIVALENT.

2 VALVE BOX LAYOUT DETAIL

NOT TO SCALE

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DRAWN BY
CHECKED BY
ISSUE BY

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 7

REVISIONS NO.	DESCRIPTION	BY	DATE

SHEET TITLE
IRRIGATION DETAILS

SCALE: AS SHOWN
ISSUE DATE: 02/18/18
PROJECT NO: V0219
SHEET NO: L4.4
OF

GENERAL NOTES:

1. Contractor shall verify all existing site conditions prior to beginning construction. Notify Owner's Representative of any discrepancies.
2. The Contractor shall provide all materials, labor and equipment to complete all landscape work as shown on the plans and specifications.
3. If there is a conflict with the utilities and the planting, the Owner's Representative is to be responsible for spotting new plant locations prior to the planting process.
4. The Contractor shall be responsible for any damage to existing utilities, pavement or improvements. All repairs shall be made at no expense to the Owner.
5. The Contractor shall notify the Owner's Representative prior to beginning construction and shall keep the Owner's Representative informed of progress of work throughout landscape construction.
6. All work shall be installed in conformance with all applicable local codes and ordinances by experienced workmen and a licensed Contractor who shall obtain all necessary permits and pay all required fees.
7. Any requirement in the Plans and / or Notes and Specifications shall be considered binding. In case of discrepancies, the Owner's Representative shall be contacted immediately.
8. It is the Contractor's responsibility to schedule regular site visits by the Owner's Representative/Landscape Architect throughout landscape construction, at the beginning of the maintenance period, and final site review will be required.
9. Execute weekly cleaning of the site throughout the contract period to remove all waste materials, rubbish, plant containers, etc.
10. See Civil Engineer's improvement plans for all general grading information and notes.
11. All written dimensions supersede scaled distances. All dimensions are taken from back of curb, face of building, face of wall finish or face of fence.
12. Upon award of bid and prior to any construction, the Contractor shall perform the Percolation and Soils Testing as specified in the Planting Notes, if these tests have not already been performed. If drainage is found to be insufficient, or soils test results identify conditions requiring extraordinary or corrective measures, the Contractor shall immediately alert the Owner's Representative and Landscape Architect of any such problems, for corrective action and/or additional drainage treatment.

GRADING NOTES:

1. See General Notes and Civil Engineer's Grading Plans for additional information.
2. Rough grading and site drainage shall have been completed prior to Contractor's work. Verify all existing site conditions and report any discrepancies to Owner's Representative.
3. Contractor shall be responsible for finish grading. Verify positive drainage at a minimum 2% slope in landscape areas away from buildings and paved surfaces. Shrub areas shall be 1-1/2" below top of adjacent paving, headers, or curbs. No low spots which hold standing water will be permitted.
4. All salvageable, clean top soil from areas to be paved shall be stockpiled to be used as fill in planting areas.

CONSTRUCTION NOTES:

1. Concrete work: Install concrete work as detailed. Layout of concrete work shall be as shown on construction plans and as specified below.
   A. Layout shall be approved by Owner's representative/Landscape Architect prior to concrete pour. Contact Owner's Representative two days in advance.
2. Paving installation
   B. Concrete Materials: For paving, concrete shall be a 5 sack mix producing concrete having a 28 day strength not less than 2500 psi. For walls concrete shall be 6 sack mix.
1. Portland cement: Conforming to ASTM. C150, Type I or II. Total alkali content not to exceed 0.60%. Deliver cement and all materials in labeled, unopened containers.
2. Form coatings: Standard product resin type sealer. Do not use form oil or any oil-bearing material.
3. Concrete aggregates: Conform to ASTM C33. Maximum 3/4" size aggregate.
4. Base course aggregates: Conform to ASTN C33. Maximum 3/4" size aggregate.
5. Water: Clean and potable.
6. Forms: Form material is Sub-contractor's option.
7. Admixtures or finish retardants. For workability, where approved by Owner's representative, and admixture may be added in accordance with manufacturer's recommendations. Obtain approval of material prior to use.
8. Expansion joint material: 3/8" thick pre-molded joint filler, conforming to ASTM 01751 or D1752.
9. Reinforcing steel:
   a. Bars: Deformed, intermediate grade, conforming to ASTM A615, Grade 40 for sizes #5 and smaller.
   b. Tie wire: Annealed copper-bearing steel wire, minimum 16 gauge.
10. Welded wire mesh: 6" x 6" x #10.
11. Liquid curing compound as required: Thompson's approved standard product fugitive resin type, or equal conforming to ASTM C309, free of wax or oil, compatible with subsequently applied finishes or coverings, not deleterious to bond of cementitious materials to aggregate.
12. Patching mortar: One part Portland cement or equal (part white and part grey adjusted to match color of surrounding concrete) and 2-1/2 parts sand with the least water required to produce a workable mass. Rework the mortar until it is the stiffest consistency that will permit placing.
   C. Concrete Installation:
1. Construct the subgrade true to grade and detail as shown. Compact subgrade to 90% maximum density at optimum moisture content.
2. Set forms with upper edges true to line and grade. Properly brace or tie together to maintain position and shape. Remove side forms not sooner than 12 hours after finishing has been completed. Form curves and straight sections for smooth and continuous lines. Secure Owner's representative's approval of subgrade compaction and moisture content and form alignment prior to pouring concrete.
3. Embedded items: Do not place any concrete until all inserted items such as sleeves, anchor bolts, wood, nails, dowels, etc. are installed in their proper locations, secured against displacement, cleaned, inspected and approved. Furnish ties and supports necessary to keep embedded items in place when concrete is placed.
4. Weather: Do not place concrete during rain unless approved measures are taken to prevent damage to concrete.
5. Deposit concrete evenly, consolidate with mechanical vibrators, particularly at side forms and strike off to indicated elevations and contour.
6. Concrete finishes shall be even surfaces of uniform texture and appearance, free of unsightly bulges, depressions and other imperfections and as follows:

   Medium broom finish: Broom with coarse bristled broom across width of flatwork to a uniformly roughened surface. Finished surface and edges shall be clean with uniform and reasonably straight lines. Submit Sample.

   Light broom finish: Broom with janitor's push broom type, with soft bristles, across width in a uniformly roughened surface. There shall be no deeply incised or obvious lines. Submit sample.

   Steel trowel finish: After floating, and no free water is evident and/or no cement sticks to the finger when touching slab, steel trowel and hand. All trowel marks eliminated. Final troweling done when a ringing sound is produced as the trowel is moved over the surface.

   Joints: Joints shall be tooled with one-quarter inch (1/4") radius edging tool or as shown on plans.

   Edges: Edge slabs one-half (1/2") inch radius, edge curbs and other structures three-quarters inch (3/4") radius unless otherwise shown.
7. Remove flange marks. Remove flange marks resulting from tooling of edges by carefully trowelling out, unless specifically detailed in plans.

CARPENTRY NOTES:

A. Wood materials: See details for type of wood for each item.

1. Wood shall be selected for straightness and smoothness, size and grade as shown in plans.
   B. Workmanship: Carefully plan and layout the work as required. Properly accommodate the work of other trades. Accurately saw-cut and fit lumber into the respective locations, true to line, grade, and level, as indicated or required, and permanently secure in proper position with spikes, nails, lag screws, bolts, hangers, or other fastenings to make the work substantial and rigid in all parts and connections.
   C. Connections: Make connections between members tight, accurate and secure. Place fastenings without splitting wood, predrill when required. Drill bolt holes same size as bolt diameter. Drill holes for lag screws same size as thread root diameter, and counterbore, same depth and diameter as shank. Turn lag screws into place, do not drive. Provide bolts and lag screws with washers under every head and nut bearing on wood. Tighten bolts and lag screws at installation, carefully retighten just prior to closing in, or at completion of project.
   D. Finishing: As per plan.
   E. Redwood header layout: All curved sections shall be smooth and continuous. Layout shall be approved by Owner's representative.
2. Hardware
   A. All metal bolts, rails, screws and other hardware shall be galvanized steel, sized as shown on the plans.
   B. All visible hardware shall be painted with two coats of black rustproof paint or to match architectural colors. Color to be approved by Owner's representative.
   C. All hardware for metal gates to be approved by Owner's representative.
3. Metal:
   A. Provide complete shop drawings for all metal fabrication.
   B. Fabricate all exterior steel work in shop, including all welding. All metal work shall conform to ASTM specifications. Miter corners and angles of moldings or frames unless otherwise noted.
   C. Shop primer: One coat of primer, semi-quick drying. Painting: After materials has been properly cleaned, apply shop prime coat of paint to all surfaces. Apply all paint in accordance with manufacturer's directions. Spot paint all abrasions and field connections after assembly.
   D. Installation: Set all work plumb, true, rigid and neatly trimmed out as detailed. Provide all necessary connections, anchor bolts etc. required to fit metal with other work.
   E. Protect all metal from damage to surface, profile or to shape from shop through construction to final acceptance of project.
   F. Color: Color to be approved by Owner's representative, submit sample for approval.
   G. All defective work shall be repaired or replaced as directed Owner's representative.
   H. All exposed site metal for utilities, irrigation etc., shall be painted with one coat brown rustproof paint.

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PROJECT MANAGER: JW
DESIGNED BY: JW
DRAWN BY: TG
CHECKED BY: JW

PROJECT NAME: HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
DRAWING TITLE: LANDSCAPE IMPROVEMENT PLANS
LOT 7

SHEET TITLE: LANDSCAPE NOTES & SPECIFICATIONS
SCALE:
DATE: 02/18/16
PROJECT NO: V0219
SHEET NO: L5.0

PLANTING NOTES:

1. See General Notes.

2. Submittals. Contractor shall submit the following items to Owner's Representative and Landscape Architect for review/approval prior to beginning planting installation operations:

   A. Soils tests: initial site soils test & post amendment installation test)

   B. Vendor data for landscape products, including: bark mulch, root barriers, fertilizers, soil amendments, and soil conditioners.

   C. Written results of percolation tests

3. The Contractor shall verify the availability of all landscape plants within 10 days following award of the contract. Discrepancies or other problems and all plant substitutions shall be resolved at this time. If a substitute is authorized by the Owner's Representative, it must be of the same size, value and quality as the original plant.

4. All trees and representative samples of shrubs/ground covers shall be inspected at the site for approval by the Owner's Representative and meet the following standards:

   A. Quality and size shall conform to the State of California Grading Code of Nursery Stock, No. 1 grade and to the current issue of the American Standard for Nursery Stock published by the American Association of Nurserymen. Use only nursery-grown stock. The Owner's Representative will inspect plants for approval prior to any installation.

   B. Plant material must be selected from nurseries that have been inspected by state or federal agencies.

   C. Nomenclature will be in accordance with Hortus III.

   D. Plant materials will not be accepted that are overgrown, root-bound, or too recently canned so that the root system is not thoroughly established throughout the can. Pruning shall not be done prior to delivery except as authorized by the Owner's Representative.

5. Grading and Topsoil:

   A. See Grading Notes.

   B. Soil Test: Contractor shall submit three (3) representative soil samples to Soil and Plant Laboratory, Santa Clara or approved equal to be tested for agricultural suitability and fertility with pre-plant and post-plant recommendations, immediately following the completion of rough grading. Soil samples shall be taken from location determined by the Owner's Representative. Soil shall be certified as clean and free of hazardous material or waste contamination. Notify Owner's Representative of any soils problems noted in the soils test report that could potentially affect/impact plant health, including but not limited to the following: high or low soil pH, poor soil drainage, excessive soil compaction, different soil types in the same test sample, deficient or excess nutrient levels, high salt levels, high boron or other elements and compounds toxic to plants, etc. Submit report to Landscape Architect and Owner's Representative for review and approval prior to beginning work. Do not proceed with any amending operations until soils report has been reviewed and approved.

   C. Compost to be used for soil amendment at the rate indicated by the soil analysis to bring the soil organic matter content to a minimum of 3.5% by dry weight or 2" of compost. Contractor may 1) import topsoil to meet organic matter content listed, or 2) submit soils report that identifies existing topsoil meets or exceeds the specified organic matter content. (Bay-Friendly score card item C.7 a i)

      Soil amendment to be added as follows in all planting areas. (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purposes until determined by soil tests.)

      Amount per 1000 square feet.

      6 cubic yards Compost

      20 lbs. 8-20-20 fertilizer (Best's Cropmaker)

      10 lbs. 0-25-0 Single super phosphate

      10 lbs. iron sulfate

   D. Soil amendment in all planting areas shall be uniformly spread and thoroughly incorporated to a soil depth of 6" minimum by repeated rotary hoe cultivation prior to planting.

   E. Post Amendment Installation Soil Testing for Compliance: After incorporating amendments, fertilizers and conditioners, Contractor shall take three (3) representative soil samples and have samples tested for Agricultural Suitability and Fertility by an approved soils analysis laboratory for compliance with original soil test report recommendations. Add any additional amendments, fertilizers and conditioners recommended by soils analysis laboratory at no cost to Owner. Notify Owner's Representative of any potential soils problems noted in the report. Submit report for amendment/fertilizer/conditioner compliance to Landscape Architect and Owner's Representative prior to beginning planting operations.

6. Tree and Shrub Planting:

   Prior to digging holes for final planting, the Contractor shall spot all trees as shown on the Drawings for approval by the Landscape Architect.

   A. Soil amendments and fertilizer shall have been incorporated into the soil prior to tree and shrub planting.

   B. Dig pits as shown on Drawings.

   C. After pits are dug, break sides and bottom of holes to open wall of pit for root penetration.

   D. Percolation Test: All plant pits shall be tested for sufficient drainage prior to planting. Representative plant pits shall be dug (at least 2) at site upon award of Bid to test for general site subgrade drainage conditions. Individual planting pits shall also be tested again for sufficient drainage prior to planting. Contractor shall fill plant pits with water, to see if subsoil conditions will cause retention of water within plant pits overnight. If standing water is still observed after 12 hours, then Contractor shall alert Owner's Representative and Landscape Architect of the problem.

   E. Planting backfill mix for trees and shrubs shall be:

      Amount per Cubic Yard:

      3/4 cubic yard On site soil

      1/4 cubic yard compost

      1.5 lbs. 8-20-20 fertilizer (Best's Cropmaker)

      2.5 lbs. 0-25-0 Single super phosphate

      1 lb. iron sulfate

   (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purposes until determined by soil tests)

   F. Fertilize plants at the time of planting with Agriform 21 gram fertilizer packets, 20-10-5: 2 per 1 gallon can; 3 per 5 gallon can; 4 per 15 gallon can; specimen trees-3 per inch of caliper.

   G. Plants shall be erect after planting, and staked or guyed as detailed at the time of planting. Remove nursery stakes.

   H. Rootball crown shall be 2" above finish grade after watering and settling.

   I. Tree and shrub plantings shall be watered and flooded to eliminate air pockets within 2 hours of the time of planting.

   J. All vines shall be trained to posts, fences or walls by tying select individual branches with plastic covered wire ties as follows: ties shall be attached to wood surfaces with 3/4" galvanized iron staples and attached to stucco or masonry surfaces with epoxy as recommended by manufacturer. See planting details.

   K. All trees shall be planted 10'-0" minimum from buildings including overhangs and 5'-0" minimum from curbs, paving, fences, etc. Orient main branches of trees away from building. Should any discrepancies occur between field conditions and planting plans contact Owner's Representative. All trees closer than 5'-0" from curbs, foundations, sidewalks, or other hardscape items, shall be installed with linear root deflector panels protecting adjacent hardscape items, but never fully surrounding rootball. Install a 10 foot by 24 inch deep section of linear interlocking root deflector panels, centered on tree (5 feet on each side), located at curb, foundation, sidewalks, other hardscape items, unless otherwise indicated. See plans for detail.

   L. All trees shall be planted a minimum of 5'-0" away from storm drain, or other underground utility lines (or per code), and 10'-0" away from sanitary sewer lines (or per code), and 15'-0" minimum away from utility poles or light standards (or per code)

   M. All planting areas to receive 3" layer of bark mulch, natural color, no dyes.

   N. All trees and shrubs shall have watering basins around them. Basin diameters shall be the same size as the tree or shrub's rootball. Basins shall be formed with level bottoms and 3 inch high walls. Planting areas to receive 3" depth of bark mulch unless otherwise indicated. Submit sample for approval.

   O. Soil amendments shall have been incorporated into the soil prior to planting.

   P. Clear planting areas of rocks and debris greater than 1" diameter.

   Q. Apply a pre-emergent herbicide, per manufacturer's directions.

   R. All planting areas with slopes greater than 2:1 shall have jute mesh installed as per detail, or per manufacturer recommendations.

   S. Thirty (30) days after planting, replace all dead plants and fill in bare areas. Top dress with 16-6-8 fertilizer at 7 lbs./1000 sq. ft. when ground is dry and thoroughly irrigate promptly after application.

   (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purpose until determined by soil tests)

7. NOT USED

8. Workmanship:

   Precautions shall be taken to avoid damage to existing plants, turf and structures. Any areas damaged shall be restored to their original condition.

9. Clean-up

   Keep all areas of work clean, neat and orderly at all times. Keep all paved areas clean during planting and maintenance operations.

10. Site Visits and Approvals:

    The Contractor shall contact the Owner's Representative for review and approval of plant materials and plant locations. The maintenance period begins following acceptance of plant installation.

11. Maintenance

    A. Begin maintenance after each plant is installed and continue until Final Acceptance.

    B. Maintenance Period shall begin upon inspection and approval by Owner's Representative and shall be for 60 calendar days.

    C. Maintenance of new planting shall consist of watering, cultivating, weeding, mulching, re-staking, tightening and repairing of guys, resetting plants to proper grades or upright position, restoration of the planting saucer, and furnishing and applying such sprays and invigorates as are necessary to keep the plantings free of insects and disease and in thriving condition.

    D. Protect planting areas and plants at all times against damage of all kinds, including frost, for duration of maintenance period. Maintenance includes temporary protection fences, barriers, covers during frost and signs as required for protection. If any plants become damaged or injured, treat or replace as directed by Landscape Architect at no additional cost to Owner.

13 Guarantee:

   A. Replacement trees shall be in thriving condition 3 years from the date of final acceptance. Any replacement trees which have lost at least 30% of their normal foliage or are not in vigorous growing condition shall be replaced.

   B. All other trees, shrubs, grasses, ground covers shall be in thriving condition 1 year from the date of final acceptance. Replace any trees which have lost at least 30% of their normal foliage or are not in vigorous growing condition.

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PROJECT MANAGER: JVA
DRAWN BY: JVA
CHECKED BY: JVA

PROJECT NAME: HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
DRAWING TITLE: LANDSCAPE IMPROVEMENT PLANS
LOT 7

NO	DESCRIPTION	DATE
1	---	---
2	---	---
3	---	---
4	---	---

SHEET TITLE
LANDSCAPE NOTES & SPECIFICATIONS
SCALE:

ISSUE DATE: 02/18/16
PROJECT NO: V0219
SHEET NO: L5.1

HIGHLAND ESTATES

LOT 8 – LANDSCAPE PLANS

VICINITY MAP

SITE MAP

SHEET INDEX

SHEET NUMBER	SHEET TITLE
L0.0	COVER SHEET
L1.0	CALLOUT PLAN
L2.0	PLANTING PLAN
L3.0-L3.1	LANDSCAPE DETAILS
L4.0-L4.1	IRRIGATION PLAN & LEGEND
L4.2	HYDROZONE PLAN
L4.3-L4.4	IRRIGATION DETAILS
L5.0-L5.1	LANDSCAPE SPECIFICATIONS

REVISION LOG

DATE	SHEET NUMBER	DESCRIPTION

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PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 8

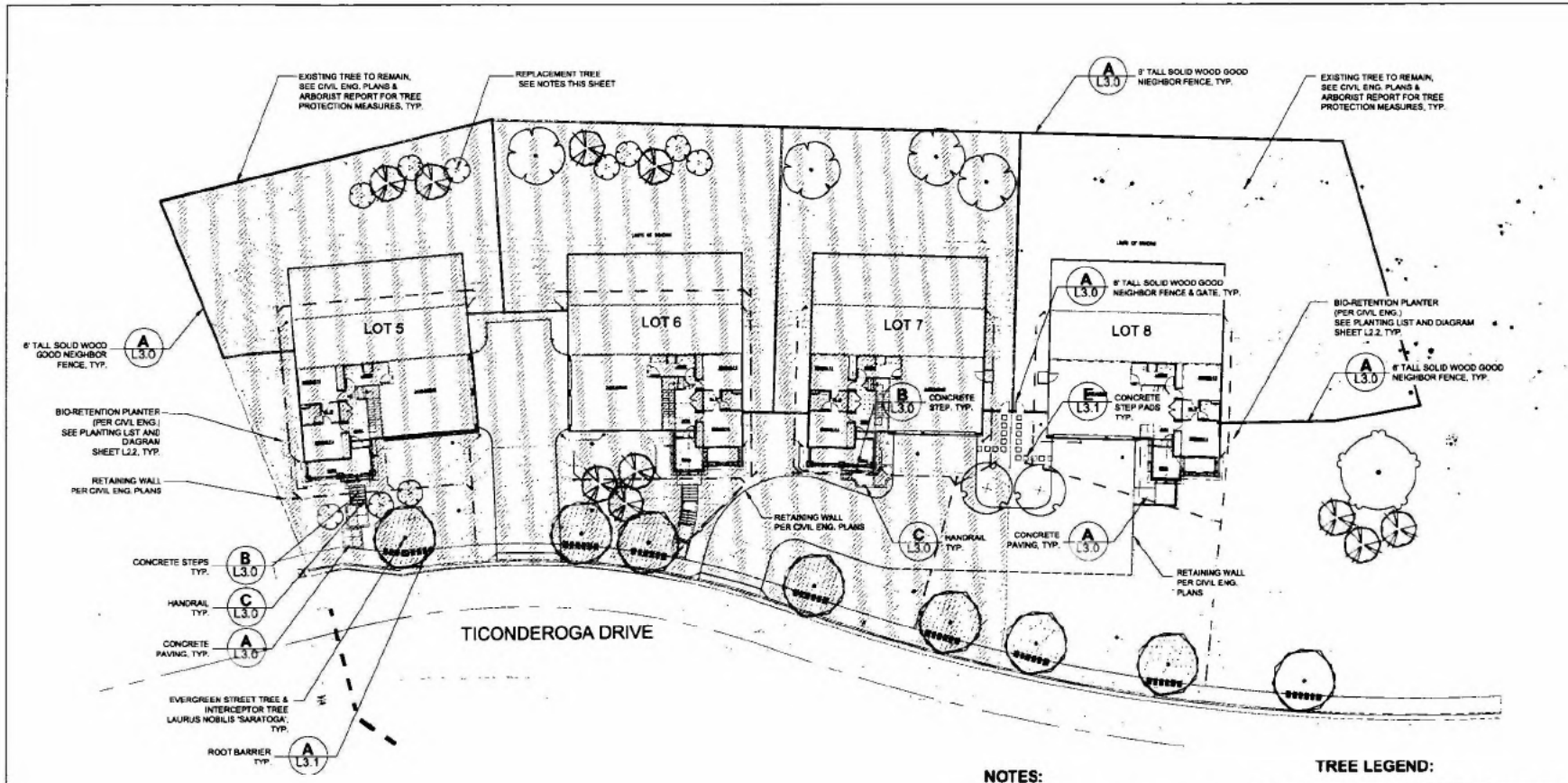
SHEET TITLE
COVER SHEET

SCALE
NTS

ISSUE DATE
02/18/16

PROJECT NO.
V0219

SHEET NO.
L0.0



NOTES:

1. NO PLANTING OR IRRIGATION SHALL OCCUR UNDER THE CANOPIES OF THE EXISTING OAK TREES. FIELD ADJUST NEW REPLACEMENT TREES AS NEEDED.

TREE LEGEND:

	STORMWATER CREDIT/EVERGREEN INTERCEPTOR TREES LAURUS NOBILIS 'SARATOGA' 11 TOTAL WITHIN 25' OF IMPERVIOUS SURFACE
	PROPOSED REPLACEMENT TREES - SEE L2.2 FOR COMPLETE TREE SPECIES/LEGEND TOTAL SITE: 23 REPLACEMENT TREES REQUIRED 33 REPLACEMENT TREES PROVIDED LOT 8 6 REPLACEMENT TREES PROVIDED
*	EXISTING TREES TO REMAIN, TYP. SEE CIVIL PLANS AND ARBORISTS REPORT FOR TREE PROTECTION MEASURES

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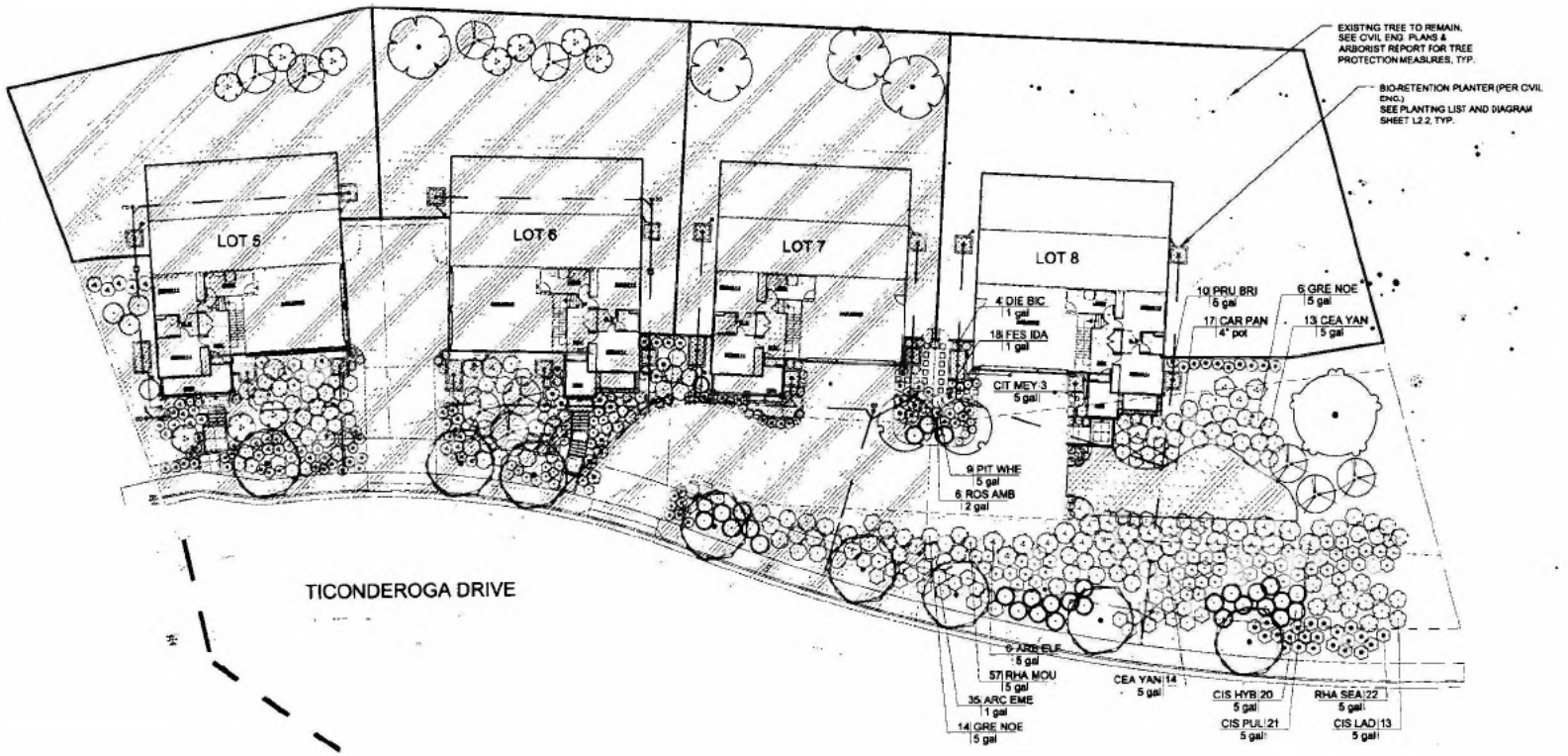
HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
LANDSCAPE IMPROVEMENT PLANS
LOT 8

CALLOUT & LAYOUT PLAN

SCALE: 1/16" = 1'-0"
DRAWN DATE: 02/18/16
PROJECT NO: V0219
SHEET NO: L1.0



PLANTING NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. **NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY**
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.
4. IRRIGATION DRIP SYSTEM SHALL BE ADJUSTED AS REQ'D FOR OPTIMUM WATER SAVINGS AND NO RUN OFF.

EROSION CONTROL NOTES:

1. LEAVE EROSION CONTROL JUTE MESH ON ALL SLOPES. CUT HOLES FOR NEW SHRUBS AS NEEDED.

EXISTING OAK TREE NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY.
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.

SAN MATEO COUNTY WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE STATEMENT:

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN."

ZIKI ABED - LICENSED LANDSCAPE ARCHITECT

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HIGHLAND ESTATES
SAN MATEO
CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 8

NO	DESCRIPTION	BY	DATE

SHEET TITLE: PLANTING PLAN
SCALE: 1/16" = 1'-0"
ISSUE DATE: 02/18/16
PROJECT NO: V0218
SHEET NO: L2.0

BIO-RETENTION PLANTERS ON THE NORTH & NORTHEAST SIDES OF BUILDINGS

5 GAL	CORNUS SERICEA "ISANTI"	QTY: 1
1 GAL	CAREX PRAEGRACILUS	QTY: CAN-TO-CAN FULL

ALTERNATIVE:

5 GAL	CARPENTERIA CALIFORNICA	QTY: 1
1 GAL	CAREX PRAEGRACILUS	QTY: CAN-TO-CAN FULL

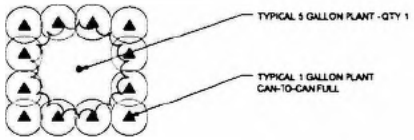
BIO-RETENTION PLANTERS ON THE SOUTH & SOUTHWEST SIDES OF BUILDINGS

5 GAL	MUHLENBERGIA RIGENS	QTY: 1
1 GAL	MIMULUS AURANTIACUS & CAREX PRAEGRACILUS (ALTERNATING)	QTY: CAN-TO-CAN FULL

NOTES:

1. CONTRACTOR TO HAND WATER PLANTS IN BIO-RETENTION PLANTERS UNTIL ESTABLISHED.
2. SEE CIVIL ENGINEER'S PLANS AND SPECIFICATIONS FOR BIO-RETENTION SOIL MIX.
3. PLANT SPECIES LISTED ABOVE ARE APPROVED FOR USE IN BIO-PLANTERS PER THE SAN MATEO COUNTY STORMWATER MEASURES PLANT LIST

PLANTING DIAGRAM:



PLANTING LIST

TREES	CODE	BOTANICAL NAME	COMMON NAME	CONT	QTY	REMARKS
	ARB HYB	Arbutus x 'Marina'	Arbutus Standard	15 gal	2	Replacement Tree
	ARC MAN	Arctostaphylos manzanita MULTI-TRUNK	Manzanita	15 gal	10	Multi-Trunk Replacement Tree
	CER OCC	Cercis occidentalis - MULTI-TRUNK	Western Redbud	15 gal	15	Multi-trunk Replacement Tree
	LAU SAR	Laurus nobilis 'Saratoga'	Sweet Bay	15 gal	12	Street Tree/Interceptor Tree Evergreen
	QUE AGR	Quercus agrifolia	Coast Live Oak	15 gal	1	Replacement tree
	SAM MEX	Sambucus mexicana - MULTI-TRUNK	Mexican Elderberry	15 gal	5	Multi-Trunk Replacement tree

PLANTING LIST (cont.)

SHRUBS	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
	ACA COG	Acacia cognata 'Cousin It'	River Wattle	5 gal	17
	ALY MON	Alyogyne huegelii 'Monterey Bay'	Blue Hibiscus	5 gal	11
	ARB ELF	Arbutus unedo 'Elfin King'	Dwarf Strawberry Tree	5 gal	8
	ARC EME	Arctostaphylos x 'Emerald Carpet'	Emerald Carpet Manzanita	1 gal	121
	CEA YAN	Ceanothus griseus horizontalis 'Yankee Point'	California Lilac	5 gal	100
	CEA CON	Ceanothus x 'Concha'	California Lilac	5 gal	7
	CIS LAD	Cistus ladanifer	Crimson Spot Rockrose	5 gal	31
	CIS PUL	Cistus pulverulentus 'Sunset'	Rockrose	5 gal	34
	CIS PRO	Cistus salvifolius 'Prostratus'	Sageleaf Rockrose	5 gal	54
	CIS HYB	Cistus x hybridus	White Rockrose	5 gal	58
	CIT MEY	Citrus x meyeri	Meyer Lemon	5 gal	3
	DIE BIC	Dietes bicolor	Fortnight Lily	1 gal	47
	ERI WAY	Erigeron glaucus 'Wayne Roderick'	Seaside Daisy	1 gal	38
	GRE NOE	Grevillea x 'Noelii'	Grevillea	5 gal	45
	LAV ASS	Lavatera assurgentiflora	Mallow	5 gal	9
	PEN FAR	Pennisetum x 'Fairy Tails'	Evergreen Fountain Grass	5 gal	12
	PIT TEN	Pittosporum tenuifolium 'Marjorie Channon'	Tawhiwhi	5 gal	30
	PIT CRE	Pittosporum tobira 'Cream De Mint' TM	Cream De Mint Dwarf Mock Orange	5 gal	15
	PIT WHE	Pittosporum tobira 'Wheelers Dwarf'	Wheeler's Dwarf Mock Orange	5 gal	34
	PRU BRI	Prunus caroliniana 'Bright 'N Tight' TM	Bright 'N Tight Carolina Laurel	5 gal	44
	RHA MOU	Rhamnus californica 'Mound San Bruno'	California Coffeeberry	5 gal	120
	RHA SEA	Rhamnus californica 'Seaview'	California Coffee Berry	5 gal	22
	ROS AMB	Rosa x 'Flower Carpet Amber'	Amber Carpet Rosa	2 gal	65
	ROS RED	Rosa x 'Flower Carpet Red'	Rose	2 gal	35
	WES MOR	Westringia fruticosa 'Morning Light'	Morning Light Coast Rosemary	5 gal	11

GRASSES	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
	FES IDA	Festuca idahoensis	Idaho Fescue	1 gal	64

GROUND COVERS	CODE	BOTANICAL NAME	COMMON NAME	CONT	SPACING	QTY
	CAR PAN	Carex panae	Sanddune Sedge	4" pot	8" o.c.	13 sf

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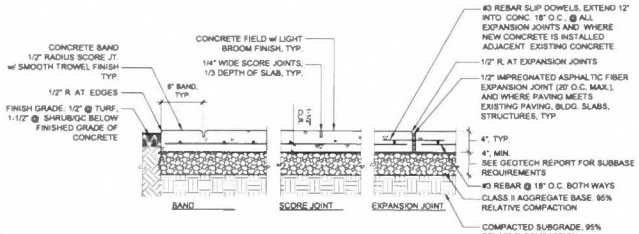
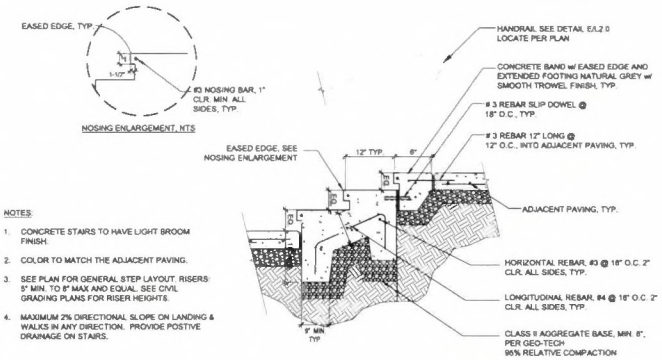
HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
LANDSCAPE IMPROVEMENT PLANS
LOT 8

PLANTING LEGEND
SCALE: NTS
DATE: 02/15/16
PROJECT NO: Y0210
SHEET NO: L2.1



A CONCRETE PAVING
1" = 1'-0"



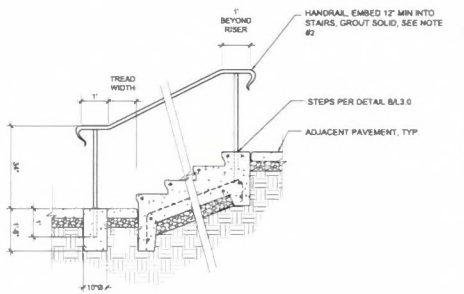
NOTES:

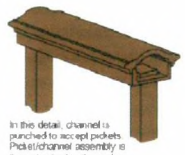
1. CONCRETE STAIRS TO HAVE LIGHT BROOM FINISH.
2. COLOR TO MATCH THE ADJACENT PAVING.
3. SEE PLAN FOR GENERAL STEP LAYOUT. RISERS: 5" MIN. TO 8" MAX AND EQUAL. SEE CIVIL GRADING PLANS FOR RISER HEIGHTS.
4. MAXIMUM 2% DIRECTIONAL SLOPE ON LANDING & WALKS IN ANY DIRECTION. PROVIDE POSITIVE DRAINAGE ON STAIRS.

B CONCRETE STEPS
3/4" = 1'-0"

CONCRETE NOTES:

1. SCORING PATTERN TO MEET ALL ACI INTERNATIONAL GUIDELINES.
2. ALL FORMWORK/SCORING/PROPOSED JOINT SPACING TO BE APPROVED AND REVIEWED BY OWNERS' REPRESENTATIVE PRIOR TO POURING.
3. ALL SCORING/CONTRACTION JOINTS TO BE MINIMUM 1/3 DEPTH OF SLAB.
4. DISTANCE BETWEEN CONTRACTION JTS TO BE MAXIMUM 24 TIMES SLAB THICKNESS. ALL CONTRACTION JTS TO BE CONTINUOUS,NOT STAGGERED OR OFFSET. REFER TO ACI INTL. CCS-1 SERIES GUIDELINES FOR ALL CONCRETE WORK. ANY DISCREPANCIES WITH DRAWINGS TO BE BROUGHT TO ATTENTION OF OWNER/ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
5. CONCRETE PANELS TO BE AS SQUARE AS PRACTICAL. NEVER MAKE LONG SIDE MORE THAN 1-1/2 TIMES LENGTH OF SHORT SIDE. NO ONE PANEL TO BE MORE THAN 100 SQ. FT.
6. INSTALL EXPANSION JOINTS WHERE NEW PAVING MEETS EXISTING PAVING, WALLS, CURBS, FOUNDATIONS, OR OTHER FIXED OBJECTS, AND CHANGES IN WALK DIRECTIONS.
7. CONCRETE COLOR TO BE NATURAL GRAY.
8. BROOM FINISH SHALL BE PERPENDICULAR TO PATH OF TRAVEL.
9. CONTRACTOR SHALL COORDINATE INSTALLATION OF REBAR SLIP DOWELS WHERE DRIVEWAY MEETS GARAGE CONCRETE PAD WITH OWNER'S REPRESENTATIVE AND PROJECT STRUCTURAL ENGINEER. DOWELS SHALL BE #4 REBAR SPACED 24" O.C. EXTENDING 12" INTO DRIVEWAY AND GARAGE PAD, OR AS SPECIFIED BY STRUCTURAL ENGINEER. CONTRACTOR SHALL ONLY INSTALL REBAR DOWELS IF APPROVED BY OWNER'S REPRESENTATIVE AND PROJECT STRUCTURAL ENGINEER. SUBMIT TO OWNER'S REPRESENTATIVE PROPOSED DOWEL LOCATIONS.
10. FOR ALL PAVING DETAILS SHOWN, THE PAVING PROFILE, AGGREGATE, SUBBASE PREPARATION & COMPACTION PER GEOTECH ENGINEER, TYP. PROFILES ARE SHOWN FOR DESIGN INTENT & BIDDING PURPOSES ONLY. SEE GEOTECH REPORT FOR PAVING & SUBBASE REQUIREMENTS.



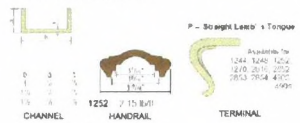


In this detail, channel is punched to accept pockets. Pocket/channel assembly is then attached to the underside of the railing.

HANDRAIL, CHANNEL & POST

HANDRAIL NOTES:

1. HANDRAILS TO BE 1-4/16" MODEL H2901 ALUMINUM HANDRAIL WITH LAMBS TONGUE TERMINUS AS SHOWN. ALUMINUM CHANNEL SHALL BE MODEL C2100612. POSTS SHALL BE 1" SQUARE STEEL BAR WELDED TO BASE OF CHANNEL.
2. PRIME AND PAINT WITH ZINC-RICH PRIMER AND 2 COATS ENAMEL, COLOR TO BE DARK BRONZE. SUBMIT PAINT SAMPLE TO OWNER FOR APPROVAL.
3. AVAILABLE THROUGH R&B WAGNER, INC. (888) 243-8914.



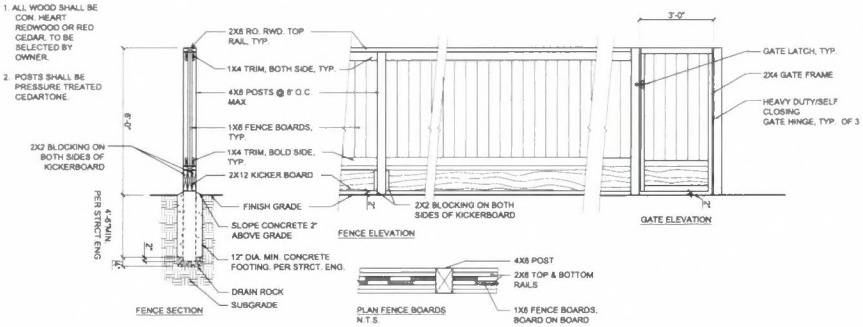
HANDRAIL MAKE AND MODEL

TERMINAL

C HANDRAIL
1/2" = 1'-0"

NOTES:

1. ALL WOOD SHALL BE CON. HEART REDWOOD OR RED CEDAR, TO BE SELECTED BY OWNER.
2. POSTS SHALL BE PRESSURE TREATED CEDARTONE.



D 6' TALL WOOD FENCE & GATE
NTS

CHAMBERLAIN GROUP
655 Skyway, Suite 290
San Carlos, CA 94070
(650) 595.5582

USA 800.227.2600

VAN DORN ABED
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PO BOX 1 SAN MATEO, CA 94401
TEL (650) 342-7474 FAX (650) 342-7476

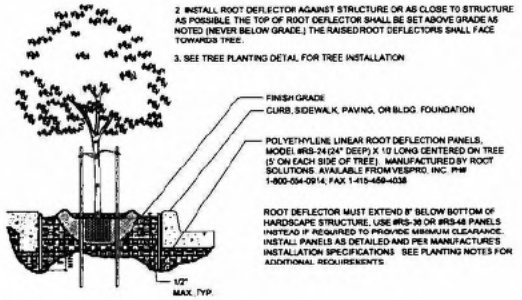
PROJECT NAME / LOCATION:
HIGHLAND ESTATES
SAN MATEO
CALIFORNIA

LANDSCAPE IMPROVEMENT PLANS
LOT 8

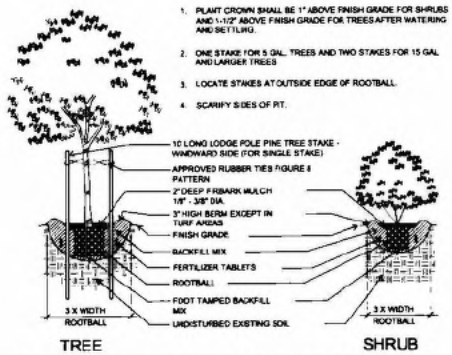
NO	DESCRIPTION	DATE

SHEET TITLE:
LANDSCAPE DETAILS

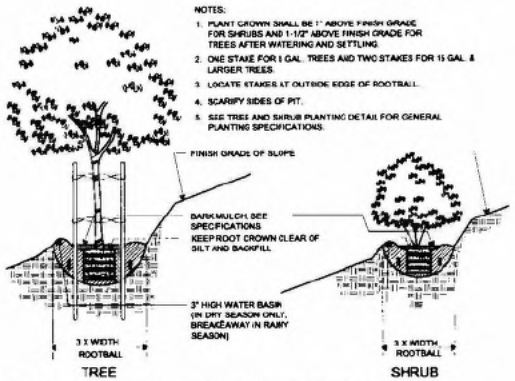
SCALE: AS NOTED
ISSUE DATE: 02/18/16
PROJECT NO: V0219
SHEET NO: L3.0



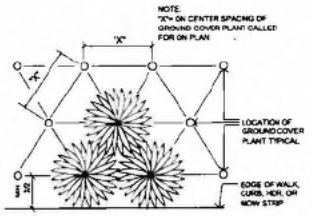
A ROOT DEFLECTOR
NTS



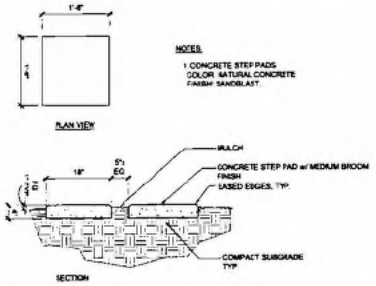
B TREE AND SHRUB PLANTING
NTS



C HILLSIDE TREE AND SHRUB PLANTING
NTS



D GROUNDCOVER PLANTING
NTS



E CONCRETE STEP PADS
3/4" = 1'-0"

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San Carlos, CA 94070
(650) 595-5582

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81 14TH ST. SAN FRANCISCO, CA

HIGHLAND ESTATES
SAN MATEO CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 8

LANDSCAPE DETAILS

SCALE: AS NOTED
DATE: 02/18/16
PROJECT NO: V9219
SHEET NO: L3.1

GENERAL NOTES:

1. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC., SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE, UNLESS OTHERWISE NOTED. AVOID ANY CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING AND ARCHITECTURAL FEATURES.
2. CONTRACTOR SHALL PERFORM PRESSURE TESTS (STATIC & DYNAMIC) AND FLOW TESTS (GPM) AT POINT OF CONNECTION (P.O.C.) PRIOR TO BEGINNING WORK. SEE IRRIGATION NOTES FOR PRESSURE AND FLOW TEST REQUIREMENTS AND PROCEDURES. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CORRECTIVE MEASURES REQUIRED TO IRRIGATION SYSTEM, AT NO ADDITIONAL COST TO THE OWNER, IF IRRIGATION SYSTEM IS INSTALLED WITHOUT REQUIRED TESTS, AND DISCREPANCIES IN PRESSURE AND FLOW AT THE P.O.C. ARE DISCOVERED THAT PREVENT THE IRRIGATION SYSTEM FROM FUNCTIONING CORRECTLY.

WATER PRESSURE AT P.O.C. NOTES:

1. CONTRACTOR SHALL VERIFY WATER PRESSURE ON SITE. IF PRESSURE IS 65 PSI OR HIGHER AT P.O.C., CONTRACTOR SHALL INSTALL A PRESSURE REDUCER AS SHOWN, AND SET PRESSURE REDUCER TO 65 PSI. PRESSURE REDUCER SHALL BE 1-1/4" WILKINS LEAD FREE 500XL-YSBR (INCLUDES PRESSURE REDUCER & FILTER). SEE IRRIGATION DETAILS.
2. IF PRESSURE IS LESS THAN 65 PSI OMIT PRESSURE REDUCER.
3. IF PRESSURE IS LESS THAN 55 PSI NOTIFY OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT FOR CORRECTIVE MEASURES.

SLEEVE NOTES:

1. FOR DESIGN CLARITY, NOT ALL SLEEVES SHOWN. CONTRACTOR SHALL SLEEVE ALL PIPES CROSSING UNDER PAVED AREAS.
2. WHERE LATERAL LINES WITH SLEEVES CROSS ROADS OR DRIVEWAYS, CONTRACTOR SHALL INSTALL ONE SPARE 4" CLASS 315 PVC SLEEVE.
3. WHERE MAIN LINES WITH SLEEVES CROSS ROADS OR DRIVEWAYS, CONTRACTOR SHALL INSTALL ONE SPARE 6" CLASS 315 PVC SLEEVE.

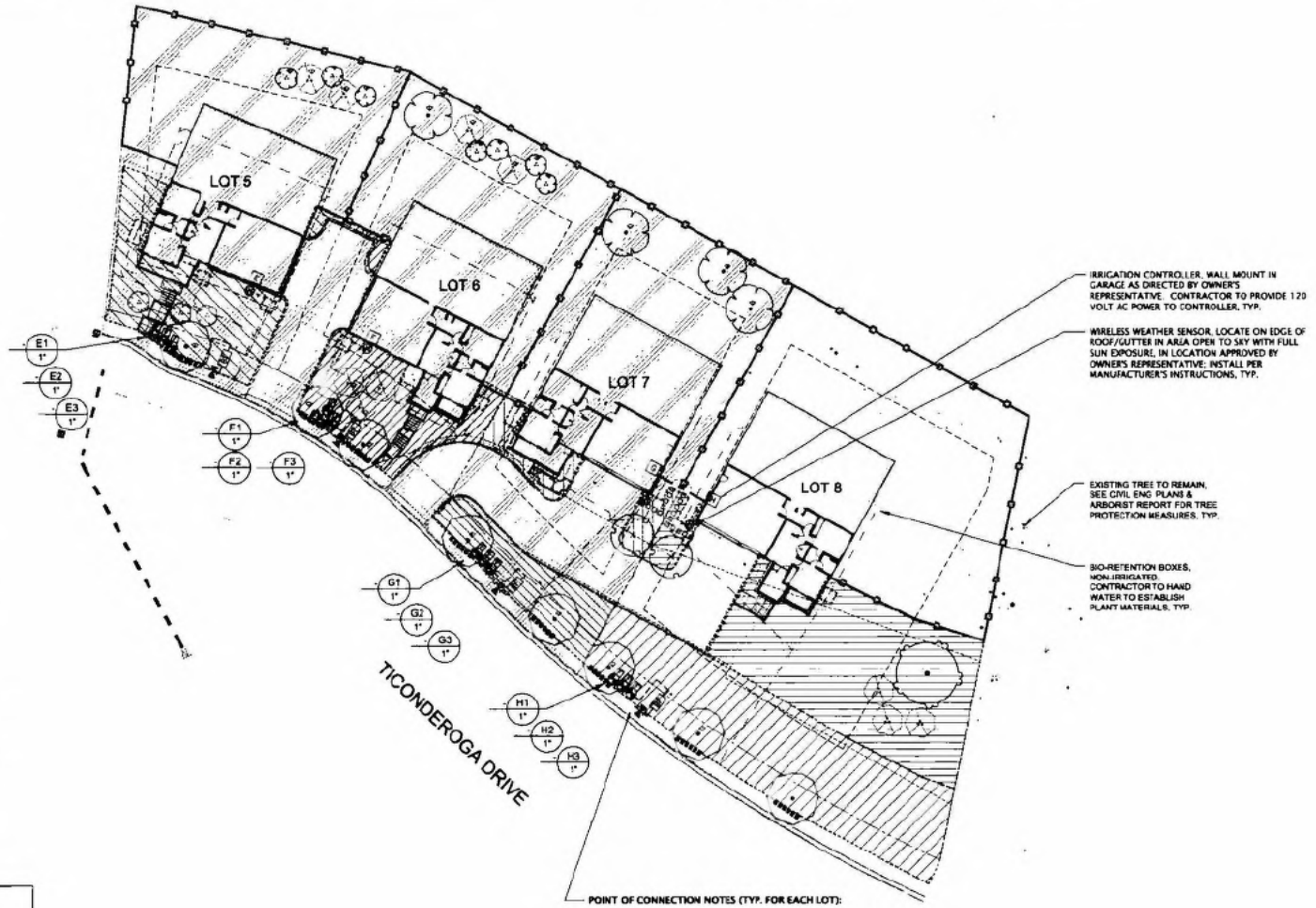
SPECIAL REQUIREMENTS AT EXISTING TREES

1. ALL UNDERGROUND IRRIGATION LINES SHALL BE ROUTED OUTSIDE THE DRIP LINES WHERE POSSIBLE.
2. IF UNDERGROUND IRRIGATION LINES MUST TRAVERSE THROUGH THE DRIP LINE AREA, LOCATION OF IRRIGATION LINES SHALL BE REVIEWED WITH PROJECT ARBORIST AND MODIFIED AS NEEDED PRIOR TO INSTALLATION. WHEN LINES ARE PROPOSED WITHIN A DISTANCE FROM THE TRUNKS OF FIVE (5) TIMES THEIR DIAMETER, THE PROJECT ARBORIST MAY RECOMMEND THAT A PNEUMATIC AIR DEVICE IS USED TO EXCAVATE THE TRENCH.

EXISTING OAK TREE NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY.
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.

NOTE: CONTRACTOR SHALL FIELD STAKE ALL TREE LOCATIONS PRIOR TO INSTALLATION OF IRRIGATION SYSTEM TO AVOID CONFLICTS WITH TREE LOCATIONS AND MAIN LINES/LATERAL LINES. IRRIGATION LATERAL LINES AND MAIN LINES SHALL BE LOCATED 3' MINIMUM HORIZONTALLY FROM TREE LOCATIONS. FIELD ADJUST ROUTING OF IRRIGATION LINES AS NECESSARY TO MEET MINIMUM CLEARANCE NOTED ABOVE.



IRRIGATION CONTROLLER, WALL MOUNT IN GARAGE AS DIRECTED BY OWNER'S REPRESENTATIVE. CONTRACTOR TO PROVIDE 120 VOLT AC POWER TO CONTROLLER, TYP.

WIRELESS WEATHER SENSOR, LOCATE ON EDGE OF ROOF/GUTTER IN AREA OPEN TO SKY WITH FULL SUN EXPOSURE, IN LOCATION APPROVED BY OWNER'S REPRESENTATIVE; INSTALL PER MANUFACTURER'S INSTRUCTIONS, TYP.

EXISTING TREE TO REMAIN, SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.

BIO-RETENTION BOXES, NON-IRRIGATED. CONTRACTOR TO HAND WATER TO ESTABLISH PLANT MATERIALS, TYP.

POINT OF CONNECTION NOTES (TYP. FOR EACH LOT):

P.O.C. IS AT 1" HOUSE WATER METER, SEE P.O.C. DETAIL. WATER METER BY OTHERS, SEE CIVIL PLANS. FIELD VERIFY METER LOCATION & SIZE. CONTRACTOR SHALL VERIFY STATIC & DYNAMIC PRESSURE AND FLOW RATES AVAILABLE AT P.O.C. PRIOR TO BEGINNING WORK (SEE IRRIG. SPECIFICATIONS). SUBMIT TO OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT RESULTS OF PRESSURE AND FLOW TESTS PRIOR TO BEGINNING WORK. IF THERE ARE DISCREPANCIES OF 10 PSI OR MORE OR FLOW RATES LOWER THAN STATED IRRIGATION DEMAND ON PLANS, SYSTEM MAY NOT PERFORM CORRECTLY. SEE "WATER PRESSURE AT P.O.C. NOTES" & IRRIGATION SPECS FOR PRESSURE AND FLOW TEST REQUIREMENTS AND PROCEDURES.

IRRIGATION DEMAND: 6 GPM @ 65 PSI.

SEE "WATER PRESSURE AT P.O.C. NOTES" FOR PRESSURE REDUCER INSTALLATION REQUIREMENTS.

SAN MATEO COUNTY WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE STATEMENT:

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN."

ZOU ABED - LICENSED LANDSCAPE ARCHITECT

0 10 20 40 60

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VAN DORN ABED LANDSCAPE ARCHITECTS, INC.
21 MAIN ST. SUITE 200
SF 94103 PH (415) 864-5511 FAX (415) 864-5515

PROJECT MANAGER: ZA
DRAWN BY: ZA
CHECKED BY: ZA

PROJECT NAME: HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
DRAWING TITLE: LANDSCAPE IMPROVEMENT PLANS
LOT 8

NO.	DESCRIPTION	DATE

SHEET TITLE: IRRIGATION PLAN

SCALE: 1" = 20'-0"
ISSUE DATE: 02/18/16
PROJECT NO: V0219
SHEET NO: L4.0

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
△	PVC lateral line to drip area with Rainbird 8-outlet emitter units. Route PVC lateral line thru drip area and install required quantity of Octabubblers necessary to irrigate plants in the drip area.
◇	Rain Bird XBT-8 Six multi-outlet drip emitter/bubbler Six-Outlet, Pressure Compensating, with 1.0 GPH Black Drip Emitters at each emitter outlet. Comes with 1/2" FPT Inlet x Barb Outlet. Install DBC-025 Diffuser Bug Caps at end of each emitter's 1/4" distribution line. Install 4 (four) 1/4" distribution lines with Diffuser Bug Caps at 5Gal & 15Gal trees; Install 6 (six) 1/4" distribution lines with Diffuser Bug Caps at 24"Box trees. Plug unused emitter outlets.
NOTE: DRIP AREA PATTERNS VARY	
FOR DESIGN CLARITY A1 A1 A1 A1 A1 A1	Area to Receive Drip Emitters Rain Bird XB081-PRS w/XB-10 Xeri-Bird 8 Multi Outlet Emission Device with Xeri-Bug emitters at 1gph each, with built-in 200 mesh filter. Pressure Regulator In-stem Emitter Notes: 1 gal plant to receive 1 of OCT8-16 emitter. 5 gal plant to receive 2 of OCT8-16 emitters. 15 gal plant to receive 4 of OCT8-16 emitters. 24"box plant to receive 6 of OCT8-16 emitters. 2 gal plant to receive 1 of OCT8-16 emitter.
CONTROLLER VALVE CIRCUIT NO.	

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Irritrol 700 with OMR-100 Electric Remote Control Valve, with Omni-Reg 5-100psi regulator. Set pressure regulator at 40 PSI.
	Nibco T-113-LF Lead free Class 125 bronze gate shut off valve with wheel handle, same size as mainline pipe diameter at valve location. Size Range - 1/4" - 3"
	Febco LF825Y 1" Lead Free Reduced Pressure Backflow Preventer
A	Irritrol TC-06-MOD-R Hybric Controller, 6- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
B	Irritrol TC-06-MOD-R Hybric Controller, 6- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
C	Irritrol TC-06-MOD-R Hybric Controller, 6- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
D	Irritrol TC-06-MOD-R Hybric Controller, 6- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
	Irritrol CL Wireless Weather Sensing System. 100-Receiver and Transmitter Kit. Outdoor sensor, and receiver attaches to Irritrol Controller. Compatible with Rain Dial-R, Total Control-R, KwikDial, adn MC-E controllers. Monitors weather data.
	Amiad 150 mesh Y-Filter with flush valve, or approved equivalent, at drip remote control valves
	Irrigation Lateral Line: PVC Class 200 SDR 21 PVC Class 200 irrigation pipe. Only lateral transition pipe sizes 1" and above are indicated on the plan, with all others being 3/4" in size. 12" min. burry.
	Irrigation Mainline: PVC Schedule 40 PVC Schedule 40 irrigation pipe. 18" min. burry.
	Pipe Sleeve: PVC Class 315 SDR 13.5 24" MIN. BURRY.
	Valve Callout Valve Number Valve GPM Valve Size

IRRIGATION RUN TIME SCHEDULE NOTES:

1. IRRIGATION CONTROLLER RUN TIMES ARE NOT INCLUDED ON LANDSCAPE PLANS. IRRIGATION CONTROLLERS ARE ET BASED SMART CONTROLLERS THAT GENERATE OPTIMUM RUN TIME SCHEDULES BASED UPON LOCAL WEATHER CONDITIONS.

2. CONTROLLERS ARE INITIALLY PROGRAMMED WITH IRRIGATION SYSTEM COMPONENT INFORMATION, PLANT MATERIAL WATER USE REQUIREMENTS, SOIL TYPE, AND LOCAL MICRO CLIMATIC INFORMATION. CONTROLLERS AUTOMATICALLY GENERATE RUN TIME SCHEDULES FROM THIS INFORMATION. EACH DAY CONTROLLERS RECEIVES LOCAL WEATHER CONDITION DATA WIRELESS WEATHERS SENSORS, AND AUTOMATICALLY ADJUST THEIR WATERING SCHEDULES FOR OPTIMUM WATER CONSERVATION. EACH CONTROLLER HAS IT'S OWN WIRELESS WEATHER SENSOR, LOCATED ON-SITE.

IRRIGATION SPECIFICATIONS:

1. Irrigation system shall be installed in conformance with all applicable local codes and ordinances by experienced workmen and a licensed Landscape Contractor who shall obtain all necessary permits and pay all required fees.

2. Prior to the start of construction, the Contractor shall verify with the City, Water District, and/or other governing agency(s) if a reclaimed water source will be available in the future for connection to the irrigation system. If local regulations so stipulate, then the Contractor shall follow all requirements, specifications, construction details, codes, etc., for the installation of irrigation systems utilizing reclaimed water sources for irrigation of landscaping.

3. The Contractor shall be responsible for any damage to existing facilities caused by or during the performance of his work. All repairs shall be made at no cost to the Owner.

4. This design is diagrammatic: install parallel lines in a common trench with minimum horizontal distance of 4" and lines not one above the other. Snake pipe in trenches. All piping, valves, etc., shown within paved areas is for design clarification only and shall be installed in planting areas where possible. Avoid any conflicts between the irrigation system, planting and architectural features.

5. Do not willfully install the irrigation system as shown on the drawings when it is obvious in the field that obstructions, grade differences or differences in the area dimensions exist that might not have been considered in the engineering. Such obstructions or differences should be brought to the attention of the Owner's authorized representative. In the event this notification is not performed, the Contractor shall assume full responsibility for any revisions necessary.

6. It is the responsibility of the Contractor to familiarize himself with all grade differences, location of walls, retaining walls etc. He shall coordinate his work with the General Contractor and other Subcontractors for the location and the installation of pipe sleeves through walls, under roadways, paving, structures, etc.

7. Due to the scale of the drawings, it is not possible to indicate all offsets, fittings, sleeves, etc., which may be required. The Contractor shall carefully investigate the structural and finished conditions affecting all of his work and plan his work accordingly, furnishing such fittings, etc., as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation system, planting, and architectural features.

8. Notify Landscape Architect of any other aspects of layout which will provide incomplete or insufficient water coverage of plant material and do not proceed until his instructions are obtained.

9. Electrical Contractor to supply 120 volt A.C. (2.5 AMP) service to controller location. Contractor to make final connection from electrical sub-out to controller. Paint conduit to controller with 2 coats Rustoleum brown paint if installed outdoors; color to be approved by Owner's representative. 120 volt A.C. J-Box to controller by others. All 120 volt A.C. and 24 volt connections to be made by Contractor.

10. Each controller shall have its own independent ground wire.

11. Program irrigation controller(s) to operate between the hours of 10:00 P.M. and 7:00 A.M.

12. Valve locations shown are diagrammatic. Install in ground cover/shrub areas.

13. Install valve boxes 12" from and perpendicular to walk, curb, building or landscape feature. At multiple valve box groups, each box shall be an equal distance from the walk, curb, lawn, etc., and each box shall be 12" apart. Short side of valve box shall be parallel to walk, curb, lawn, etc.

14. Install U.L. approved direct-burial wire #14 minimum and #14 common ground at 18" depth minimum. Splicing of 24 volt wires will not be permitted except in valve boxes. Leave a 24" coil of excess wire at each splice and 100 feet on center along wire run. Tape wire in bundles 10 feet on center. No taping permitted inside sleeves.

15. Install a spare control wire of a different color along the entire main line. Loop 36" excess wire into each single valve box and into one valve box in each group of valves.

16. Prior to trenching, call Underground Service Alert, 1-800-642-2444 to locate all cables, conduits, and other utilities and take proper precautions not to damage or disturb existing utilities.

17. All Main lines and Lateral lines under paving shall be in PVC sleeves which extend 12" into planting areas. All backfill shall be free of rocks greater than 1" diameter. For ring-tite PVC main line piping inside sleeves use 1120-315 PSI PVC plastic pipe with schedule 40 PVC couplings.

18. When applicable, Schedule 80, ASTM D2466 male adapters to be used where mainline connects to copper pipe service lines installed by others.

19. Copper pipe shall be joined to steel or cast iron pipe with a dielectric union.

20. In addition to the sleeves and conduits shown on the plans the Contractor shall be responsible for the installation of sleeves and conduits of sufficient size under all paved areas.

21. Locate quick coupling valve 12" from hardscape area.

22. The irrigation system design is based on the minimum operating Pressure (PSI) and Flow (GPM) shown on the irrigation drawings (see Irrigation Demand at P.O.C.). The Contractor shall verify the Static and Dynamic water pressure (PSI) and Flow Rate (GPM) at the point of connection (P.O.C.) prior to construction as follows:

   A. Static Pressure: take PSI reading at P.O.C. with no water flowing.

   B. Dynamic Pressure: install at P.O.C. a pressure (PSI) and flow gauge (GPM) assembly of suitable size* to take flow (GPM) readings in the range of the stated Irrigation Demand for the irrigation system design. Open valve or meter at P.O.C. until GPM flow reading equals or exceeds irrigation GPM demand. Note dynamic pressure and flow readings. If the GPM flow does not equal or exceed the GPM demand, note highest flow reading possible.

   C. Readings shall be taken at the following times: 1PM, 5PM, 9PM, 1AM, 5AM, 9AM.

   * Irrigation systems with high irrigation demand GPM flow rates, will require large capacity test gauge assemblies.

Submit to Owner's Representative and Landscape Architect results of Pressure and Flow Tests prior to beginning work. Note any discrepancies of 10 PSI or more or flow rates lower than stated Irrigation Demand on plans to Owner's Representative and Landscape Architect. If there are discrepancies of 10 PSI or more or flow rates lower than stated Irrigation Demand on plans, system may not perform correctly - do not proceed with irrigation system installation until corrective measures are determined. Note, Contractor shall be responsible for any corrective measures required to the irrigation system, at no additional cost to the Owner, if irrigation system is installed without required tests, and discrepancies in Pressure and Flow at the P.O.C. are discovered that prevent the irrigation system from functioning correctly.

28. Meter(s) indicated on the Drawing(s) is supplied and installed by others, unless otherwise indicated. The Contractor is responsible for furnishing all proper fittings.

29. All irrigation piping shall be subjected to hydrostatic pressure tests as follows before backfilling trenches: Valves, pumps, and accurately calibrated recording gauges shall be installed in at least two places. Supply lines shall be tested at 125 psi for at least 4 hours with an allowable loss of 5 psi. Laterals lines shall be tested at the existing static psi for at least 1 hour with an allowable loss of 5 psi. Any leaks shall be corrected and piping re-tested until the system meet the requirements. The Contractor shall notify the Owner's Representative at least 3 days in advance of the time that the irrigation system piping is to be tested. Submit written test results to Owner's Representative and Landscape Architect.

30. Contractor to notify all local jurisdictions for inspection and testing of installed backflow prevention device.

31. The entire irrigation system shall be operating properly before any lawn or ground cover is planted.

32. The Contractor shall provide Owner with a clean set of marked prints of "RECORD DRAWINGS" drawings. Reference all trenches, valves, controllers, splice boxes, quick couplers, backflow preventers, water meters, with dimensions to nearest building or paving.

33. The Contractor shall guarantee the irrigation system will be free of defects of workmanship and materials for a period of one year. All repairs necessary shall be made at no cost to the Owner with the exception of repairs and labor cost made necessary by vandalism.

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PROJECT MANAGER: MT
DRAWN BY: EO
CHECKED BY: ZA

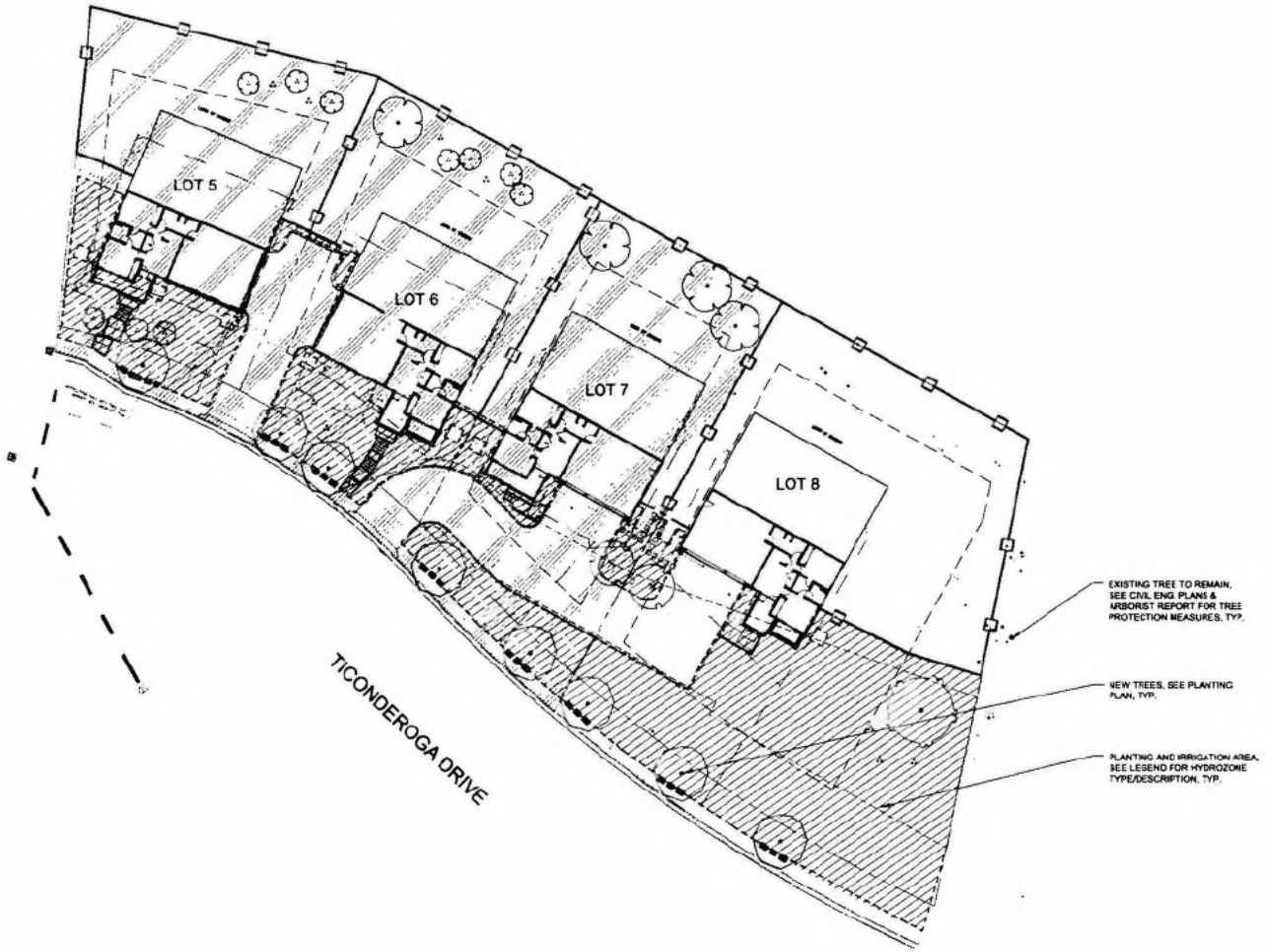
PROJECT NAME/LOCATION:
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

DRAWING TITLE:
LANDSCAPE IMPROVEMENT PLANS
LOT 8

NO.	DESCRIPTION	BY	DATE

SHEET TITLE:
IRRIGATION LEGEND & SPECIFICATIONS

SCALE: NA
ISSUE DATE: 02/18/16
PROJECT NO: V6219
SHEET NO: L4.1



HYRDOZONE AREA LEGEND

SYMBOL	HYDROZONE	DESCRIPTION	IRRIG. METHOD	LOT 5 SF	LOT 6 SF	LOT 7 SF	LOT 8 SF	LOT 9 SF	LOT 10 SF	LOT 11 SF	TOTAL AREA SF	%LANDSCAPE AREA
	1	LOW WATER USE, SUN EXPOSURE, DRIP IRRIGATED TREE, SHRUB & GROUND COVER AREAS	DRIP	2,458 SF +	2,051 SF +	2,111 SF +	9,853 SF +	3,379 SF +	3,039 SF +	2,752 SF =	25,643 SF	90.9%
	2	MEDIUM WATER USE, SHADE EXPOSURE, DRIP IRRIGATED TREE, SHRUB & GROUND COVER AREAS	DRIP	0 SF +	0 SF +	0 SF +	0 SF +	1,469 SF +	486 SF +	612 SF =	2,567 SF	9.1%
										TOTAL SITE (ALL LOTS) SF =	28,210 SF	100%

SAN MATEO COUNTY WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE STATEMENT:

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN."

ZEKI ABED - LICENSED LANDSCAPE ARCHITECT

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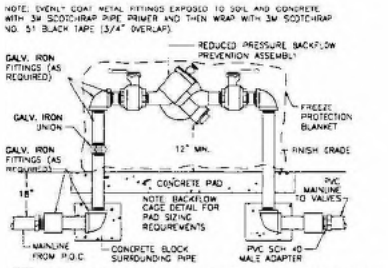
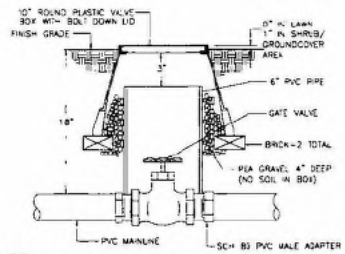
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 8

HYDROZONE PLAN

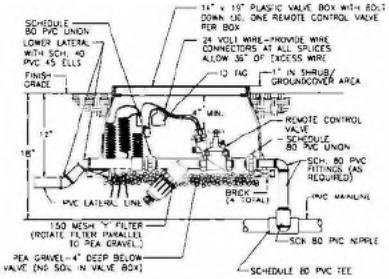
SCALE: 1" = 20'-0"
ISSUE DATE: 02/18/16
PROJECT NO: V0219
SHEET NO: L4.2



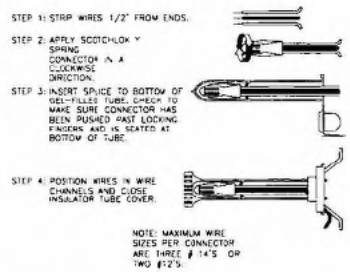
1 REDUCED PRESSURE BACKFLOW PREVENTER DETAIL
NOT TO SCALE



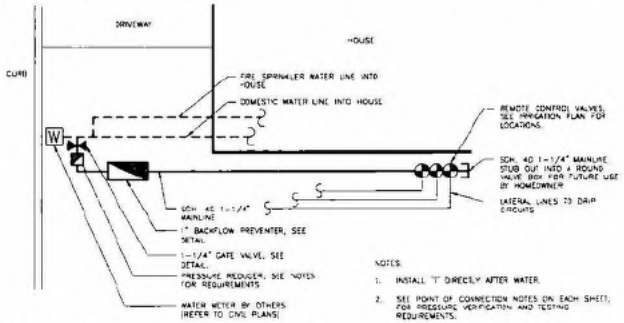
2 GATE VALVE DETAIL
NOT TO SCALE



3 REMOTE CONTROL VALVE & 'Y' FILTER DETAIL
NOT TO SCALE



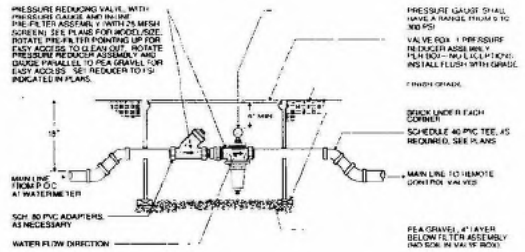
4 WIRE CONNECTION DETAIL
NOT TO SCALE



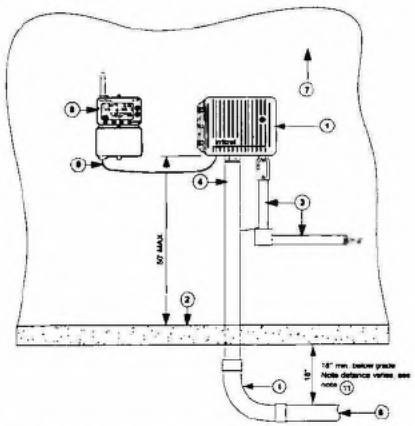
NOTES:
1. INSTALL 'T' DIRECTLY AFTER WATER.
2. SEE POINT OF CONNECTION NOTES ON EACH SHEET, FOR PRESSURE VERIFICATION AND TESTING REQUIREMENTS.

5 IRRIGATION SYSTEM P.O.C. AT EACH LOT DETAIL
NOT TO SCALE

NOTES:
PRESSURE REDUCER SHALL BE 1-1/4" LEAD FREE WILKINS 500XLYSBW (INCLUDES PRESSURE REDUCER & FILTER), SET AT 50 PSI. SEE NOTES ON IRRIGATION PLANS FOR INSTALLATION REQUIREMENTS.

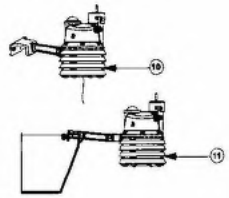


6 PRESSURE REDUCER DETAIL
NOT TO SCALE

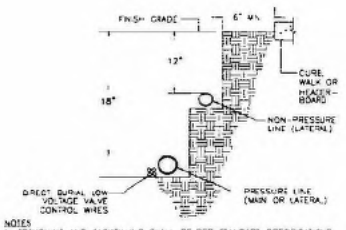


1. Irrigation controller. Install controller in location as directed by Owner's Representative.
2. Garage finish surface.
3. 1/2" UL approved electrical conduit, ring nut and junction box for 120V AC electrical power. Contractor to proved 120 volt AC electrical power to controller, see notes on Irrigation Plans.
4. PVC schedule 40 control wire conduit (size as required)
5. PVC sweep ell to conduit through bldg to exterior planting area 18" below grade.
6. End conduit 12" beyond edge of bldg., 18" below grade.
7. Interior wall in garage area.
8. Climate Logic™ receiver module mounted near the compatible controller. Mount with screws at eye level.
9. Single connection cord plugged into controllers remote port.
10. Climate Logic™ weather sensor mounted outdoors on flat surface using screws. , see notes on Irrigation Plans.
11. Climate Logic™ weather sensor mounted on a rain gutter using QuickClip™ guttermount, see notes on Irrigation Plans.
11. Note: at lots where garage areas are elevated above grade, route conduit down side of bldg./structural piers out site where possible, to 18" below grade. Paint exposed conduit to match house color as directed by Owner's Representative.

7 IRRIGATION CONTROLLER & WIRELESS WEATHER SENSOR DETAIL
NOT TO SCALE



NOTES:
1. Irrigation controller is not shown on the irrigation plan. Irrigation controller to be installed in garage as directed by Owner's Representative.
2. 120 volt AC power to controller per Electrical Plans.
3. Wireless weather sensor unit to be installed on edge of bldg. in area open to sky with full sun exposure, in location approved by Owner's Representative. Locate sensor unit within radio communication range of controller.
4. All electrical work must conform to local codes. Refer to product literature for additional installation requirements.



NOTES:
1. TRENCHING AND BACKFILLING SHALL BE PER STANDARD SPECIFICATIONS.
2. MINIMUM BACKFILL RELATIVE COMPACTION SHALL BE 90%.
3. BUNDLE CONTROL WIRES TOGETHER AND TAPE AT 10' INTERVALS.
4. 4" MIN. HORIZONTAL DISTANCE BETWEEN PIPES IN COMMON TRENCH.
5. ALL PLASTIC IRRIGATION PIPING TO BE SNAKED IN TRENCHES.

8 IRRIGATION LINE TRENCHING
NOT TO SCALE

CLIENT:
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655 Skyway, Suite 250
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PROJECT MANAGER: WA
DRAWN BY: MA
CHECKED BY: WA

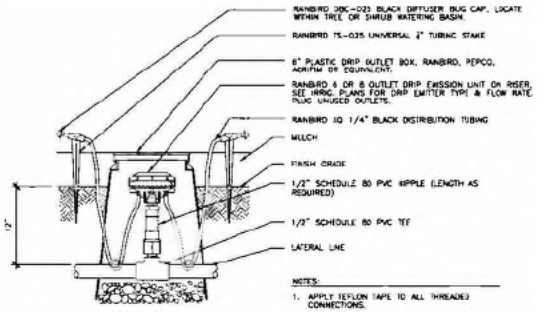
PROJECT NAME/LOCATION:
HIGHLAND ESTATES
SAN MATEO, CALIFORNIA
LOT 8

SHEET TITLE:
LANDSCAPE IMPROVEMENT PLANS

DATE | BY | DESCRIPTION

SHEET TITLE:
IRRIGATION DETAILS

SCALE: AS SHOWN
DATE: 02/18/16
PROJECT NO.: Y0219
SHEET NO.: L4.3



SECTION

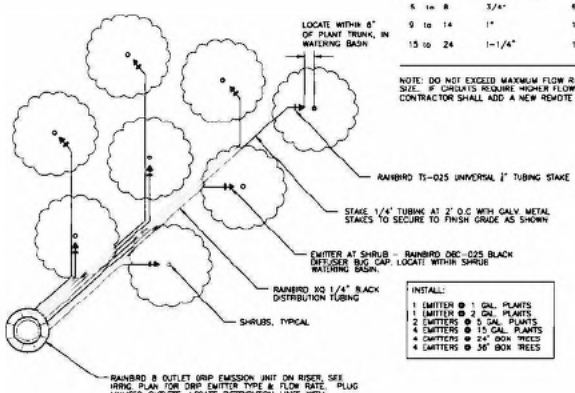
NOTES:

1. APPLY TEFLON TAPE TO ALL THREADED CONNECTIONS.
2. SEE DRIP LATERAL PIPE SIZING CHART FOR SIZING LATERAL LINES.
3. 1/4" DISTRIBUTION TUBING MAXIMUM LENGTH SHALL NOT EXCEED 20'.

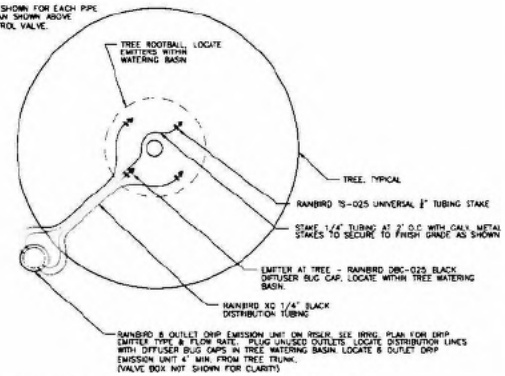
DRIP SHRUB/GC LATERAL PIPE SIZING CHART

GPM FLOW RATE	SIZE OF CLASS 200 PVC PIPE	MAX. QUANTITY OF RAINBIRD 6-OUTLET DRIP EMISSION UNITS (WITH 1.0 GPM EMITTERS)
5 to 8	3/4"	68
9 to 14	1"	101
15 to 24	1-1/4"	178

NOTE: DO NOT EXCEED MAXIMUM FLOW RATES SHOWN FOR EACH PIPE SIZE. IF CIRCUITS REQUIRE HIGHER FLOWS THAN SHOWN ABOVE CONTRACTOR SHALL ADD A NEW REMOTE CONTROL VALVE.



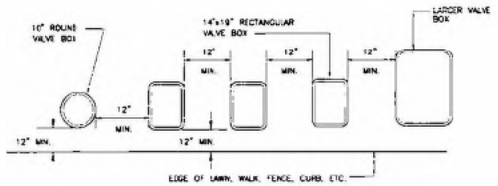
PLAN VIEW - RAINBIRD 8 OUTLET DRIP EMITTER LAYOUT @ SHRUBS/GROUND COVERS



PLAN VIEW - RAINBIRD 6 OUTLET DRIP EMITTER LAYOUT @ TREES

1 8-OUTLET & 6-OUTLET DRIP EMITTER ON RISER DETAIL

NOT TO SCALE



TOP VIEW

NOTES

1. CENTER BOX OVER VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA.
3. SET VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN AREA ONLY IF GROUND COVER/SHRUB AREA DOES NOT EXIST ADJACENT TO LAWN.
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOX EDGES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
6. VALVE BOXES SHALL HAVE BOLT DOWN LIDS WITH BOLTS INSTALLED.
7. VALVE BOXES SHALL BE BY CARSON, OR EQUIVALENT.

2 VALVE BOX LAYOUT DETAIL

NOT TO SCALE

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PROJECT MANAGER
DRAWN BY
CHECKED BY

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 8

NO.	DESCRIPTION	DATE

SHEET TITLE
IRRIGATION DETAILS

SCALE
AS SHOWN
ISSUE DATE
02/18/16
PROJECT NO.
Y0219
SHEET NO.
L4.4

GENERAL NOTES:

1. Contractor shall verify all existing site conditions prior to beginning construction. Notify Owner's Representative of any discrepancies.
2. The Contractor shall provide all materials, labor and equipment to complete all landscape work as shown on the plans and specifications.
3. If there is a conflict with the utilities and the planting, the Owner's Representative is to be responsible for spotting new plant locations prior to the planting process.
4. The Contractor shall be responsible for any damage to existing utilities, pavement or improvements. All repairs shall be made at no expense to the Owner.
5. The Contractor shall notify the Owner's Representative prior to beginning construction and shall keep the Owner's Representative informed of progress of work throughout landscape construction.
6. All work shall be installed in conformance with all applicable local codes and ordinances by experienced workman and a licensed Contractor who shall obtain all necessary permits and pay all required fees.
7. Any requirement in the Plans and / or Notes and Specifications shall be considered binding. In case of discrepancies the Owner's Representative shall be contacted immediately.
8. It is the Contractor's responsibility to schedule regular site visits by the Owner's Representative/Landscape Architect throughout landscape construction, at the beginning of the maintenance period, and final site review will be required.
9. Execute weekly cleaning of the site throughout the contract period to remove all waste materials, rubbish, plant containers, etc.
10. See Civil Engineer's improvement plans for all general grading information and notes.
11. All written dimensions supersede scaled distances. All dimensions are taken from back of curb, face of building, face of wall finish or face of fence.
12. Upon award of bid and prior to any construction, the Contractor shall perform the Percolation and Soils Testing as specified in the Planting Notes, if these tests have not already been performed. If drainage is found to be insufficient, or soils test results identify conditions requiring extraordinary or corrective measures, the Contractor shall immediately alert the Owner's Representative and Landscape Architect of any such problems, for corrective action and/or additional drainage treatment.

GRADING NOTES:

1. See General Notes and Civil Engineer's Grading Plans for additional information.
2. Rough grading and site drainage shall have been completed prior to Contractor's work. Verify all existing site conditions and report any discrepancies to Owner's Representative.
3. Contractor shall be responsible for finish grading. Verify positive drainage at a minimum 2% slope in landscape areas away from buildings and paved surfaces. Shrub areas shall be 1-1/2" below top of adjacent paving, headers, or curbs. No low spots which hold standing water will be permitted.
4. All salvageable, clean top soil from areas to be paved shall be stockpiled to be used as fill in planting areas.

CONSTRUCTION NOTES:

1. Concrete work: Install concrete work as detailed. Layout of concrete work shall be as shown on construction plans and as specified below.
   A. Layout shall be approved by Owner's representative/Landscape Architect prior to concrete pour. Contact Owner's Representative two days in advance.
2. Paving installation:
   B. Concrete Materials: For paving, concrete shall be a 5 sack mix producing concrete having a 28 day strength not less than 2500 psi. For walls concrete shall be 6 sack mix.
1. Portland cement: Conforming to ASTM. C150 Type I or II. Total alkali content not to exceed 0.60%. Deliver cement and all materials in labeled, unopened containers.
2. Form coatings: Standard product resin type sealer. Do not use form oil or any oil-bearing material.
3. Concrete aggregates: Conform to ASTM C33. Maximum 3/4" size aggregate.
4. Base course aggregates: Conform to ASTM C33. Maximum 3/4" size aggregate.
5. Water: Clean and potable.
6. Forms: Form material is Sub-contractor's option.
7. Admixtures or finish retarders: For workability, where approved by Owner's representative, and admixture may be added in accordance with manufacturer's recommendations. Obtain approval of material prior to use.
8. Expansion joint material: 3/8" thick pre-molded joint filler, conforming to ASTM D1751 or D1752.
9. Reinforcing steel:
   a. Bars: Deformed, intermediate grade, conforming to ASTM A615, Grade 40 for sizes #5 and smaller.
   b. Tie wire: Annealed copper-bearing steel wire, minimum 16 gauge.
10. Welded wire mesh: 6" x 6" x #10.
11. Liquid curing compound as required: Thompson's approved standard product fugitive resin type, or equal conforming to ASTM C309, free of wax or oil, compatible with subsequently applied finishes or coverings, not deleterious to bond of cementitious materials to aggregate.
12. Patching mortar: One part Portland cement or equal (part white and part grey adjusted to match color of surrounding concrete) and 2-1/2 parts sand with the least water required to produce a workable mass. Rework the mortar until it is the stiffest consistency that will permit placing.
   C. Concrete Installation.
1. Construct the subgrade true to grade and detail as shown. Compact subgrade to 90% maximum density at optimum moisture content.
2. Set forms with upper edges true to line and grade. Properly brace or tie together to maintain position and shape. Remove side forms not sooner than 12 hours after finishing has been completed. Form curves and straight sections for smooth and continuous lines. Secure Owner's representative's approval of subgrade compaction and moisture content and form alignment prior to pouring concrete.
3. Embedded items: Do not place any concrete until all inserted items such as sleeves, anchor bolts, wood, nails, dowels, etc. are installed in their proper locations, secured against displacement, cleaned, inspected and approved. Furnish ties and supports necessary to keep embedded items in place when concrete is placed.
4. Weather: Do not place concrete during rain unless approved measures are taken to prevent damage to concrete.
5. Deposit concrete evenly, consolidate with mechanical vibrators, particularly at side forms and strike off to indicated elevations and contour.
6. Concrete finishes shall be even surfaces of uniform texture and appearance, free of unsightly bulges, depressions and other imperfections and as follows:

   Medium broom finish: Broom with coarse bristled broom across width of flatwork to a uniformly roughened surface. Finished surface and edges shall be clean with uniform and reasonably straight lines. Submit Sample.

   Light broom finish: Broom with janitor's push broom type, with soft bristles, across width to a uniformly roughened surface. There shall be no deeply incised or obvious lines. Submit sample.

   Steel trowel finish: After floating, and no free water is evident and/or no cement sticks to the finger when touching slab, steel trowel until hard. All trowel marks eliminated. Final trowelling done when a ringing sound is produced as the trowel is moved over the surface.

   Joints: Joints shall be tooled with one-quarter inch (1/4") radius edging tool or as shown on plans.

   Edges: Edge slabs one-half (1/2") inch radius, edge curbs and other structures three-quarters inch (3/4") radius unless otherwise shown.
7. Remove flange marks: Remove flange marks resulting from tooling of edges by carefully trowelling out, unless specifically detailed in plans.

CARPENTRY NOTES:

A. Wood materials: See details for type of wood for each item.

1. Wood shall be selected for straightness and smoothness, size and grade as shown in plans.
   B. Workmanship: Carefully plan and layout the work as required. Properly accommodate the work of other trades. Accurately saw-cut and fit lumber into the respective locations true to line, grade, and level, as indicated or required, and permanently secure in proper position with spikes, nails, lag screws, bolts, hangers, or other fastenings to make the work substantial and rigid in all parts and connections.
   C. Connections: Make connections between members tight, accurate and secure. Place fastenings without splitting wood, predrill when required. Drill bolt holes same size as bolt diameter. Drill holes for lag screws same size as thread root diameter, and counterbore, same depth and diameter as shank. Turn lag screws into place, do not drive. Provide bolts and lag screws with washers under every head and nut bearing on wood. Tighten bolts and lag screws at installation, carefully retighten just prior to closing in, or at completion of project.
   D. Finishing: As per plan.
   E. Redwood header layout: All curved sections shall be smooth and continuous. Layout shall be approved by Owner's representative.
2. Hardware:
   A. All metal bolts, nails, screws and other hardware shall be galvanized steel, sized as shown on the plans.
   B. All visible hardware shall be painted with two coats of black rustproof paint or to match architectural colors. Color to be approved by Owner's representative.
   C. All hardware for metal gates to be approved by Owner's representative.
3. Metal:
   A. Provide complete shop drawings for all metal fabrication.
   B. Fabricate all exterior steel work in shop, including all welding. All metal work shall conform to ASTM specifications. Miter corners and angles of moldings or frames unless otherwise noted.
   C. Shop primer: One coat of primer, semi-quick drying. Painting: After material has been properly cleaned, apply shop prime coat of paint to all surfaces. Apply all paint in accordance with manufacturer's directions. Spot paint all abrasions and field connections after assembly.
   D. Installation: Set all work plumb, true, rigid and neatly trimmed-out as detailed. Provide all necessary connections, anchor bolts etc. required to fit metal with other work.
   E. Protect all metal from damage to surface, profile or to shape from shop through construction to final acceptance of project.
   F. Color: Color to be approved by Owner's representative, submit sample for approval.
   G. All defective work shall be repaired or replaced as directed Owner's representative.
   H. All exposed site metal for utilities, irrigation, etc., shall be painted with one coat brown rustproof paint.

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PROJECT NAME
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 8

NO	DESCRIPTION	BY	DATE
1	-	-	-

SHEET TITLE
LANDSCAPE NOTES & SPECIFICATIONS
SCALE -
DESIGN DATE 02/18/16
PROJECT NO V0210
SHEET NO. L5.0

PLANTING NOTES:

1. **See General Notes.**

2. Submittals: Contractor shall submit the following items to Owner's Representative and Landscape Architect for review/approval prior to beginning planting installation operations:

   A. Soils tests: Initial site soils test & post amendment installation test)

   B. Vendor data for landscape products, including: bark mulch, root barriers, fertilizers, soil amendments, and soil conditioners.

   C. Written results of percolation tests

3. The Contractor shall verify the availability of all landscape plants within 10 days following award of the contract. Discrepancies or other problems and all plant substitutions shall be resolved at this time. If a substitute is authorized by the Owner's Representative, it must be of the same size, value and quality as the original plant.

4. All trees and representative samples of shrubs/ground covers shall be inspected at the site for approval by the Owner's Representative and meet the following standards:

   A. Quality and size shall conform to the State of California Grading Code of Nursery Stock, No. 1 grade and to the current issue of the American Standard for Nursery Stock published by the American Association of Nurserymen. Use only nursery-grown stock. The Owner's Representative will inspect plants for approval prior to any installation.

   B. Plant material must be selected from nurseries that have been inspected by state or federal agencies.

   C. Nomenclature will be in accordance with Hortus III.

   D. Plant materials will not be accepted that are overgrown, root-bound, or too recently canned so that the root system is not thoroughly established throughout the can. Pruning shall not be done prior to delivery except as authorized by the Owner's Representative.

5. Grading and Topsoil:

   A. See Grading Notes.

   B. Soil Test: Contractor shall submit three (3) representative soil samples to Soil and Plant Laboratory, Santa Clara or approved equal to be tested for agricultural suitability and fertility with pre-plant and post-plant recommendations, immediately following the completion of rough grading. Soil samples shall be taken from location determined by the Owner's Representative. Soil shall be certified as clean and free of hazardous material or waste contamination. Notify Owner's Representative of any soils problems noted in the soils test report that could potentially effect/impact plant health, including but not limited to the following: high or low soil pH, poor soil drainage, excessive soil compaction, different soil types in the same test sample, deficient or excess nutrient levels, high salt levels, high boron or other elements and compounds toxic to plants, etc. Submit report to Landscape Architect and Owner's Representative for review and approval prior to beginning work. Do not proceed with any amending operations until soils report has been reviewed and approved.

   C. Compost to be used for soil amendment at the rate indicated by the soil analysis to bring the soil organic matter content to a minimum of 3.5% by dry weight or 2" of compost. Contractor may 1) import topsoil to meet organic matter content listed, or 2) submit soils report that identifies existing topsoil meets or exceeds the specified organic matter content. (Bay-Friendly score card item C.7.a.i)

      Soil amendment to be added as follows in all planting areas: **(Applied rates of soil amendment and commercial fertilizer shall be used for bidding purpose until determined by soil tests.)**

      Amount per 1000 square feet:

      6 cubic yards Compost

      20 lbs. 8-20-20 fertilizer (Best's Cropmaker)

      10 lbs. 0-25-0 Single super phosphate

      10 lbs. iron sulfate

   D. Soil amendment in all planting areas shall be uniformly spread and thoroughly incorporated to a soil depth of 6" minimum by repeated rotary hoe cultivation prior to planting.

   E. Post Amendment Installation Soil Testing for Compliance: After incorporating amendments, fertilizers and conditioners, Contractor shall take three (3) representative soil samples and have samples tested for Agricultural Suitability and Fertility by an approved soils analysis laboratory for compliance with original soil test report recommendations. Add any additional amendments, fertilizers and conditioners recommended by soils analysis laboratory at no cost to Owner. Notify Owner's Representative of any potential soils problems noted in the report. Submit report for amendment/fertilizer/conditioner compliance to Landscape Architect and Owner's Representative prior to beginning planting operations.

6. Tree and Shrub Planting:

   Prior to digging holes for final planting, the Contractor shall spot all trees as shown on the Drawings for approval by the Landscape Architect.

   A. Soil amendments and fertilizer shall have been incorporated into the soil prior to tree and shrub planting.

   B. Dig pits as shown on Drawings.

   C. After pits are dug, break sides and bottom of holes to open wall of pit for root penetration.

   D. Percolation Test: All plant pits shall be tested for sufficient drainage prior to planting. Representative plant pits shall be dug (at least 2) at site upon award of Bid to test for general site subgrade drainage conditions. Individual planting pits shall also be tested again for sufficient drainage prior to planting. Contractor shall fill plant pits with water, to see if subsoil conditions will cause retention of water within plant pits overnight. If standing water is still observed after 12 hours, then Contractor shall alert Owner's Representative and Landscape Architect of the problem.

   E. Planting backfill mix for trees and shrubs shall be:

      Amount per Cubic Yard:

      3/4 cubic yard On site soil

      1/4 cubic yard compost

      1.5 lbs. 8-20-20 fertilizer (Best's Cropmaker)

      2.5 lbs. 0-25-0 Single super phosphate

      1 lb. iron sulfate

   (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purpose until determined by soil tests)

   F. Fertilize plants at the time of planting with Agriform 21 gram fertilizer packets, 20-10-5: 2 per 1 gallon can; 3 per 5 gallon can; 4 per 15 gallon can; specimen trees-3 per inch of caliper.

   G. Plants shall be aired after planting, and staked or guyed as detailed at the time of planting. Remove nursery stakes.

   H. Rootball crown shall be 2" above finish grade after watering and settling.

   I. Tree and shrub plantings areas to be watered and flooded to eliminate air pockets within 2 hours of the time of planting.

   J. All vines shall be trained to posts, fences or walls by tying select individual branches with plastic covered wire ties as follows: ties shall be attached to wood surfaces with 3/4" galvanized iron staples and attached to stucco or masonry surfaces with epoxy as recommended by manufacturer. See planting details.

   K. All trees shall be planted 10'-0" minimum from buildings including overhangs and 5'-0" minimum from curbs, paving, fences, etc. Orient main branches of trees away from building. Should any discrepancies occur between field conditions and planting plans contact Owner's Representative. All trees closer than 5'-0" from curbs, foundations, sidewalks, or other hardscape items, shall be installed with linear root deflector panels protecting adjacent hardscape items, but never fully surrounding rootball. Install a 10 foot by 24 inch deep section of linear interlocking root deflector panels, centered on tree (5 feet on each side), located at curb, foundation, sidewalks, other landscape items, unless otherwise indicated. See plans for detail.

   L. All trees shall be planted a minimum of 5'-0" away from storm drain, or other underground utility lines (or per code), and 12'-0" away from sanitary sewer lines (or per code), and 15'-0" minimum away from utility poles or light standards (or per code).

   M. All planting areas to recieve 3" layer of bark mulch, natural color, no dyes.

   N. All trees and shrubs shall have watering basins around them. Basin diameters shall be the same size as the tree or shrub's rootball. Basins shall be formed with level bottoms and 3 inch high walls. Planting areas to receive 3" depth of bark mulch unless otherwise indicated. Submit sample for approval.

   O. Soil amendments shall have been incorporated into the soil prior to planting.

   P. Clear planting areas of rocks and debris greater than 1" diameter.

   Q. Apply a pre-emergent herbicide, per manufacturer's directions.

   R. All planting areas with slopes greater than 2:1 shall have jute mesh installed as per detail, or per manufacturer recommendations.

   S. Thirty (30) days after planting, replace all dead plants and fill in bare areas. Top dress with 16-6-8 fertilizer at 7 lbs./1000 sq. ft. when ground is dry and thoroughly irrigate promptly after application.

   (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purpose until determined by soil tests)

7. NOT USED

8. Workmanship:

   Precautions shall be taken to avoid damage to existing plants, turf and structures. Any areas damaged shall be restored to their original condition.

9. Clean-up:

   Keep all areas of work clean, neat and orderly at all times. Keep all paved areas clean during planting and maintenance operations.

10. Site Visits and Approvals:

    The Contractor shall contact the Owner's Representative for review and approval of plant materials and plant locations. The maintenance period begins following acceptance of plant installation.

11. Maintenance:

    A. Begin maintenance after each plant is installed and continue until Final Acceptance.

    B. Maintenance Period shall begin upon inspection and approval by Owner's Representative and shall be for 90 calendar days.

    C. Maintenance of new planting shall consist of watering, cultivating, weeding, mulching, re-staking, tightening and repairing of guys, resetting plants to proper grades or upright position, restoration of the planting saucer, and furnishing and applying such sprays and invigorates as are necessary to keep the plantings free of insects and disease and in thriving condition.

    D. Protect planting areas and plants at all times against damage of all kinds, including frost, for duration of maintenance period. Maintenance includes temporary protection fences, barriers, covers during frost and signs as required for protection. If any plants become damaged or injured, treat or replace as directed by Landscape Architect at no additional cost to Owner.

13. Guarantee:

    A. Replacement trees shall be in thriving condition 3 years from the date of final acceptance. Any replacement trees which have lost at least 30% of their normal foliage or are not in vigorous growing condition shall be replaced.

    B. All other trees, shrubs, grasses, ground covers shall be in thriving condition 1 year from the date of final acceptance. Replace any trees which have lost at least 30% of their normal foliage or are not in vigorous growing condition.

CLIENT
CHAMBERLIN GROUP
605 Shipway, Suite 230
San Carlos, CA 94070
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800.227.2600

VAN DORN ABED
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81 14TH ST. SAN FRANCISCO, CA
TF 94103 PH 415 861-7021 FAX 415 861-4276

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 8

REVISIONS	NO	DESCRIPTION	BY	DATE

SHEET TITLE
LANDSCAPE NOTES & SPECIFICATIONS
SCALE
ISSUE DATE
02/18/16
PROJECT NO.
V0219
SHEET NO.
L5.1

HIGHLAND ESTATES

LOT 9 – LANDSCAPE PLANS

VICINITY MAP

SITE MAP

SHEET INDEX

SHEET NUMBER	SHEET TITLE
L0.0	COVER SHEET
L1.0	CALLOUT PLAN
L2.0	PLANTING PLAN
L3.0-L3.1	LANDSCAPE DETAILS
L4.0-L4.1	IRRIGATION PLAN & LEGEND
L4.2	HYDROZONE PLAN
L4.3-L4.4	IRRIGATION DETAILS
L5.0-L5.1	LANDSCAPE SPECIFICATIONS

REVISION LOG

DATE	SHEET NUMBER	DESCRIPTION

CLIENT
CHAMBERLAIN GROUP
655 Skyway, Suite 250
San Carlos, CA 94070
(650) 595.5882

811
800.227.2600

VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.
[illegible]

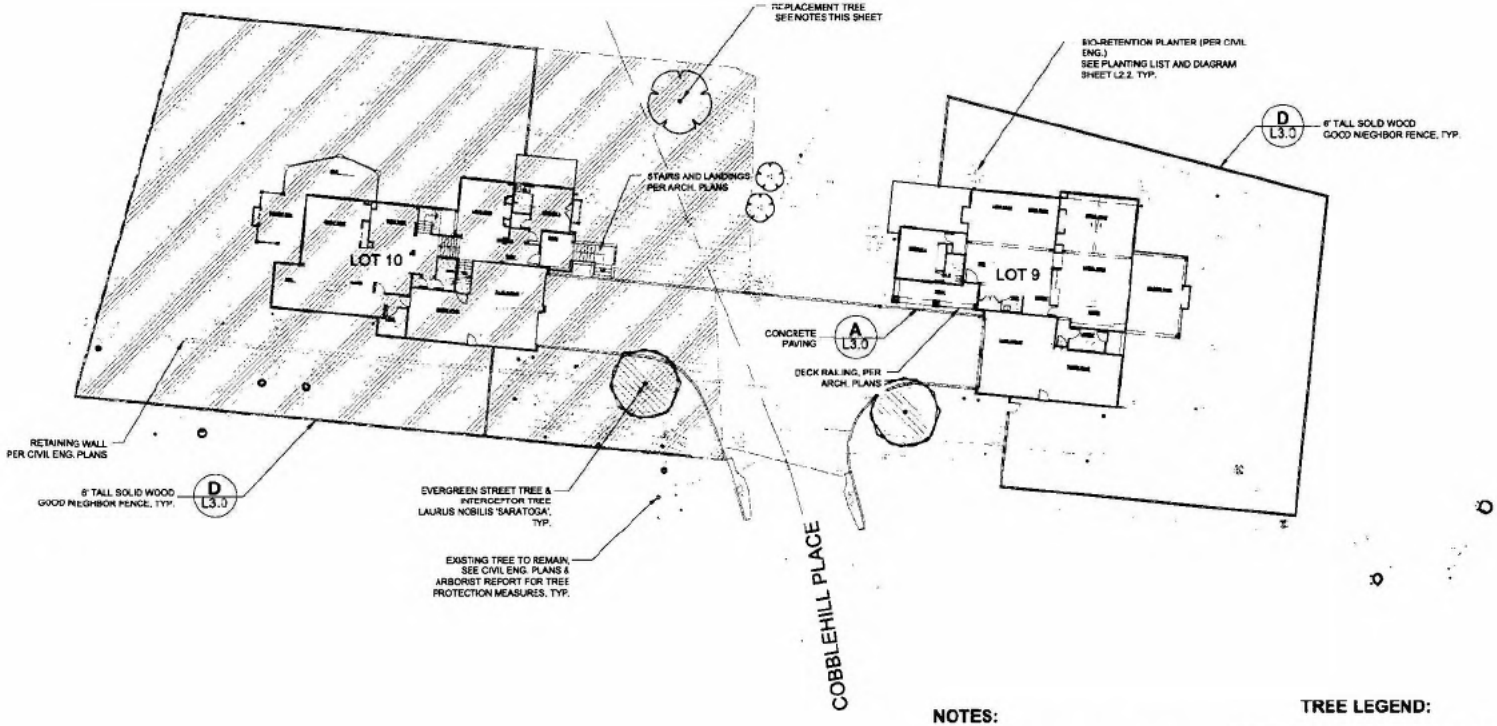
PROJECT MANAGER
DESIGNED BY
DRAWN BY
CHECKED BY

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 9

REVISIONS
NO | DESCRIPTION | BY | DATE

SHEET TITLE
COVER SHEET

SCALE
NTS
ISSUE DATE
02/18/16
PROJECT NO.
V0219
SHEET NO.
L0.0



NOTES:

1. NO PLANTING OR IRRIGATION SHALL OCCUR UNDER THE CANOPIES OF THE EXISTING OAK TREES. FIELD ADJUST NEW REPLACEMENT TREES AS NEEDED.

TREE LEGEND:

	STORMWATER CREDIT/EVERGREEN INTERCEPTOR TREES LAURUS NOBILIS 'SARATOGA' 11 TOTAL WITHIN 25' OF IMPERVIOUS SURFACE.
	PROPOSED REPLACEMENT TREES - SEE L2.2 FOR COMPLETE TREE SPECIES/LEGEND TOTAL SITE: 23 REPLACEMENT TREES REQUIRED 33 REPLACEMENT TREES PROVIDED LOT 9: 3 REPLACEMENT TREES PROVIDED
	EXISTING TREES TO REMAIN, TYP. SEE CIVIL PLANS AND ARBORISTS REPORT FOR TREE PROTECTION MEASURES

0 8 16 32 64

CLIENT
CHAMBERLAIN GROUP
850 Stanley, Suite 250
Palo Alto, CA 94303
(650) 580.5582

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87 WEST H STREET, SAN RAFAEL, CA 94901
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PROJECT MANAGER: MW
DRAWN BY: MW
CHECKED BY: ZA

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO
CALIFORNIA

DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 9

NO	DESCRIPTION	BY	DATE

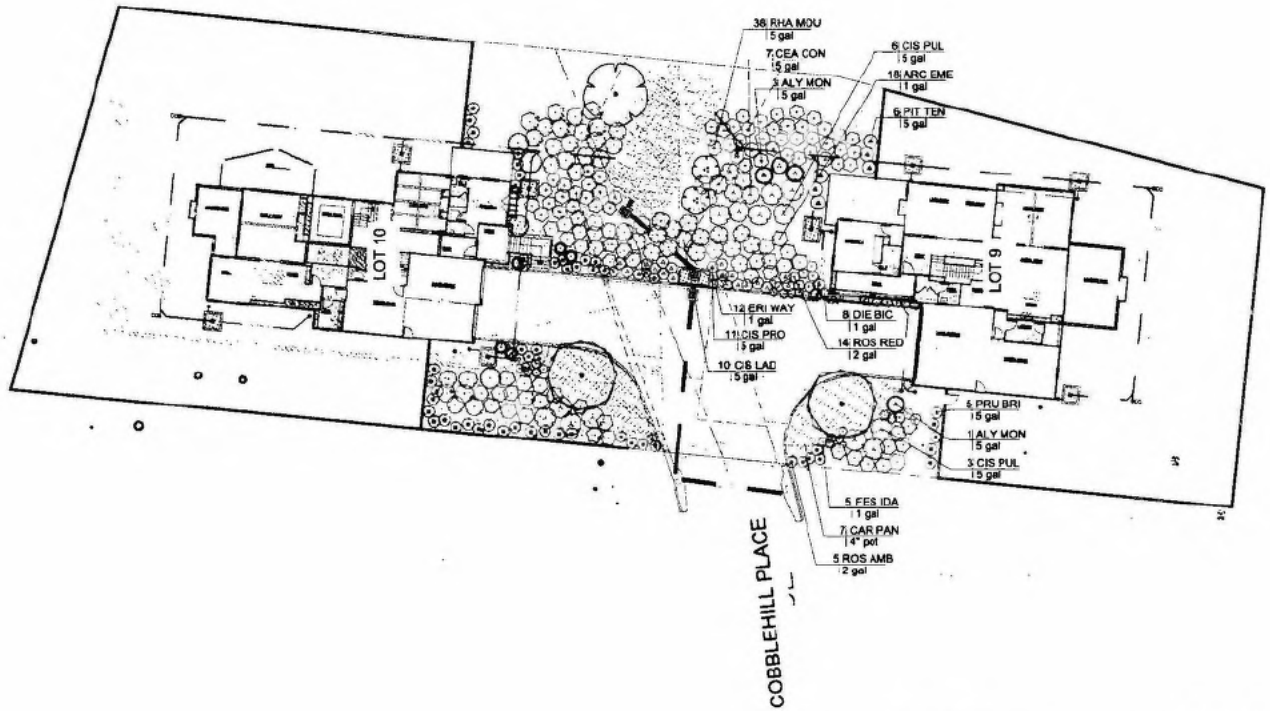
SHEET TITLE
CALLOUT & LAYOUT PLAN

SCALE
1/16" = 1'-0"

ISSUE DATE
02/18/16

PROJECT NO:
V0219

SHEET NO:
L1.0



PLANTING NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. **NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY.**
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.
4. IRRIGATION DRIP SYSTEM SHALL BE ADJUSTED AS REQ'D FOR OPTIMUM WATER SAVINGS AND NO RUN OFF.

EROSION CONTROL NOTES:

1. LEAVE EROSION CONTROL JUTE MESH ON ALL SLOPES. CUT HOLES FOR NEW SHRUBS AS NEEDED.

EXISTING OAK TREE NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY.
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.

SAN MATEO COUNTY WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE STATEMENT:

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN."

ZEKI ABED - LICENSED LANDSCAPE ARCHITECT

0 8 16 32 64

CRANBERLAIN GROUP
855 Skyway, Suite 250
San Carlos, CA 94070
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VAN DORN ABED
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SAN MATEO, CA 94401 PH (650) 344-1100 FAX (650) 344-1101

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

LANDSCAPE IMPROVEMENT PLANS
LOT 9

NO.	DESCRIPTION	DATE

SHEET TITLE
PLANTING PLAN

SCALE: 1/16" = 1'-0"
ISSUE DATE: 02/18/16
PROJECT NO: V0219
SHEET NO: L2.0

BIO-RETENTION PLANTERS ON THE NORTH & NORTHEAST SIDES OF BUILDINGS

5 GAL	CORNUS SERICEA "ISANTI"	QTY: 1
1 GAL	CAREX PRAEGRACILUS	QTY: CAN-TO-CAN FULL

ALTERNATIVE:

5 GAL	CARPENTERIA CALIFORNICA	QTY: 1
1 GAL	CAREX PRAEGRACILUS	QTY: CAN-TO-CAN FULL

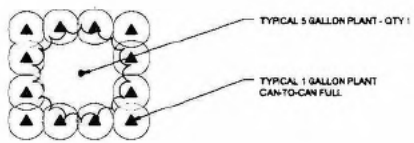
BIO-RETENTION PLANTERS ON THE SOUTH & SOUTHWEST SIDES OF BUILDINGS

5 GAL	MUHLENBERGIA RIGENS	QTY: 1
1 GAL	MIMULUS AURANTIACUS & CAREX PRAEGRACILUS (ALTERNATING)	QTY: CAN-TO-CAN FULL

NOTES:

1. CONTRACTOR TO HAND WATER PLANTS IN BIO-RETENTION PLANTERS UNTIL ESTABLISHED.
2. SEE CIVIL ENGINEER'S PLANS AND SPECIFICATIONS FOR BIO-RETENTION SOIL MIX.
3. PLANT SPECIES LISTED ABOVE ARE APPROVED FOR USE IN BIO-PLANTERS PER THE SAN MATEO COUNTY STORMWATER MEASURES PLANT LIST

PLANTING DIAGRAM:



PLANTING LIST

TREES	CODE	BOTANICAL NAME	COMMON NAME	CONT	QTY	REMARKS
	ARB HYB	Arbutus x 'Marina'	Arbutus Standard	15 gal	2	Replacement Tree
	ARC MAN	Arctostaphylos manzanita MULTI-TRUNK	Manzanita	15 gal	10	Multi-Trunk Replacement Tree
	CER OCC	Cercis occidentalis - MULTI-TRUNK	Western Redbud	15 gal	15	Multi-trunk Replacement Tree
	LAU SAR	Laurus nobilis 'Saratoga'	Sweet Bay	15 gal	12	Street Tree/Interceptor Tree Evergreen
	QUE AGR	Quercus agrifolia	Coast Live Oak	15 gal	1	Replacement tree
	SAM MEX	Sambucus mexicana - MULTI-TRUNK	Mexican Elderberry	15 gal	5	Multi-Trunk Replacement tree

PLANTING LIST (cont.)

SHRUBS	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
	ACA COG	Acacia cognata 'Cousin Itt'	River Wattle	5 gal	17
	ALY MON	Alyogyne huegelii 'Monterey Bay'	Blue Hibiscus	5 gal	11
	ARB ELF	Arbutus unedo 'Elfin King'	Dwarf Strawberry Tree	5 gal	8
	ARC EME	Arctostaphylos x 'Emerald Carpet'	Emerald Carpet Manzanita	1 gal	121
	CEA YAN	Ceanothus griseus horizontalis 'Yankee Point'	California Lilac	5 gal	100
	CEA CON	Ceanothus x 'Concha'	California Lilac	5 gal	7
	CIS LAD	Cistus ladanifer	Crimson Spot Rockrose	5 gal	31
	CIS PUL	Cistus pulverulentus 'Sunset'	Rockrose	5 gal	34
	CIS PRO	Cistus salvifolius 'Prostratus'	Sageleaf Rockrose	5 gal	54
	CIS HYB	Cistus x hybridus	White Rockrose	5 gal	56
	CIT MEY	Citrus x meyeri	Meyer Lemon	5 gal	3
	DIE BIC	Dietes bicolor	Fortnight Lily	1 gal	47
	ERI WAY	Erigeron glaucus 'Wayne Roderick'	Seaside Daisy	1 gal	36
	GRE NOE	Grevillea x 'Noelii'	Grevillea	5 gal	45
	LAV ASS	Lavatera assurgentiflora	Mallow	5 gal	9
	PEN FAR	Pennisetum x 'Fairy Tails'	Evergreen Fountain Grass	5 gal	12
	PIT TEN	Pittosporum tenuifolium 'Marjorie Channon'	Tawhiwhi	5 gal	30
	PIT CRE	Pittosporum tobira 'Cream De Mint' TM	Cream De Mint Dwarf Mock Orange	5 gal	15
	PIT WHE	Pittosporum tobira 'Wheelers Dwarf'	Wheeler's Dwarf Mock Orange	5 gal	34
	PRU BRI	Prunus cardiniana 'Bright 'N Tight' TM	Bright 'N Tight Carolina Laurel	5 gal	44
	RHA MOU	Rhamnus californica 'Mound San Bruno'	California Coffeeberry	5 gal	120
	RHA SEA	Rhamnus californica 'Seaview'	California Coffee Berry	5 gal	22
	ROS AMB	Rosa x 'Flower Carpet Amber'	Amber Carpet Rose	2 gal	65
	ROS RED	Rosa x 'Flower Carpet Red'	Rose	2 gal	35
	WES MOR	Westringia fruticosa 'Morning Light'	Morning Light Coast Rosemary	5 gal	11

GRASSES	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
	FES IDA	Festuca idahoensis	Idaho Fescue	1 gal	64

GROUND COVERS	CODE	BOTANICAL NAME	COMMON NAME	CONT	SPACING	QTY
	CAR PAN	Carex pansa	Sanddune Sedge	4" pot	6" o.c.	13 sf

CLIENT
CHANDERLAIN GROUP
800 Bayway, Suite 200
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VAN DORN ABED
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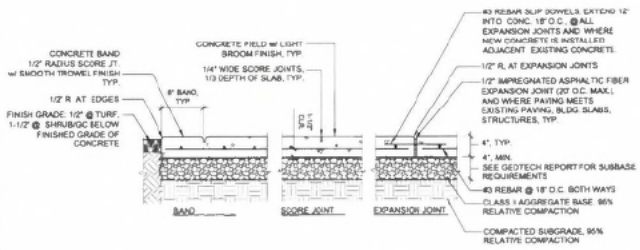
37 NED PI HS 94-70 FAX(415) 94-70

PROJECT MANAGER MW
DESIGNED BY MW
DRAWN BY MW
CHECKED BY

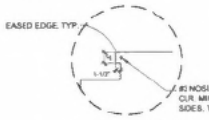
CALIFORNIA
HIGHLAND ESTATES
SAN MATEO
LANDSCAPE IMPROVEMENT PLANS
LOT 9

PLANTING LEGEND

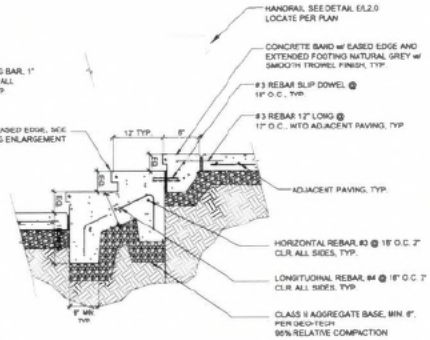
SCALE NTS
DATE 02/18/16
PROJECT NO V02119
SHEET NO L2.1



A CONCRETE PAVING
1" = 1'-0"



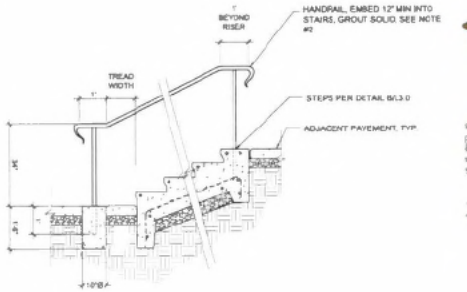
NOSING ENLARGEMENT, NTS



NOTES:
1. CONCRETE STAIRS TO HAVE LIGHT BROOM FINISH.
2. COLOR TO MATCH THE ADJACENT PAVING.
3. SEE PLAN FOR GENERAL STEP LAYOUT. RISERS: 5" MIN. TO 8" MAX AND EQUAL. SEE CIVIL GRADING PLANS FOR RISER HEIGHTS.
4. MAXIMUM 2% DIRECTIONAL SLOPE ON LANDING & WALKS IN ANY DIRECTION. PROVIDE POSITIVE DRAINAGE ON STAIRS.

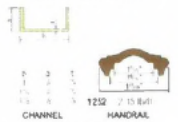
B CONCRETE STEPS
3/4" = 1'-0"

CONCRETE NOTES:
1. SCORING PATTERN TO MEET ALL ACI INTERNATIONAL GUIDELINES.
2. ALL FORMWORK/SCORING/PROPOSED JOINT SPACING TO BE APPROVED AND REVIEWED BY OWNERS' REPRESENTATIVE PRIOR TO POURING.
3. ALL SCORING/CONTRACTION JOINTS TO BE MINIMUM 1/3 DEPTH OF SLAB.
4. DISTANCE BETWEEN CONTRACTION JTS TO BE MAXIMUM 24 TIMES SLAB THICKNESS. ALL CONTRACTION JTS TO BE CONTINUOUS,NOT STAGGERED OR OFFSET. REFER TO ACI INTL CCR-1 SERIES GUIDELINES FOR ALL CONCRETE WORK. ANY DISCREPANCIES WITH DRAWINGS TO BE BROUGHT TO ATTENTION OF OWNER/ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
5. CONCRETE PANELS TO BE AS SQUARE AS PRACTICAL. NEVER MAKE LONG SIDE MORE THAN 1-1/2 TIMES LENGTH OF SHORT SIDE. NO ONE PANEL TO BE MORE THAN 150 SQ. FT.
6. INSTALL EXPANSION JOINTS WHERE NEW PAVING MEETS EXISTING PAVING, WALLS, CURBS, FOUNDATIONS, OR OTHER FIXED OBJECTS, AND CHANGES IN WALK DIRECTIONS.
7. CONCRETE COLOR TO BE NATURAL GRAY.
8. BROOM FINISH SHALL BE PERPENDICULAR TO PATH OF TRAVEL.
9. CONTRACTOR SHALL COORDINATE INSTALLATION OF REBAR SLIP DOWELS WHERE DRIVEWAY MEETS GARAGE CONCRETE PAD WITH OWNER'S REPRESENTATIVE AND PROJECT STRUCTURAL ENGINEER. DOWELS SHALL BE #4 REBAR SPACED 24" O.C. EXTENDING 12" INTO DRIVEWAY AND GARAGE PAD, OR AS SPECIFIED BY STRUCTURAL ENGINEER. CONTRACTOR SHALL ONLY INSTALL REBAR DOWELS IF APPROVED BY OWNER'S REPRESENTATIVE AND PROJECT STRUCTURAL ENGINEER. SUBMIT TO OWNER'S REPRESENTATIVE PROPOSED DOWEL LOCATIONS.
10. FOR ALL PAVING DETAILS SHOWN, THE PAVING PROFILE, AGGREGATE, SUBBASE PREPARATION & COMPACTION PER GEOTECH ENGINEER, TYP. PROFILES ARE SHOWN FOR DESIGN INTENT & BIDDING PURPOSES ONLY. SEE GEOTECH REPORT FOR PAVING & SUBBASE REQUIREMENTS.



HANDRAIL, CHANNEL & POST

HANDRAIL NOTES:
1. HANDRAILS TO BE 1-5/16" MODEL H2601 ALUMINUM HANDRAIL WITH LAMBS TONGUE TERMINUS AS SHOWN. ALUMINUM CHANNEL SHALL BE MODEL C21666/2. POSTS SHALL BE 1" SQUARE STEEL BAR WELDED TO BASE OF CHANNEL.
2. PRIME AND PAINT WITH ZINC-RICH PRIMER AND 2 COATS ENAMEL, COLOR TO BE DARK BRONZE. SUBMIT PAINT SAMPLE TO OWNER FOR APPROVAL.
3. AVAILABLE THROUGH R&S WAGNER, INC. (888) 243-6914.

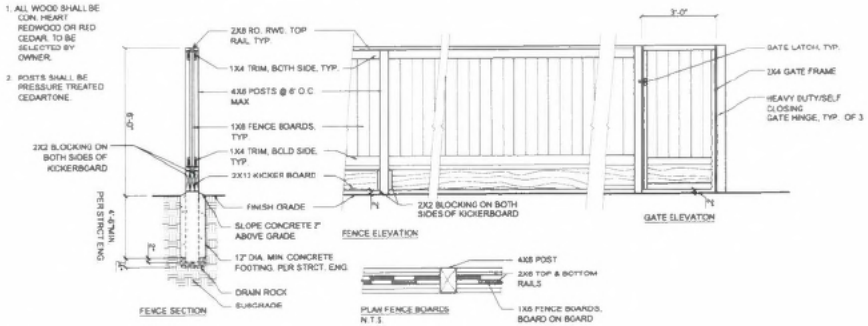


HANDRAIL MAKE AND MODEL

TERMINAL

C HANDRAIL
1/2" = 1'-0"

NOTES:
1. ALL WOOD SHALL BE CON. HEART REDWOOD OR RED CEDAR, TO BE SELECTED BY OWNER.
2. POSTS SHALL BE PRESSURE TREATED CEDARTONE.



D 6' TALL WOOD FENCE & GATE
NTS

OWNER
CHAMBERLAIN GROUP
666 Bryant, Suite 250
San Carlos, CA 94070
(650) 595.5582

800.227.2600

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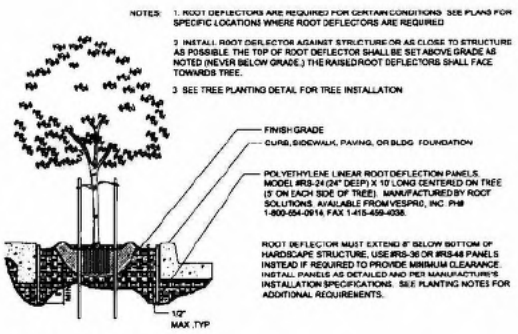
LANDSCAPE ARCHITECTS, INC.
81 14TH ST., SAN FRANCISCO, CA
PROJECT MANAGER: MW
DRAWN BY: MW
CHECKED BY: VA

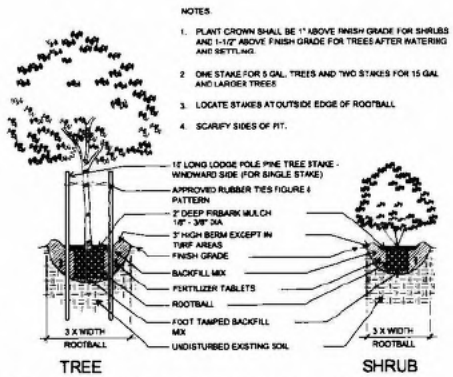
PROJECT LOCATION
HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
SHEET TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 9

NO.	DESCRIPTION	BY	DATE

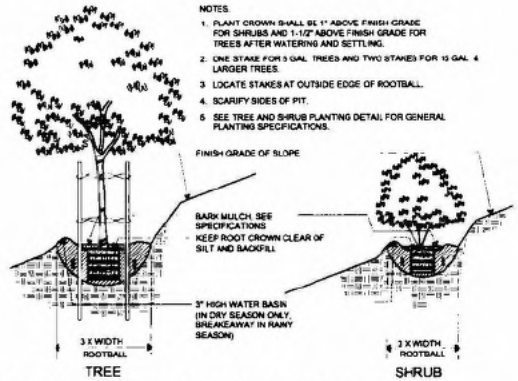
SHEET TITLE
LANDSCAPE DETAILS
SCALE
AS NOTED
DATE
02/18/16
PROJECT NO.
Y0219
SHEET NO.
L3.0



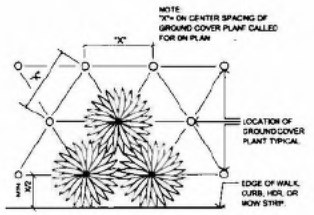
A ROOT DEFLECTOR
NTS



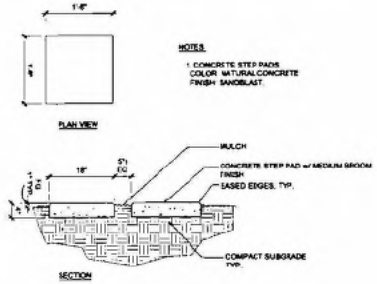
B TREE AND SHRUB PLANTING
NTS



C HILLSIDE TREE AND SHRUB PLANTING
NTS



D GROUNDCOVER PLANTING
NTS



E CONCRETE STEP PADS
3/4" = 1'-0"

CUMBERLAUN GROUP
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(650) 595-5582

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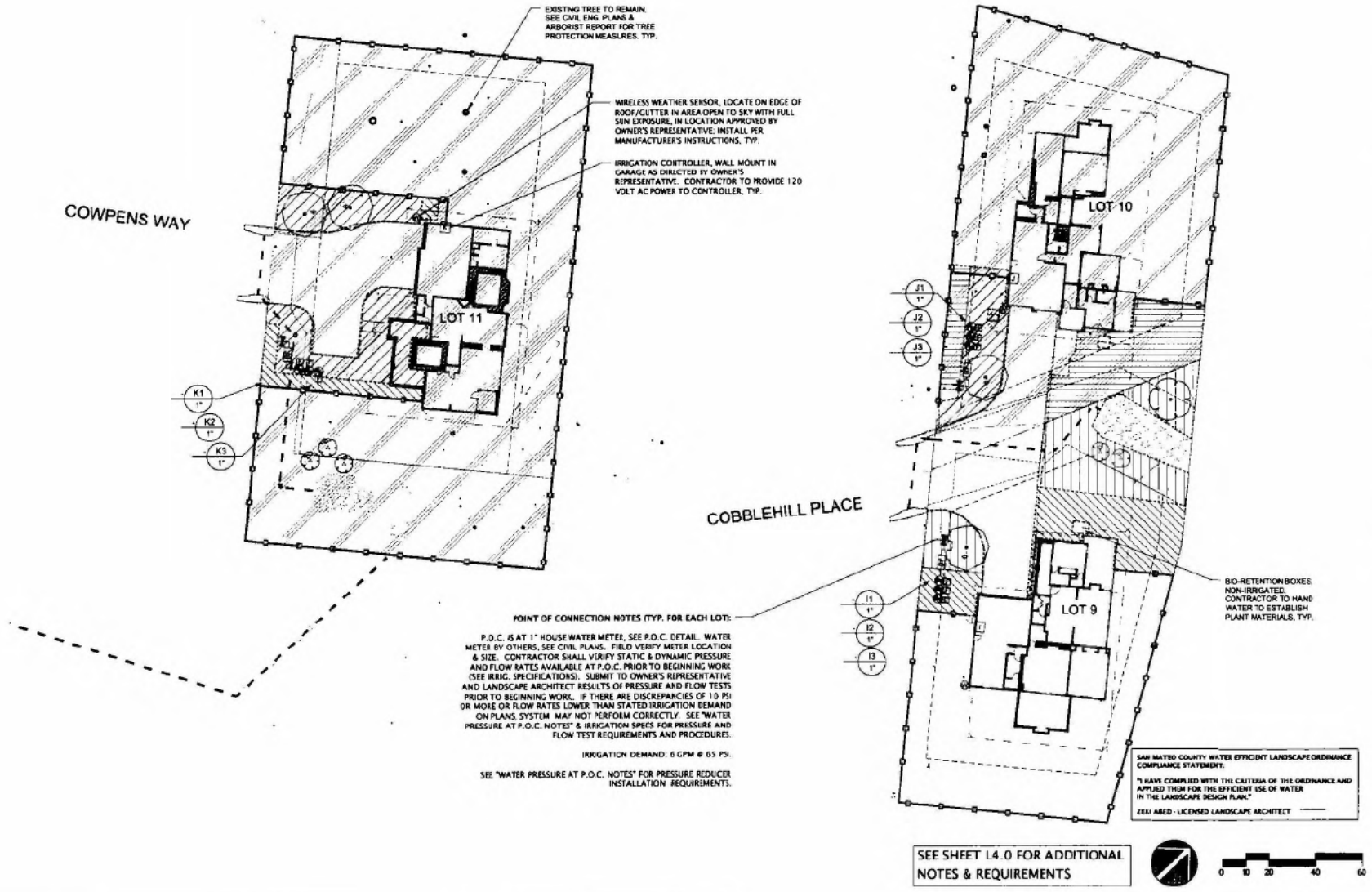
81 14TH ST. SAN FRANCISCO, CA
ZIP 9103 PH (415) 864-1811 FAX(415) 864-1814

HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
LANDSCAPE IMPROVEMENT PLANS
LOT 9

SHEET TITLE
LANDSCAPE DETAILS
SCALE
AS NOTED
DATE
02/18/16
PROJECT NO.
V0219
SHEET NO.
L3.1



CHAMBERLAIN GROUP
855 Tharpe, Suite 250
Simi Valley, CA 93065
(800) 880.5068

811 DIG ALERT
800.227.2600

VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.
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TEL 805 541-5305 FAX 805 541-5307

PROJECT MANAGER: ZA
DRAWN BY: BO
CHECKED BY: ZA

PROJECT: HIGHLAND ESTATES
LOCATION: CALIFORNIA
SAN MATEO
DRAWING TITLE: LANDSCAPE IMPROVEMENT PLANS
LOT 9

NO	DESCRIPTION	DATE

SHEET TITLE: IRRIGATION PLAN

SCALE: 1" = 20'-0"
DATE: 02/18/16
PROJECT NO: Y0219
SHEET NO: L4.0

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
Δ	PVC lateral line to drip area with Rainbird 5-outlet emitter units. Route PVC lateral line thru drip area and install required quantity of Octabubblers necessary to irrigate plants in the drip area.
◇	Rain Bird XBT-6 Six multi-outlet drip emitter/bubbler Six-Outlet, Pressure Compensating, with 1 0 GPH Black Drip Emitters at each emitter outlet. Comes with 1/2" FPT Inlet x Barb Outlet. Install DBC-025 Diffuser Bug Caps at end of each emitters 1/4" distribution line. Install 4 (four) 1/4" distribution lines with Diffuser Bug Caps at 5Gal & 15Gal trees; Install 6 (six) 1/4" distribution lines with Diffuser Bug Caps at 24"Box trees. Plug unused emitter outlets

NOTE: DRIP AREA PATTERNS ARE FOR DESIGN CLARITY

A1 A1 A1 A1 A1 A1	Area to Receive Drip Emitters Rain Bird XBD81-PRS w/XB-10 Xen-Bird 8 Multi Outlet Emission Device with Xen-Bug emitters at 1gph each, with built-in 200 mesh filter. Pressure Regulator in-stem Emitter Notes: 1 gal plant to receive 1 of OCT8-16 emitter. 5 gal plant to receive 2 of OCT8-16 emitters. 15 gal plant to receive 4 of OCT8-16 emitters 24"box plant to receive 6 of OCT8-16 emitters 2 gal plant to receive 1 of OCT8-16 emitter

CONTROLLER
VALVE CIRCUIT NO.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Irritrol 700 with OMR-100 Electric Remote Control Valve, with Omni-Reg 5-100psi regulator. Set pressure regulator at 40 PSI.
	Nibco T-113-LF Lead free Class 125 bronze gate shut off valve with wheel handle, same size as mainline pipe diameter at valve location. Size Range - 1/4" - 3"
BF	Febco LF825Y 1" Lead Free Reduced Pressure Backflow Preventer
A	Irritrol TC-06-MOD-R Hybrid Controller, 6- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
B	Irritrol TC-06-MOD-R Hybrid Controller, 6- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready
C	Irritrol TC-06-MOD-R Hybrid Controller, 6- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
D	Irritrol TC-06-MOD-R Hybrid Controller, 6- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
W	Irritrol CL Wireless Weather Sensing System 100-Receive and Transmitter Kit. Outdoor sensor, and receiver attaches to Irritrol Controller. Compatible with Rain Dial-R, Total Control-R, KwikDial, adn MC-E controllers Monitors weather data.
F	Armed 150 mesh Y-Filter with flush valve, or approved equevalent, at drip remote control valves
————	Irrigation Lateral Line. PVC Class 200 SDR 21 PVC Class 200 irrigation pipe. Only lateral transition pipe sizes 1" and above are indicated on the plan, with all others being 3/4" in size. 12" min. burry
— — — —	Irrigation Mainline. PVC Schedule 40 PVC Schedule 40 irrigation pipe. 18" min. burry
- - - - - - - -	Pipe Sleeve. PVC Class 315 SDR 13 5 24" MIN. BURRY

Valve Callout
- Valve Number
- Valve GPM
- Valve Size

IRRIGATION RUN TIME SCHEDULE NOTES:

1. IRRIGATION CONTROLLER RUN TIMES ARE NOT INCLUDED ON LANDSCAPE PLANS. IRRIGATION CONTROLLERS ARE ET BASED SMART CONTROLLERS THAT GENERATE OPTIMUM RUN TIME SCHEDULES BASED UPON LOCAL WEATHER CONDITIONS.
2. CONTROLLERS ARE INITIALLY PROGRAMMED WITH IRRIGATION SYSTEM COMPONENT INFORMATION, PLANT MATERIAL WATER USE REQUIREMENTS, SOIL TYPE, AND LOCAL MICRO CLIMATIC INFORMATION. CONTROLLERS AUTOMATICALLY GENERATE RUN TIME SCHEDULES FROM THIS INFORMATION. EACH DAY CONTROLLERS RECEIVES LOCAL WEATHER CONDITION DATA WIRELESS WEATHERS SENSORS, AND AUTOMATICALLY ADJUST THEIR WATERING SCHEDULES FOR OPTIMUM WATER CONSERVATION. EACH CONTROLLER HAS IT'S OWN WIRELESS WEATHER SENSOR, LOCATED ON-SITE.

IRRIGATION SPECIFICATIONS:

1. Irrigation system shall be installed in conformance with all applicable local codes and ordinances by experienced workmen and a licensed Landscape Contractor who shall obtain all necessary permits and pay all required fees.
2. Prior to the start of construction, the Contractor shall verify with the City, Water District, and/or other governing agency(s) if a reclaimed water source will be available in the future for connection to the irrigation system. If local regulations so stipulate, then the Contractor shall follow all requirements, specifications, construction details, codes, etc., for the installation of irrigation systems utilizing reclaimed water sources for irrigation of landscaping.
3. The Contractor shall be responsible for any damage to existing facilities caused by or during the performance of his work. All repairs shall be made at no cost to the Owner.
4. This design is diagrammatic: install parallel lines in a common trench with minimum horizontal distance of 4" and lines not one above the other. Snake pipe in trenches. All piping, valves, etc., shown within paved areas is for design clarification only and shall be installed in planting areas where possible. Avoid any conflicts between the irrigation system, planting and architectural features.
5. Do not willfully install the irrigation system as shown on the drawings when it is obvious in the field that obstructions, grade differences or differences in the area dimensions exist that might not have been considered in the engineering. Such obstructions or differences should be brought to the attention of the Owner's authorized representative. In the event this notification is not performed, the Contractor shall assume full responsibility for any revisions necessary.
6. It is the responsibility of the Contractor to familiarize himself with all grade differences, location of walls, retaining walls etc. He shall coordinate his work with the General Contractor and other Subcontractors for the location and the installation of pipe sleeves through walls, under roadways, paving, structures, etc.
7. Due to the scale of the drawings, it is not possible to indicate all offsets, fittings, sleeves, etc., which may be required. The Contractor shall carefully investigate the structural and finished conditions affecting all of his work and plan his work accordingly, furnishing such fittings, etc., as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation system, planting, and architectural features.
8. Notify Landscape Architect of any other aspects of layout which will provide incomplete or insufficient water coverage of plant material and do not proceed until his instructions are obtained.
9. Electrical Contractor to supply 120 volt A.C. (2.5 AMP) service to controller location. Contractor to make final connection from electrical stub-out to controller. Paint conduit to controller with 2 coats Rustoleum brown paint if installed outdoors; color to be approved by Owner's representative. 120 volt A.C. J-Box to controller by others. All 120 volt A.C. and 24 volt connections to be made by Contractor.
10. Each controller shall have its own independent ground wire.
11. Program irrigation controller(s) to operate between the hours of 10:00 P.M. and 7:00 A.M.
12. Valve locations shown are diagrammatic. Install in ground cover/shrub areas.
13. Install valve boxes 12" from and perpendicular to walk, curb, building or landscape feature. At multiple valve box groups, each box shall be an equal distance from the walk, curb, lawn, etc., and each box shall be 12" apart. Short side of valve box shall be parallel to walk, curb, lawn, etc.
14. Install U.L. approved direct-burial wire #14 minimum and #14 common ground at 18" depth minimum. Splicing of 24 volt wires will not be permitted except in valve boxes. Leave a 24" coil of excess wire at each splice and 100 feet on center along wire run. Tape wire in bundles 10 feet on center. No taping permitted inside sleeves.
15. Install a spare control wire of a different color along the entire main line. Loop 36" excess wire into each single valve box and into one valve box in each group of valves.
16. Prior to trenching, call Underground Service Alert, 1-800-642-2444 to locate all cables, conduits, and other utilities and take proper precautions not to damage or disturb existing utilities.
17. All Main lines and Lateral lines under paving shall be in PVC sleeves which extend 12" into planting areas. All backfill shall be free of rocks greater than 1" diameter. For ring-lite PVC main line piping inside sleeves use 1120-315 PSI PVC plastic pipe with schedule 40 PVC couplings.
18. When applicable, Schedule 80, ASTM D2466 male adapters to be used where mainline connects to copper pipe service lines installed by others.
19. Copper pipe shall be joined to steel or cast iron pipe with a dielectric union.
20. In addition to the sleeves and conduits shown on the plans the Contractor shall be responsible for the installation of sleeves and conduits of sufficient size under all paved areas.
21. Locate quick coupling valve 12" from hardscape area.
22. The irrigation system design is based on the minimum operating Pressure (PSI) and Flow (GPM) shown on the irrigation drawings (see Irrigation Demand at P.O.C.). The Contractor shall verify the Static and Dynamic water pressure (PSI) and Flow Rate (GPM) at the point of connection (P.O.C.) prior to construction as follows:
    - A. Static Pressure: take PSI reading at P.O.C. with no water flowing.
    - B. Dynamic Pressure: install at P.O.C. a pressure (PSI) and flow gauge (GPM) assembly of suitable size* to take flow (GPM) readings in the range of the stated Irrigation Demand for the irrigation system design. Open valve or meter at P.O.C. until GPM flow reading equals or exceeds irrigation GPM demand. Note dynamic pressure and flow readings. If the GPM flow does not equal or exceed the GPM demand, note highest flow reading possible.
    - C. Readings shall be taken at the following times: 1PM, 5PM, 9PM, 1AM, 5AM, 9AM.
    - * Irrigation systems with high irrigation demand GPM flow rates, will require large capacity test gauge assemblies.

Submit to Owner's Representative and Landscape Architect results of Pressure and Flow Tests prior to beginning work. Note any discrepencies of 10 PSI or more or flow rates lower than stated Irrigation Demand on plans to Owner's Representative and Landscape Architect. If there are discrepancies of 10 PSI or more or flow rates lower than stated Irrigation Demand on plans, system may not perform correctly - do not proceed with irrigation system installation until corrective measures are determined. Note, Contractor shall be responsible for any corrective measures required to the irrigation system, at no additional cost to the Owner, if irrigation system is installed without required tests, and discrepancies in Pressure and Flow at the P.O.C. are discovered that prevent the irrigation system from functioning correctly.

28. Meter(s) indicated on the Drawing(s) is supplied and installed by others, unless otherwise indicated. The Contractor is responsible for furnishing all proper fittings.
29. All irrigation piping shall be subjected to hydrostatic pressure tests as follows before backfilling trenches: Valves, pumps, and accurately calibrated recording gauges shall be installed in at least two places. Supply lines shall be tested at 125 psi for at least 4 hours with an allowable loss of 5 psi. Laterals lines shall be tested at the existing static psi for at least 1 hour with an allowable loss of 5 psi. Any leaks shall be corrected and piping re-tested until the system meet the requirements. The Contractor shall notify the Owner's Representative at least 3 days in advance of the time that the irrigation system piping is to be tested. Submit written test results to Owner's Representative and Landscape Architect.
30. Contractor to notify all local jurisdictions for inspection and testing of installed backflow prevention device.
31. The entire irrigation system shall be operating properly before any lawn or ground cover is planted.
32. The Contractor shall provide Owner with a clean set of marked prints of "RECORD DRAWINGS" drawings. Reference all trenches, valves, controllers, splice boxes, quick couplers, backflow preventers, water meters, with dimensions to nearest building or paving.
33. The Contractor shall guarantee the irrigation system will be free of defects of workmanship and materials for a period of one year. All repairs necessary shall be made at no cost to the Owner, with the exception of repairs and labor cost made necessary by vandalism.

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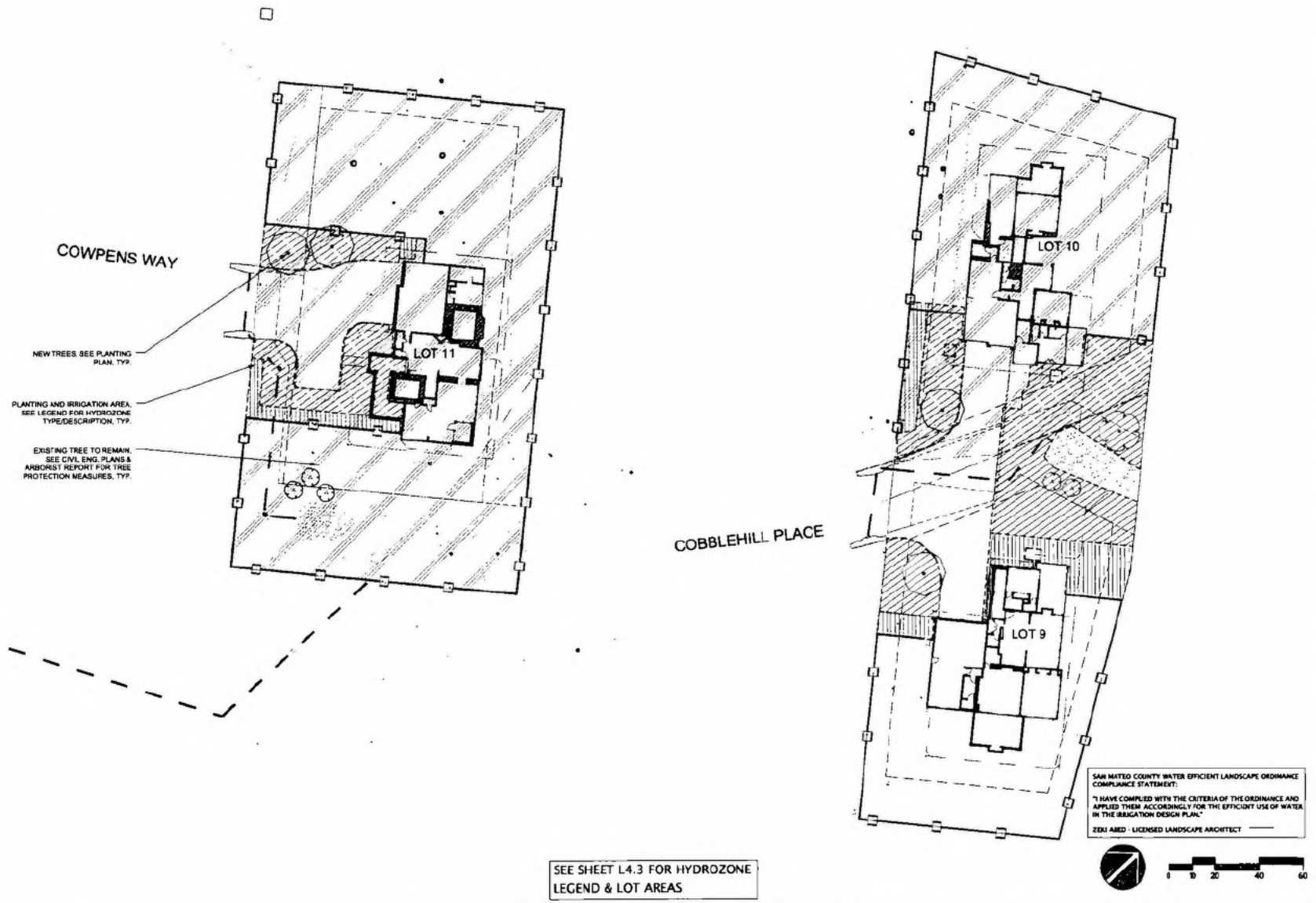
PROJECT MANAGER
DRAWN BY
CHECKED BY

PROJECT NAME / LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 9

NO.	DESCRIPTION	BY	DATE

SHEET TITLE
IRRIGATION LEGEND & SPECIFICATIONS

SCALE
NA
ISSUE DATE
02/18/16
PROJECT NO
V0210
SHEET NO.
L4.1



SEE SHEET L4.3 FOR HYDROZONE LEGEND & LOT AREAS

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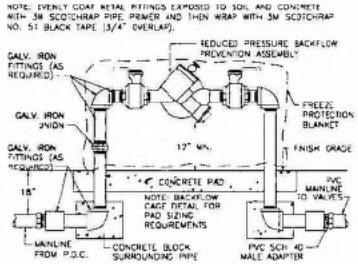
VAN DORN ABED LANDSCAPE ARCHITECTS, INC.

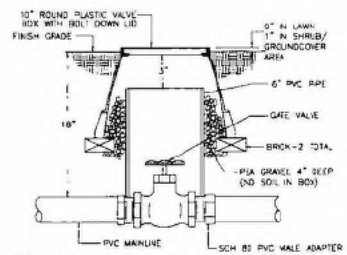
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 9

HYDROZONE PLAN

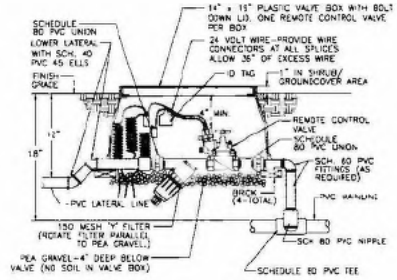
SCALE: 1" = 20'-0"
DATE: 02/18/16
PROJECT NO: V0219
SHEET NO: L4.2



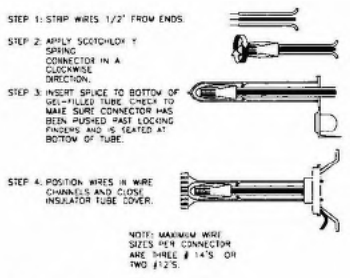
1 REDUCED PRESSURE BACKFLOW PREVENTER DETAIL
NOT TO SCALE



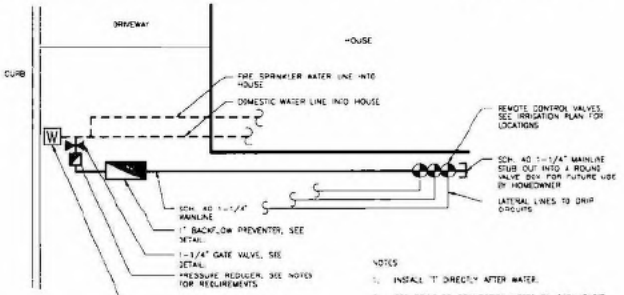
2 GATE VALVE DETAIL
NOT TO SCALE



3 REMOTE CONTROL VALVE & 'Y' FILTER DETAIL
NOT TO SCALE

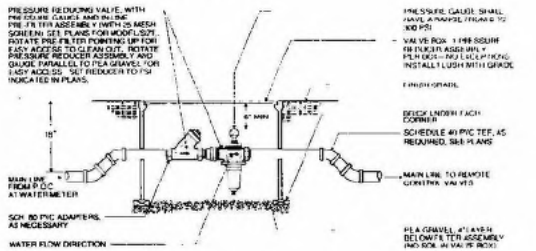


4 WIRE CONNECTION DETAIL
NOT TO SCALE



5 IRRIGATION SYSTEM P.O.C. AT EACH LOT DETAIL
NOT TO SCALE

NOTES:
PRESSURE REDUCER SHALL BE 1-1/4" LEAD FREE WILKINS 500RLYSBR (INCLUDES PRESSURE REDUCER & FILTER), SET AT 50 PSI.
SEE NOTES ON IRRIGATION PLANS FOR INSTALLATION REQUIREMENTS



6 PRESSURE REDUCER DETAIL
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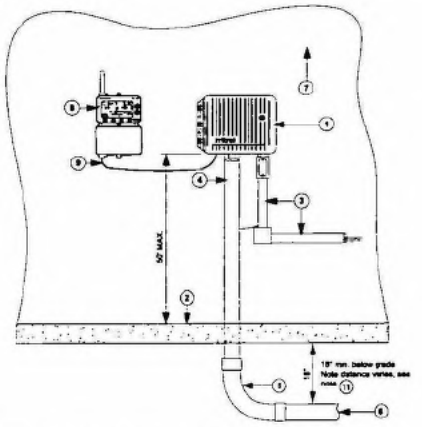
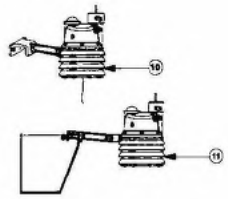
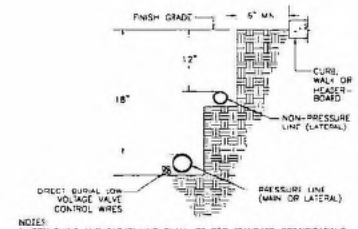


1. Irrigation controller. Install controller in location as directed by Owner's Representative.
2. Garage finish surface.
3. 1/2" UL approved electrical conduit, ring nut and junction box for 120V AC electrical power. Contractor to proved 120 volt AC electrical power to controller, see notes on Irrigation Plans.
4. PVC schedule 40 control wire conduit (size as required)
5. PVC sweep ell to conduit through bldg. to exterior planting area 18" below grade.
6. End conduit 12" beyond edge of bldg., 18" below grade.
7. Interior wall in garage area.
8. Climate Logic™ receiver module mounted near the compatible controller. Mount with screws at eye level.
9. Single connection cord plugged into controllers remote port.
10. Climate Logic™ weather sensor mounted outdoors on flat surface using screws. , see notes on Irrigation Plans.
11. Climate Logic™ weather sensor mounted on a rain gutter using QuickClip™ guttermount, see notes on Irrigation Plans.
11. Note: at lots where garage areas are elevated above grade, route conduit down side of bldg./structural piers out site where possible, to 18" below grade. Paint exposed conduit to match house color as directed by Owner's Representative.

7 IRRIGATION CONTROLLER & WIRELESS WEATHER SENSOR DETAIL
NOT TO SCALE



NOTES:
1. Irrigation controller is not shown on the irrigation plan. Irrigation controller to be installed in garage as directed by Owner's Representative.
2. 120 volt AC power to controller per Electrical Plans.
3. Wireless weather sensor unit to be installed on edge of bldg. in area open to sky with full sun exposure, in location approved by Owner's Representative. Locate sensor unit within radio communication range of controller.
4. All electrical work must conform to local codes. Refer to product literature for additional installation requirements.



NOTES:
1. TRENCHING AND BACKFILLING SHALL BE PER STANDARD SPECIFICATIONS.
2. MINIMUM BACKFILL RELATIVE COMPACTION SHALL BE 90%.
3. BUNDLE CONTROL WIRES TOGETHER AND TAPE AT 10' INTERVALS.
4. 4" MIN. HORIZONTAL DISTANCE BETWEEN PIPES IN COMMON TRENCH.
5. ALL PLASTIC IRRIGATION PIPING TO BE SNAKED IN TRENCHES.

8 IRRIGATION LINE TRENCHING
NOT TO SCALE

CLIENT:
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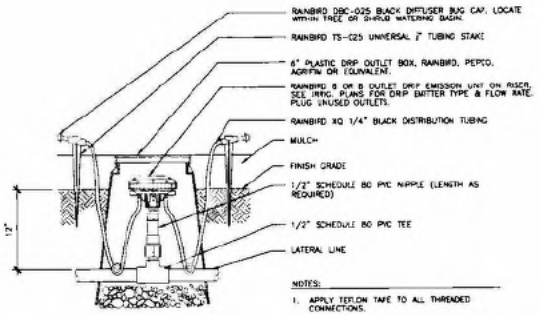
PROJECT MANAGER
DESIGNED BY
DRAWN BY
CHECKED BY

PROJECT NAME/LOCATION
HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 9

NO	DESCRIPTION	DATE

SHEET TITLE
IRRIGATION DETAILS

SCALE
AS SHOWN
ISSUE DATE
02/18/16
PROJECT NO.
V0219
SHEET NO.
L4.3



SECTION

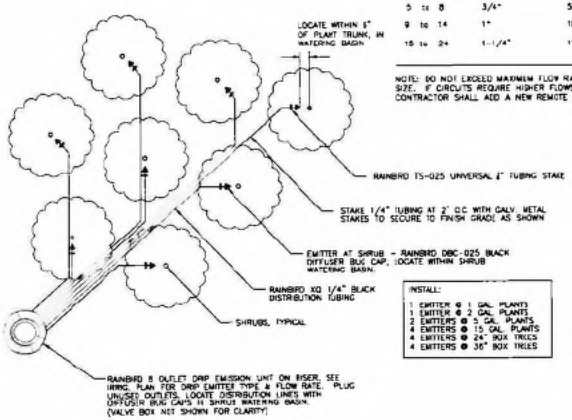
NOTES:

1. APPLY TEFLON TAPE TO ALL THREADED CONNECTIONS.
2. SEE DRIP LATERAL PIPE SIZING CHART FOR SIZING LATERAL LINES.
3. 1/4" DISTRIBUTION TUBING MAXIMUM LENGTH SHALL NOT EXCEED 20'.

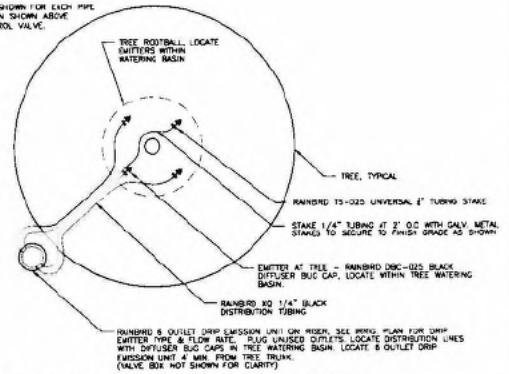
DRIP SHRUB/GC LATERAL PIPE SIZING CHART

GPM FLOW RATES	SIZE OF CLASS 200 PVC PIPE	MAX. QUANTITY OF RAINBIRD 8-OUTLET DRIP EMISSION UNITS (WITH 1.0 GPH EMITTERS)
5 to 8	3/4"	58
9 to 14	1"	102
15 to 24	1-1/4"	178

NOTE: DO NOT EXCEED MAXIMUM FLOW RATES SHOWN FOR EACH PIPE SIZE. IF CIRCUITS REQUIRE HIGHER FLOWS THAN SHOWN ABOVE CONTRACTOR SHALL ADD A NEW REMOTE CONTROL VALVE.



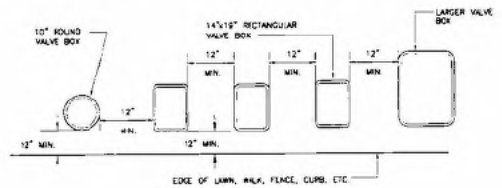
PLAN VIEW - RAINBIRD 8 OUTLET DRIP EMITTER LAYOUT @ SHRUBS/GROUND COVERS



PLAN VIEW - RAINBIRD 6 OUTLET DRIP EMITTER LAYOUT @ TREES

1 8-OUTLET & 6-OUTLET DRIP EMITTER ON RISER DETAIL

NOT TO SCALE



TOP VIEW

NOTES

1. CENTER BOX OVER VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA.
3. SET VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN AREA ONLY IF GROUND COVER/SHRUB AREA DOES NOT EXIST ADJACENT TO LAWN.
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOX EDGES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
6. VALVE BOXES SHALL HAVE BOLT DOWN LIDS WITH BOLTS INSTALLED.
7. VALVE BOXES SHALL BE BY CARSON OR EQUIVALENT.

2 VALVE BOX LAYOUT DETAIL

NOT TO SCALE

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PROJECT NAME
HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
LANDSCAPE IMPROVEMENT PLANS
LOT 9

SHEET TITLE
IRRIGATION DETAILS

SCALE
AS SHOWN

ISSUE DATE
02/18/16

PROJECT NO.
V0219

SHEET NO.
L4.4

GENERAL NOTES:

1. Contractor shall verify all existing site conditions prior to beginning construction. Notify Owner's Representative of any discrepancies.
2. The Contractor shall provide all materials, labor and equipment to complete all landscape work as shown on the plans and specifications.
3. If there is a conflict with the utilities and the planting, the Owner's Representative is to be responsible for spotting new plant locations prior to the planting process.
4. The Contractor shall be responsible for any damage to existing utilities, pavement or improvements. All repairs shall be made at no expense to the Owner.
5. The Contractor shall notify the Owner's Representative prior to beginning construction and shall keep the Owner's Representative informed of progress of work throughout landscape construction.
6. All work shall be installed in conformance with all applicable local codes and ordinances by experienced workmen and a licensed Contractor who shall obtain all necessary permits and pay all required fees.
7. Any requirement in the Plans and / or Notes and Specifications shall be considered binding. In case of discrepancies, the Owner's Representative shall be contacted immediately.
8. It is the Contractor's responsibility to schedule regular site visits by the Owner's Representative/Landscape Architect throughout landscape construction, at the beginning of the maintenance period, and final site review will be required.
9. Execute weekly cleaning of the site throughout the contract period to remove all waste materials, rubbish, plant containers, etc.
10. See Civil Engineer's improvement plans for all general grading information and notes.
11. All written dimensions supersede scaled distances. All dimensions are taken from back of curb, face of building, face of wall finish or face of fence.
12. Upon award of bid and prior to any construction, the Contractor shall perform the Percolation and Soils Testing as specified in the Planting Notes. If these tests have not already been performed. If drainage is found to be insufficient, or soils test results identify conditions requiring extraordinary or corrective measures, the Contractor shall immediately alert the Owner's Representative and Landscape Architect of any such problems, for corrective action and/or additional drainage treatment.

GRADING NOTES:

1. See General Notes and Civil Engineer's Grading Plans for additional information.
2. Rough grading and site drainage shall have been completed prior to Contractor's work. Verify all existing site conditions and report any discrepancies to Owner's Representative.
3. Contractor shall be responsible for finish grading. Verify positive drainage at a minimum 2% slope in landscape areas away from buildings and paved surfaces. Shrub areas shall be 1-1/2" below top of adjacent paving, headers, or curbs. No low spots which hold standing water will be permitted.
4. All salvageable, clean top soil from areas to be paved shall be stockpiled to be used as fill in planting areas.

CONSTRUCTION NOTES:

1. Concrete work: Install concrete work as detailed. Layout of concrete work shall be as shown on construction plans and as specified below.
   A. Layout shall be approved by Owner's representative/Landscape Architect prior to concrete pour. Contact Owner's Representative two days in advance.
2. Paving Installation
   B. Concrete Materials: For paving, concrete shall be a 5 sack mix producing concrete having a 28 day strength not less than 2500 psi. For walls concrete shall be 6 sack mix.
1. Portland cement: Conforming to ASTM. C150, Type I or II. Total alkali content not to exceed 0.60%. Deliver cement and all materials in labeled, unopened containers.
2. Form coatings: Standard product resin type sealer. Do not use form oil or any oil-bearing material.
3. Concrete aggregates: Conform to ASTM C33. Maximum 3/4" size aggregate.
4. Base course aggregates: Conform to ASTM C33. Maximum 3/4" size aggregate.
5. Water: Clean and potable.
6. Forms: Form material to Sub-contractor's option.
7. Admixtures or finish retardants: For workability, where approved by Owner's representative, and admixture may be added in accordance with manufacturer's recommendations. Obtain approval of material prior to use.
8. Expansion joint material: 3/8" thick pre-molded joint filler, conforming to ASTM D1751 or D1752.
9. Reinforcing steel.
   a. Bars: Deformed, intermediate grade, conforming to ASTM A615, Grade 40 for sizes #5 and smaller.
   b. Tie wire: Annealed copper-bearing steel wire, minimum 18 gauge.
10. Welded wire mesh: 6" x 6" x #10.
11. Liquid curing compound as required: Thompson's approved standard product fugitive resin type, or equal conforming to ASTM C309, free of wax or oil, compatible with subsequently applied finishes or coverings, not detrimental to bond of cementitious materials to aggregate.
12. Patching mortar: One part Portland cement or equal (part white and part grey adjusted to match color of surrounding concrete) and 2-1/2 parts sand with the least water required to produce a workable mass. Rework the mortar until it is the stiffest consistency that will permit placing.

C. Concrete Installation:

1. Construct the subgrade true to grade and detail as shown. Compact subgrade to 90% maximum density at optimum moisture content.
2. Set forms with upper edges true to line and grade. Properly brace or tie together to maintain position and shape. Remove side forms not sooner than 12 hours after finishing has been completed. Form curves and straight sections for smooth and continuous lines. Secure Owner's representative's approval of subgrade compaction and moisture content and form alignment prior to pouring concrete.
3. Embedded items: Do not place any concrete until all inserted items such as sleeves, anchor bolts, wood, nails, dowels, etc. are installed in their proper locations, secured against displacement, cleaned, inspected and approved. Furnish ties and supports necessary to keep embedded items in place when concrete is placed.
4. Weather: Do not place concrete during rain unless approved measures are taken to prevent damage to concrete.
5. Deposit concrete evenly, consolidate with mechanical vibrators, particularly at side forms and strike off to indicated elevations and contour.
6. Concrete finishes shall be even surfaces of uniform texture and appearance, free of unsightly bulges, depressions and other imperfections and as follows:

   Medium broom finish: Broom with coarse bristled broom across width of flatwork to a uniformly roughened surface. Finished surface and edges shall be clean with uniform and reasonably straight lines. Submit Sample.

   Light broom finish: Broom with janitor's push broom type, with soft bristles, across width to a uniformly roughened surface. There shall be no deeply incised or obvious lines. Submit sample.

   Steel trowel finish: After floating, and no free water is evident and/or no cement sticks to the finger when touching slab, steel trowel until hard. All trowel marks eliminates. Final trowelling done when a ringing sound is produced as the trowel is moved over the surface.

   Joints: Joints shall be tooled with one-quarter inch (1/4") radius edging tool or as shown on plans.

   Edges: Edge slabs one-half (1/2") inch radius, edge curbs and other structures three-quarters inch (3/4") radius unless otherwise shown.
7. Remove flange marks: Remove flange marks resulting from tooling of edges by carefully trowelling out, unless specifically detailed in plans.

CARPENTRY NOTES:

A. Wood materials: See details for type of wood for each item.

1. Wood shall be selected for straightness and smoothness, size and grade as shown in plans.
   B. Workmanship: Carefully plan and layout the work as required. Properly accommodate the work of other trades. Accurately saw-cut and fit lumber into the respective locations, true to line, grade, and level, as indicated or required, and permanently secure in proper position with spikes, nails, lag screws, bolts, hangers, or other fastenings to make the work substantial and rigid in all parts and connections.
   C. Connections: Make connections between members tight, accurate and secure. Place fastenings without splitting wood; predrill when required. Drill bolt holes same size as bolt diameter. Drill holes for lag screws same size as thread root diameter, and counterbore, same depth and diameter as shank. Turn lag screws into place, do not drive. Provide bolts and lag screws with washers under every head and nut bearing on wood. Tighten bolts and lag screws at installation, carefully retighten just prior to closing in, or at completion of project.
   D. Finishing: As per plan.
   E. Redwood header layout: All curved sections shall be smooth and continuous. Layout shall be approved by Owner's representative.
2. Hardware:
   A. All metal bolts, nails, screws and other hardware shall be galvanized steel, sized as shown on the plans.
   B. All visible hardware shall be painted with two coats of black rustproof paint or to match architectural colors. Color to be approved by Owner's representative.
   C. All hardware for metal gates to be approved by Owner's representative.
3. Metal:
   A. Provide complete shop drawings for all metal fabrication.
   B. Fabricate all exterior steel work in shop, including all welding. All metal work shall conform to ASTM specifications. Miter corners and angles of moldings or frames unless otherwise noted.
   C. Shop primer: One coat of primer, semi-quick drying. Painting: After material has been properly cleaned, apply shop prime coat of paint to all surfaces. Apply at paint in accordance with manufacturer's directions. Spot paint all abrasions and field connections after assembly.
   D. Installation. Set all work plumb, true, rigid and neatly trimmed out as detailed. Provide all necessary connections, anchor bolts etc. required to fit metal with other work.
   E. Protect all metal from damage to surface, profile or to shape from shop through construction to final acceptance of project.
   F. Color: Color to be approved by Owner's representative, submit sample for approval.
   G. All defective work shall be repaired or replaced as directed Owner's representative.
   H. All exposed site metal for utilities, irrigation, etc., shall be painted with one coat brown rustproof paint.

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PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 9

NO.	DESCRIPTION	BY	DATE
1			

SHEET TITLE
LANDSCAPE NOTES & SPECIFICATIONS
SCALE
-
ISSUE DATE
02/18/16
PROJECT NO.
V0219
SHEET NO.
L5.0

PLANTING NOTES:

1. See General Notes.

2. Submittals: Contractor shall submit the following items to Owner's Representative and Landscape Architect for review/approval prior to beginning planting installation operations:

   A. Soils tests: Initial site soils test & post amendment installation test)

   B. Vendor data for landscape products, including: bark mulch, root barriers, fertilizers, soil amendments, and soil conditioners.

   C. Written results of percolation tests

3. The Contractor shall verify the availability of all landscape plants within 10 days following award of the contract. Discrepancies or other problems and all plant substitutions shall be resolved at the time. If a substitute is authorized by the Owner's Representative, it must be of the same size, value and quality as the original plant.

4. All trees and representative samples of shrubs/ground covers shall be inspected at the site for approval by the Owner's Representative and meet the following standards:

   A. Quality and size shall conform to the State of California Grading Code of Nursery Stock, No. 1 grade and to the current issue of the American Standard for Nursery Stock published by the American Association of Nurserymen. Use only nursery-grown stock. The Owner's Representative will inspect plants for approval prior to any installation

   B. Plant material must be selected from nurseries that have been inspected by state or federal agencies.

   C. Nomenclature will be in accordance with Hortus III.

   D. Plant materials will not be accepted that are overgrown, root-bound, or too recently canned so that the root system is not thoroughly established throughout the can. Pruning shall not be done prior to delivery except as authorized by the Owner's Representative.

5. Grading and Topsoil:

   A. See Grading Notes

   B. Soil Test: Contractor shall submit three (3) representative soil samples to Soil and Plant Laboratory, Santa Clara or approved equal to be tested for agriculture suitability and fertility with pre-plant and post-plant recommendations immediately following the completion of rough grading. Soil samples shall be taken from location determined by the Owner's Representative. Soil shall be certified as clean and free of hazardous material or waste contamination. Notify Owner's Representative of any soils problems noted in the soils test report that could potentially affect/impact plant health, including but not limited to the following: high or low soil pH, poor soil drainage, excessive soil compaction, different soil types in the same test sample, deficient or excess nutrient levels, high salt levels, high boron or other elements and compounds toxic to plants, etc. Submit report to Landscape Architect and Owner's Representative for review and approval prior to beginning work. Do not proceed with any amending operations until soils report has been reviewed and approved.

   C. Compost to be used for soil amendment at the rate indicated by the soil analysis to bring the soil organic matter content to a minimum of 3.5% by dry weight or 2" of compost. Contractor may 1) import topsoil to meet organic matter content tested, or 2) submit soils report that identifies existing topsoil meets or exceeds the specified organic matter content (Bay-Friendly score card item G.7.e.i)

      Soil amendment to be added as follows in all planting areas: **(Applied rates of soil amendment and commercial fertilizer shall be used for bidding purposes until determined by soil tests.)**

      Amount per 1000 square feet.

      6 cubic yards Compost

      20 lbs. 5-20-20 fertilizer (Best's Copmaker)

      10 lbs. 3-25-0 Single super phosphate

      10 lbs. iron sulfate

   D. Soil amendment in all planting areas shall be uniformly spread and thoroughly incorporated to a soil depth of 6" minimum by repeated rotary hoe cultivation prior to planting.

   E. Post Amendment Installation Soil Testing for Compliance: After incorporating amendments, fertilizers and conditioners, Contractor shall take three (3) representative soil samples and have samples tested for Agricultural Suitability and Fertility by an approved soils analysis laboratory for compliance with original soil test report recommendations. Add any additional amendments, fertilizers and conditioners recommended by soils analysis laboratory at no cost to Owner. Notify Owner's Representative of any potential soils problems noted in the report. Submit report for amendment/fertilizer/conditioner compliance to Landscape Architect and Owner's Representative prior to beginning planting operations.

6. Tree and Shrub Planting:

   Prior to digging holes for final planting, the Contractor shall spot all trees as shown on the Drawings for approval by the Landscape Architect.

   A. Soil amendments and fertilizer shall have been incorporated into the soil prior to tree and shrub planting

   B. Dig pits as shown on Drawings

   C. After pits are dug, break sides and bottom of holes to open wall of pit for root penetration

   D. Percolation Test: All plant pits shall be tested for sufficient drainage prior to planting. Representative plant pits shall be dug (at least 2) at site upon award of Bid to test for general site subgrade drainage conditions. Individual planting pits shall also be tested again for sufficient drainage prior to planting. Contractor shall fill plant pits with water to see if subsoil conditions will cause retention of water within plant pits overnight. If standing water is still observed after 12 hours then Contractor shall alert Owner's Representative and Landscape Architect of the problem.

   E. Planting backfill mix for trees and shrubs shall be:

      Amount per Cubic Yard:

      3/4 cubic yard On site soil

      1/4 cubic yard compost

      1.5 lbs 5-20-20 fertilizer (Best's Copmaker)

      2.0 lbs 0-23-0 Single super phosphate

      1 lb. iron sulfate

   (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purpose until determined by soil tests)

   F. Fertilize plants at the time of planting with Agriform 21 gram fertilizer packets, 20-10-5. 2 per 1 gallon can; 3 per 5 gallon can, 4 per 15 gallon can, specimen trees-3 per inch of caliper.

   G. Plants shall be erect after planting, and staked or guyed as detailed at the time of planting. Remove nursery stakes.

   H. Football crown shall be 2" above finish grade after watering and settling.

   I. Tree and shrub plantings shall be watered and flooded to eliminate air pockets within 2 hours of the time of planting.

   J. All vines shall be trained to posts, fences or walls by tying select individual branches with plastic covered wire ties as follows: ties shall be attached to wood surfaces with 3/4" galvanized iron staples and attached to stucco or masonry surfaces with epoxy as recommended by manufacturer. See planting details.

   K. All trees shall be planted 10'-0" minimum from buildings including overhangs and 5'-0" minimum from curbs, paving, fences, etc. Orient main branches of trees away from building. Should any discrepancies occur between field conditions and planting plans contact Owner's Representative. At trees closer than 5'-0" from curbs, foundations, sidewalks, or other hardscape items, shall be installed with linear root deflector panels protecting adjacent hardscape items, but never fully surrounding rootball. Install a 18' thick by 24 inch deep section of linear interlocking root deflector panels, centered on tree (5 feet on each side), located at curb, foundation, sidewalks, other hardscape items, unless otherwise indicated. See plans for detail.

   L. All trees shall be planted a minimum of 5'-0" away from storm drain, or other underground utility lines (or per code), and 10'-0" away from sanitary sewer lines (or per code), and 15'-0" minimum away from utility poles or light standards (or per code).

   M. All planting areas to recieve 3" layer of bark mulch, natural color, no dyes.

   N. All trees and shrubs shall have watering basins around them. Basin diameters shall be the same size as the tree or shrub's rootball. Basins shall be formed with level bottoms and 3 inch high walls. Planting areas to receive 3" depth of bark mulch unless otherwise indicated. Submit sample for approval

   O. Soil amendments shall have been incorporated into the soil prior to planting.

   P. Clear planting areas of rocks and debris greater than 1" diameter.

   Q. Apply a pre-emergent herbicide, per manufacturer's directions

   R. All planting areas with slopes greater then 2:1 shall have jute mesh installed as per detail, or per manufacturer recommendations.

   S. Thirty (30) days after planting, replace all dead plants and fill in bare areas. Top dress with 16-6-8 fertilizer at 7 lbs/1000 sq. ft. when ground is dry and thoroughly irrigate promptly after application

      (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purpose until determined by soil tests)

7. NOT USED

8. Workmanship:

   Precautions shall be taken to avoid damage to existing plants, turf and structures. Any areas damaged shall be restored to their original condition.

9. Clean-up

   Keep all areas of work clean, neat and orderly at all times. Keep all paved areas clean during planting and maintenance operations.

10. Site Visits and Approvals

    The Contractor shall contact the Owner's Representative for review and approval of plant materials and plant locations. The maintenance period begins following acceptance of plant installation.

11. Maintenance

    A. Begin maintenance after each plant is installed and continue until Final Acceptance.

    B. Maintenance Period shall begin upon inspection and approval by Owner's Representative and shall be for 90 calendar days.

    C. Maintenance of new planting shall consist of watering, cultivating, weeding, mulching, re-staking, tightening and repairing of guys, resetting plants to proper grades or upright position, restoration of the planting saucer, and furnishing and applying such sprays and invigorates as are necessary to keep the plantings free of insects and diseases and in thriving condition.

    D. Protect planting areas and plants at all times against damage of all kinds, including frost, for duration of maintenance period. Maintenance includes temporary protection fences, barriers, covers during frost and signs as required for protection. If any plants become damaged or injured, treat or replace as directed by Landscape Architect at no additional cost to Owner.

13. Guarantee

    A. Replacement trees shall be in thriving condition 3 years from the date of final acceptance. Any replacement trees which have lost at least 30% of their normal foliage or are not in vigorous growing condition shall be replaced.

    B. All other trees, shrubs, grasses, ground covers shall be in thriving condition 1 year from the date of final acceptance. Replace any trees which have lost at least 30% of their normal foliage or are not in vigorous growing condition.

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PROJECT NAME: HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
DRAWING TITLE: LANDSCAPE IMPROVEMENT PLANS
LOT 9

NO.	DESCRIPTION	BY	DATE
1			

SHEET TITLE: LANDSCAPE NOTES & SPECIFICATIONS
SCALE:
ISSUE DATE: 02/18/16
PROJECT NO: V0219
SHEET NO.: L5.1

HIGHLAND ESTATES

LOT 10 – LANDSCAPE PLANS

VICINITY MAP

SITE MAP

SHEET INDEX

SHEET NUMBER	SHEET TITLE
L0.0	COVER SHEET
L1.0	CALLOUT PLAN
L2.0	PLANTING PLAN
L3.0-L3.1	LANDSCAPE DETAILS
L4.0-L4.1	IRRIGATION PLAN & LEGEND
L4.2	HYDROZONE PLAN
L4.3-L4.4	IRRIGATION DETAILS
L5.0-L5.1	LANDSCAPE SPECIFICATIONS

REVISION LOG

DATE	SHEET NUMBER	DESCRIPTION

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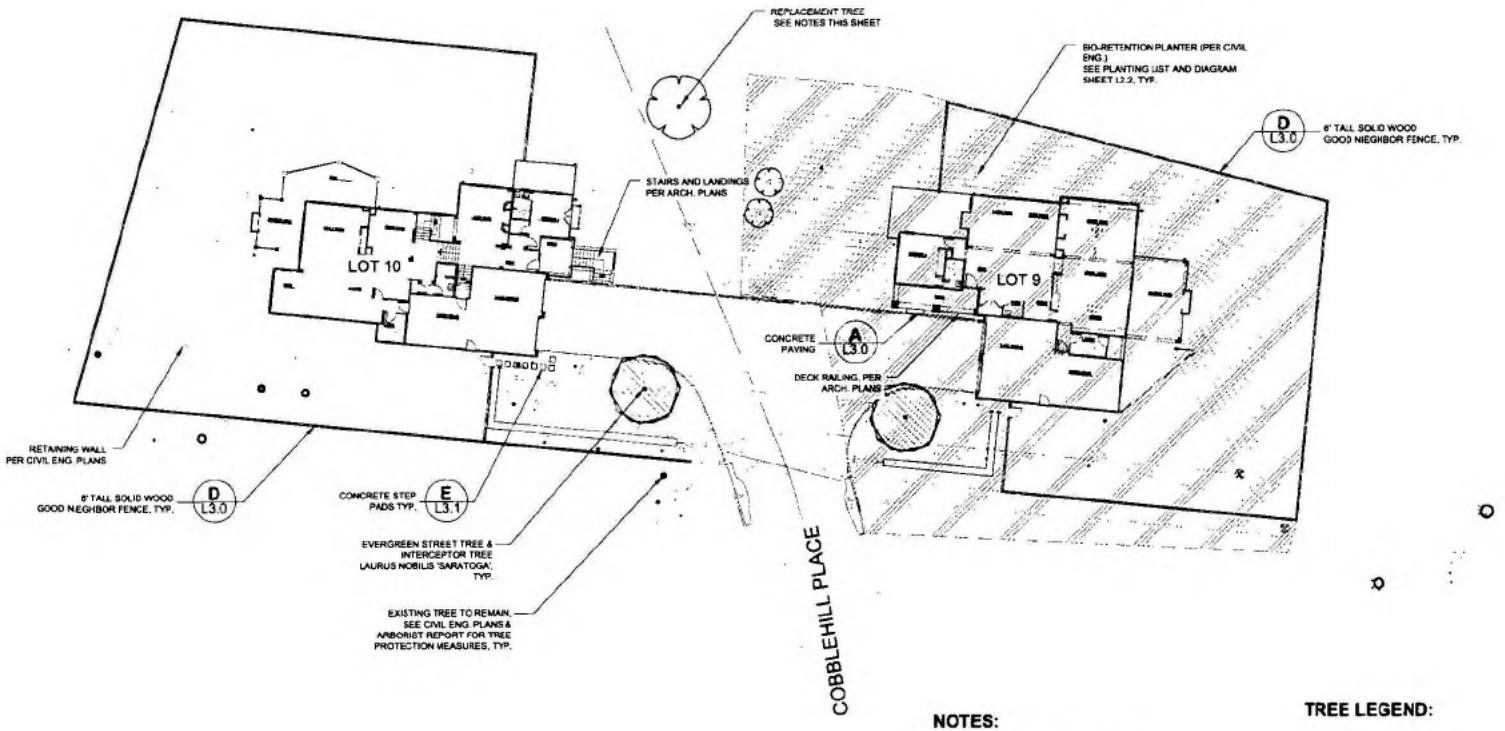
PROJECT LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

LANDSCAPE IMPROVEMENT PLANS
LOT 10

DATE
BY
DESCRIPTION
NO.

SHEET TITLE
COVER SHEET

SCALE
NTS
ISSUE DATE
02/18/16
PROJECT NO.
Y0219
SHEET NO.
L0.0



NOTES:

1. **NO PLANTING OR IRRIGATION SHALL OCCUR UNDER THE CANOPIES OF THE EXISTING OAK TREES. FIELD ADJUST NEW REPLACEMENT TREES AS NEEDED.**

TREE LEGEND:

	STORMWATER CREDIT:EVERGREEN INTERCEPTOR TREES LAURUS NOBILIS 'SARATOGA' 11 TOTAL WITHIN 25' OF IMPERVIOUS SURFACE.
	PROPOSED REPLACEMENT TREES - SEE L2.2 FOR COMPLETE TREE SPECIES/LEGEND TOTAL SITE: 23 REPLACEMENT TREES REQUIRED 33 REPLACEMENT TREES PROVIDED LOT 10: 1 REPLACEMENT TREES PROVIDED
*	EXISTING TREES TO REMAIN, TYP. SEE CIVIL PLANS AND ARBORIST'S REPORT FOR TREE PROTECTION MEASURES.

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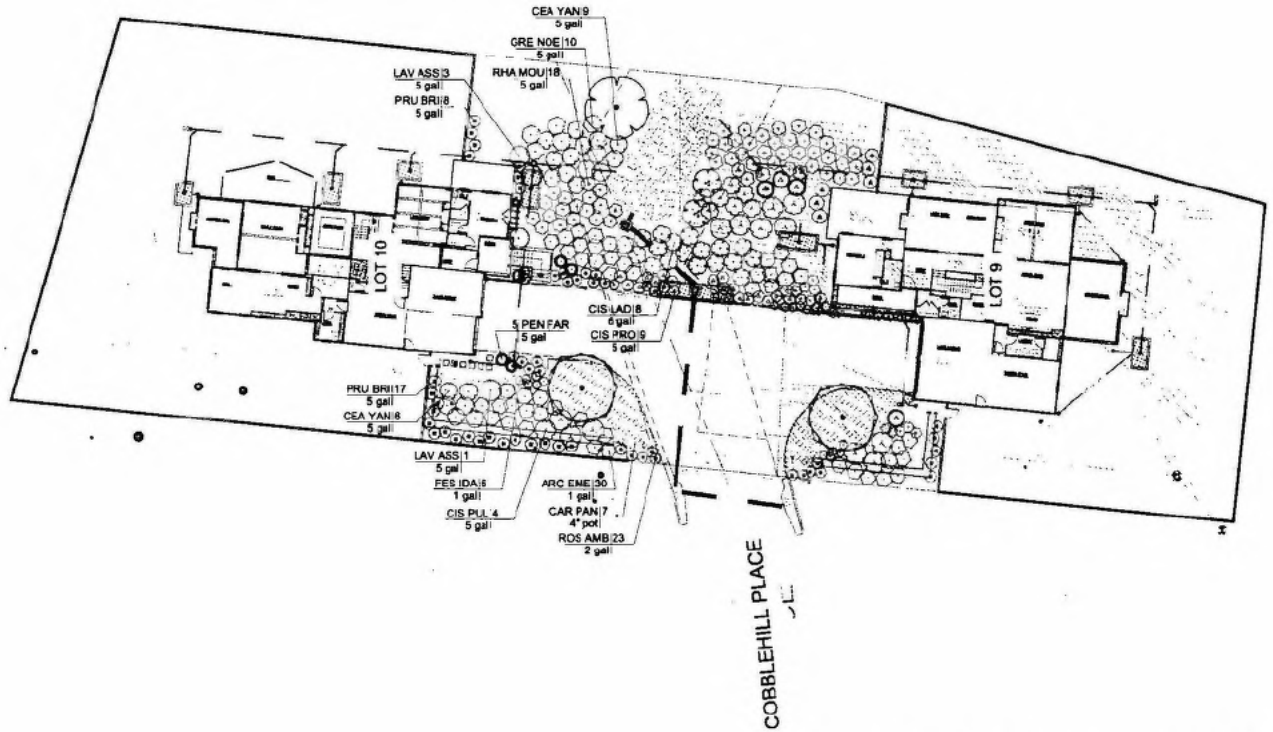
HIGHLAND ESTATES
SAN MATEO
CALIFORNIA

LANDSCAPE IMPROVEMENT PLANS
LOT 10

CALLOUT & LAYOUT PLAN

SCALE: 1/16" = 1'-0"
DATE: 02/18/16
PROJECT NO: VD219
SHEET NO: L1.0



PLANTING NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. **NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY.**
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.
4. IRRIGATION DRIP SYSTEM SHALL BE ADJUSTED AS REQ'D FOR OPTIMUM WATER SAVINGS AND NO RUN OFF.

EROSION CONTROL NOTES:

1. LEAVE EROSION CONTROL JUTE MESH ON ALL SLOPES. CUT HOLES FOR NEW SHRUBS AS NEEDED.

EXISTING OAK TREE NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY.
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.

SAN MATEO COUNTY WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE STATEMENT:

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN."

ZEKI ASED - LICENSED LANDSCAPE ARCHITECT

0 8 16 32 64

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PROJECT NAME
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 10

NO.	DATE	REVISION
1	8/1	
2	8/1	

SHEET TITLE
PLANTING PLAN

SCALE
1/16" = 1'-0"

DATE
02/18/16

PROJECT NO.
VC219

SHEET NO.
L2.0

BIO-RETENTION PLANTERS ON THE NORTH & NORTHEAST SIDES OF BUILDINGS

5 GAL	CORNUS SERICEA "ISANTI"	QTY: 1
1 GAL	CAREX PRAEGRACILUS	QTY: CAN-TO-CAN FULL

ALTERNATIVE:

5 GAL	CARPENTERIA CALIFORNICA	QTY: 1
1 GAL	CAREX PRAEGRACILUS	QTY: CAN-TO-CAN FULL

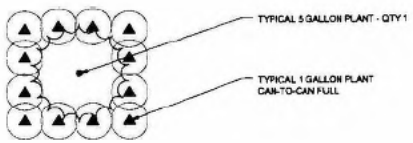
BIO-RETENTION PLANTERS ON THE SOUTH & SOUTHWEST SIDES OF BUILDINGS

5 GAL	MUHLENBERGIA RIGENS	QTY: 1
1 GAL	MIMULUS AURANTIACUS & CAREX PRAEGRACILUS (ALTERNATING)	QTY: CAN-TO-CAN FULL

NOTES:

1. CONTRACTOR TO HAND WATER PLANTS IN BIO-RETENTION PLANTERS UNTIL ESTABLISHED.
2. SEE CIVIL ENGINEER'S PLANS AND SPECIFICATIONS FOR BIO-RETENTION SOIL MIX.
3. PLANT SPECIES LISTED ABOVE ARE APPROVED FOR USE IN BIO-PLANTERS PER THE SAN MATEO COUNTY STORMWATER MEASURES PLANT LIST

PLANTING DIAGRAM:



PLANTING LIST

TREES	CODE	BOTANICAL NAME	COMMON NAME	CONT	QTY	REMARKS
	ARB HYB	Arbutus x 'Marina'	Arbutus Standard	15 gal	2	Replacement Tree
	ARC MAN	Arctostaphylos manzanita MULTI-TRUNK	Manzanita	15 gal	10	Multi-Trunk Replacement Tree
	CER OCC	Cercis occidentalis - MULTI-TRUNK	Western Redbud	15 gal	15	Multi-trunk Replacement Tree
	LAU SAR	Laurus nobilis 'Saratoga'	Sweet Bay	15 gal	12	Street Tree/Interceptor Tree Evergreen
	QUE AGR	Quercus agrifolia	Coast Live Oak	15 gal	1	Replacement tree
	SAM MEX	Sambucus mexicana - MULTI-TRUNK	Mexican Elderberry	15 gal	5	Multi-Trunk Replacement tree

PLANTING LIST (cont.)

SHRUBS	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
	ACA COG	Acacia cognata 'Cousin It'	River Wattle	5 gal	17
	ALY MON	Alyogyne huegelii 'Monterey Bay'	Blue Hibiscus	5 gal	11
	ARB ELF	Arbutus unedo 'Elfin King'	Dwarf Strawberry Tree	5 gal	8
	ARC EME	Arctostaphylos x 'Emerald Carpet'	Emerald Carpet Manzanita	1 gal	121
	CEA YAN	Ceanothus griseus horizontalis 'Yankee Point'	California Lilac	5 gal	100
	CEA CON	Ceanothus x 'Concha'	California Lilac	5 gal	7
	CIS LAD	Cistus ladanifer	Crimson Spot Rockrose	5 gal	31
	CIS PUL	Cistus pulverulentus 'Sunset'	Rockrose	5 gal	34
	CIS PRO	Cistus salvifolius 'Prostratus'	Sageleaf Rockrose	5 gal	54
	CIS HYB	Cistus x hybridus	White Rockrose	5 gal	58
	CIT MEY	Citrus x meyeri	Meyer Lemon	5 gal	3
	DIE BIC	Dietes bicolor	Fortnight Lily	1 gal	47
	ERI WAY	Erigeron glaucus 'Wayne Roderick'	Seaside Daisy	1 gal	36
	GRE NOE	Grevillea x 'Noellii'	Grevillea	5 gal	45
	LAV ASS	Lavatera assurgentiflora	Mallow	5 gal	9
	PEN FAR	Pennisetum x 'Fairy Tails'	Evergreen Fountain Grass	5 gal	12
	PIT TEN	Pittosporum tenuifolium 'Marjorie Channon'	Tawhiwhi	5 gal	30
	PIT CRE	Pittosporum tobira 'Cream De Mint' TM	Cream De Mint Dwarf Mock Orange	5 gal	15
	PIT WHE	Pittosporum tobira 'Wheelers Dwarf'	Wheeler's Dwarf Mock Orange	5 gal	34
	PRU BRI	Prunus caroliniana 'Bright 'N Tight' TM	Bright 'N Tight Carolina Laurel	5 gal	44
	RHA MOU	Rhamnus californica 'Mound San Bruno'	California Coffeeberry	5 gal	120
	RHA SEA	Rhamnus californica 'Seaview'	California Coffee Berry	5 gal	22
	ROS AMB	Rosa x 'Flower Carpet Amber'	Amber Carpet Rose	2 gal	65
	ROS RED	Rosa x 'Flower Carpet Red'	Rose	2 gal	35
	WES MOR	Westringia fruticosa 'Morning Light'	Morning Light Coast Rosemary	5 gal	11

GRASSES	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
	FES IDA	Festuca idahoensis	Idaho Fescue	1 gal	64

GROUND COVERS	CODE	BOTANICAL NAME	COMMON NAME	CONT	SPACING	QTY
	CAR PAN	Carex pansa	Sanddune Sedge	4" pot	8" o.c.	13 sf

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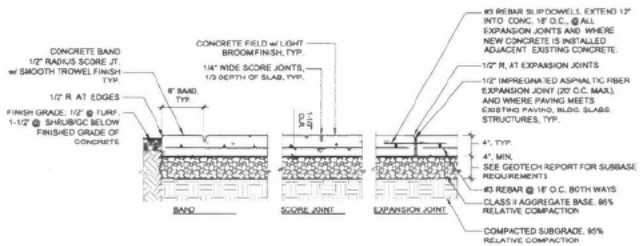
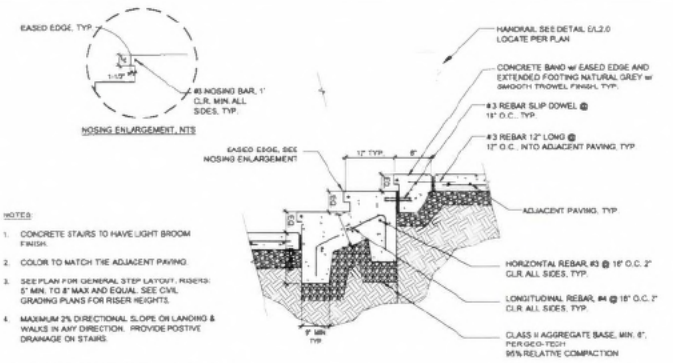
PROJECT ADDRESS
HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
SHEET TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 10

SHEET TITLE
PLANTING LEGEND
SCALE
NTS
DATE
02/18/16
PROJECT NO
V0210
SHEET NO
L2.1



A CONCRETE PAVING
1" = 1'-0"



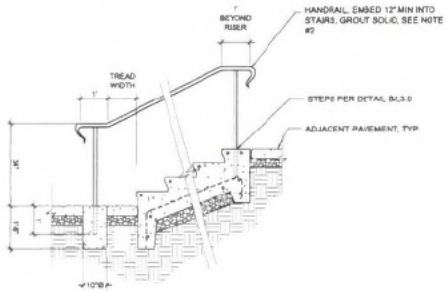
NOTES:

1. CONCRETE STAIRS TO HAVE LIGHT BROOM FINISH.
2. COLOR TO MATCH THE ADJACENT PAVING.
3. SEE PLAN FOR GENERAL STEP LAYOUT. RISERS: 5" MIN. TO 8" MAX AND EQUAL. SEE CIVIL GRADING PLANS FOR RISER HEIGHTS.
4. MAXIMUM 2% DIRECTIONAL SLOPE ON LANDING & WALKS IN ANY DIRECTION. PROVIDE POSITIVE DRAINAGE ON STAIRS.

B CONCRETE STEPS
3/4" = 1'-0"

CONCRETE NOTES:

1. SCORING PATTERN TO MEET ALL ACI INTERNATIONAL GUIDELINES.
2. ALL FORMWORK/SCORING/PROPOSED JOINT SPACING TO BE APPROVED AND REVIEWED BY OWNERS' REPRESENTATIVE PRIOR TO POURING.
3. ALL SCORING/CONTRACTION JOINTS TO BE MINIMUM 1/3 DEPTH OF SLAB.
4. DISTANCE BETWEEN CONTRACTION JTS TO BE MAXIMUM 24 TIMES SLAB THICKNESS. ALL CONTRACTION JTS TO BE CONTINUOUS, NOT STAGGERED OR OFFSET. REFER TO ACI INTL. CCS-1 SERIES GUIDELINES FOR ALL CONCRETE WORK. ANY DISCREPANCIES WITH DRAWINGS TO BE BROUGHT TO ATTENTION OF OWNER/ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
5. CONCRETE PANELS TO BE AS SQUARE AS PRACTICAL. NEVER MAKE LONG SIDE MORE THAN 1-1/2 TIMES LENGTH OF SHORT SIDE. NO ONE PANEL TO BE MORE THAN 100 SQ. FT.
6. INSTALL EXPANSION JOINTS WHERE NEW PAVING MEETS EXISTING PAVING, WALLS, CURBS, FOUNDATIONS, OR OTHER FIXED OBJECTS, AND CHANGES IN WALK DIRECTIONS.
7. CONCRETE COLOR TO BE NATURAL GRAY.
8. BROOM FINISH SHALL BE PERPENDICULAR TO PATH OF TRAVEL.
9. CONTRACTOR SHALL COORDINATE INSTALLATION OF REBAR SLIP DOWELS WHERE DRIVEWAY MEETS GARAGE CONCRETE PAD WITH OWNER'S REPRESENTATIVE AND PROJECT STRUCTURAL ENGINEER. DOWELS SHALL BE #4 REBAR SPACED 24" O.C. EXTENDING 12" INTO DRIVEWAY AND GARAGE PAD, OR AS SPECIFIED BY STRUCTURAL ENGINEER. CONTRACTOR SHALL ONLY INSTALL REBAR DOWELS IF APPROVED BY OWNER'S REPRESENTATIVE AND PROJECT STRUCTURAL ENGINEER. SUBMIT TO OWNER'S REPRESENTATIVE PROPOSED DOWEL LOCATIONS.
10. FOR ALL PAVING DETAILS SHOWN, THE PAVING PROFILE, AGGREGATE, SUBBASE PREPARATION & COMPACTION PER GEOTECH ENGINEER, TYP. PROFILES ARE SHOWN FOR DESIGN INTENT & BIDDING PURPOSES ONLY. SEE GEOTECH REPORT FOR PAVING & SUBBASE REQUIREMENTS.

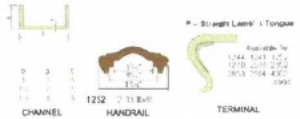


In this detail, channel is punched to accept pickets. Picket/channel assembly is then attached to the under-side of the railing.

HANDRAIL, CHANNEL & POST

HANDRAIL NOTES:

1. HANDRAILS TO BE 1-5/16" MODEL #2901 ALUMINUM HANDRAIL WITH LAMBS TONGUE TERMINUS AS SHOWN. ALUMINUM CHANNEL SHALL BE MODEL C2100912. POSTS SHALL BE 1" SQUARE STEEL BAR WELDED TO BASE OF CHANNEL.
2. PRIME AND PAINT WITH ZINC-RICH PRIMER AND 2 COATS ENAMEL. COLOR TO BE DARK BRONZE. SUBMIT PAINT SAMPLE TO OWNER FOR APPROVAL.
3. AVAILABLE THROUGH R&G WAGNER, INC. (888) 243-8914

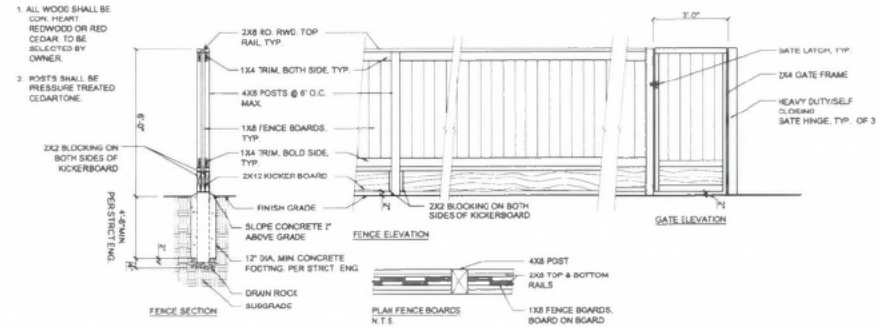


HANDRAIL MAKE AND MODEL

C HANDRAIL
1/2" = 1'-0"

NOTES:

1. ALL WOOD SHALL BE CON. HEART REDWOOD OR RED CEDAR. TO BE SELECTED BY OWNER.
2. POSTS SHALL BE PRESSURE TREATED CEDARTONE.



D 6' TALL WOOD FENCE & GATE
NTS

CLIENT
CHAMBERLIN GROUP
855 Skyway, Suite 230
San Carlos, CA 94070
(800) 395.3562

800.227.2600

VAN DORN ABED LANDSCAPE ARCHITECTS, INC.
81 14TH ST. SAN FRANCISCO, CA
94103 (415) 621-2900

PROJECT LOCATION:
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

PROJECT DESCRIPTION:
LANDSCAPE IMPROVEMENT PLANS
LOT 10

REVISIONS	NO	DESCRIPTION	DATE	BY

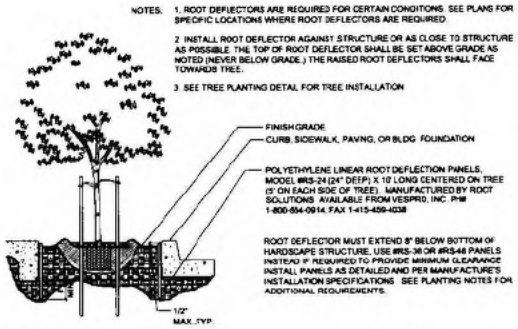
SHEET TITLE
LANDSCAPE DETAILS

SCALE
AS NOTED

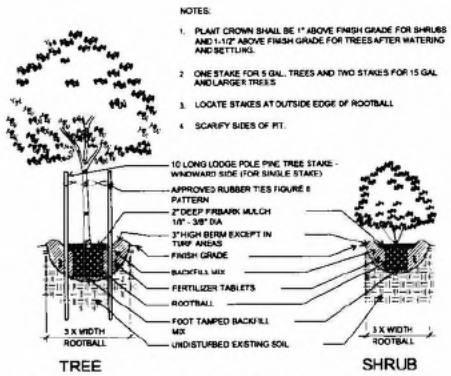
ISSUE DATE
02/18/16

PROJECT NO.
Y0219

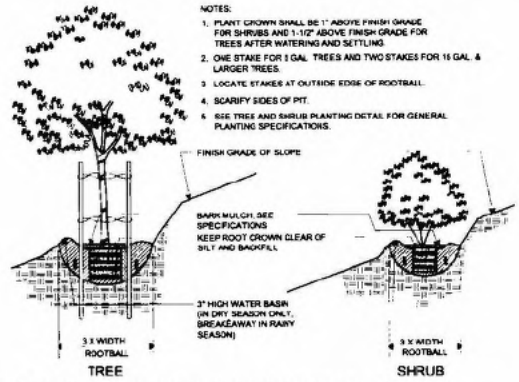
SHEET NO.
L3.0



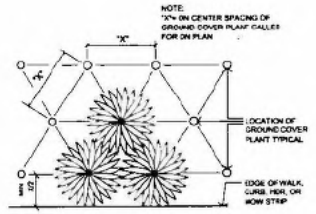
A ROOT DEFLECTOR
NTS



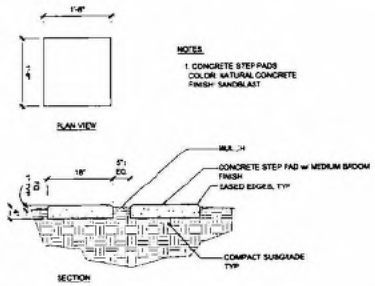
B TREE AND SHRUB PLANTING
NTS



C HILLSIDE TREE AND SHRUB PLANTING
NTS



D GROUNDCOVER PLANTING
NTS



E CONCRETE STEP PADS
3/4" = 1'-0"

CHAMBERLAIN GROUP
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San Carlos, CA 94070
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VAN DORN ABED LANDSCAPE ARCHITECTS, INC.
601 MISSION STREET, SUITE 2400
SAN FRANCISCO, CA 94105
PH (415) 543-1551 FAX (415) 543-1554

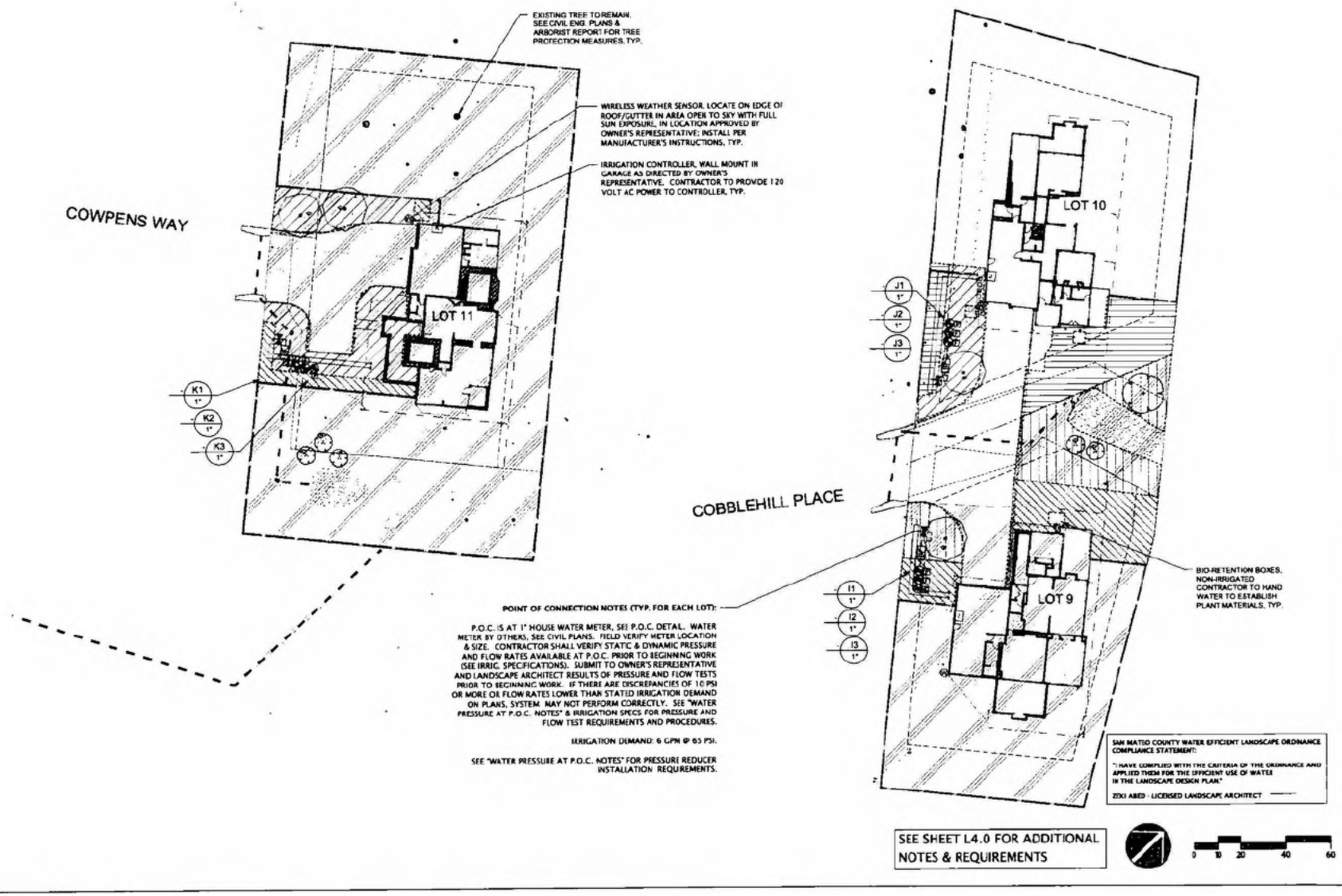
PROJECT MANAGER
MW
DRAWN BY
MW
CHECKED BY
KTW

PROJECT INFORMATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 10

NO	DESCRIPTION	DATE

SHEET TITLE
LANDSCAPE DETAILS

SCALE
AS NOTED
DATE
02/18/16
PROJECT NO
V9219
SHEET NO
L3.1



CHAMBERLAIN GROUP
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VAN DORN ABED LANDSCAPE ARCHITECTS, INC.
CALIFORNIA

HIGHLAND ESTATES
SAN MATEO
LANDSCAPE IMPROVEMENT PLANS
LOT 10

IRRIGATION PLAN

SCALE: 1" = 20'-0"
DATE: 02/18/16
PROJECT NO.: Y0219
SHEET NO.: L4.0

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
△	PVC lateral line to drip area with Rainbird 6-outlet emitter units. Route PVC lateral line thru drip area and install required quantity of Outlets/risers necessary to irrigate plants in the drip area.
○	Rain Bird XBT-6 Six mult-outlet drip emitter/bubbler Six-Outlet, Pressure Compensating, with 1.0 GPH Black Drip Emitters at each emitter outlet. Comes with 1/2" FPT Inlet x Barb Outlet. Install DBC-326 Diffuser Bug Caps at end of each emitters 1/4" distribution line. Install 4 (four) 1/4" distribution lines with Diffuser Bug Caps at 5Gal & 15Gal trees. Install 6 (six) 1/4" distribution lines with Diffuser Bug Caps at 24"Box trees. Plug unused emitter outlets.

NOTE: DRIP AREA PATTERNS VARY

FOR DESIGN CLARITY

A1 A1 A1

A1 A1 A1

CONTROLLER

VALVE CIRCUIT NO.

Area to Receive Drip Emitters
Rain Bird XB0601-PRS wXB-10
Xer-Bird 6 Multi Outlet Emission Device with Xer-Bug emitters at 1gph each, with built-in 200 mesh filter, Pressure Regulator in-stem
Emitter Notes:
1 gal plant to receive 1 of OCT8-15 emitter.
5 gal plant to receive 2 of OCT8-15 emitters.
15 gal plant to receive 4 of OCT8-15 emitters.
24"box plant to receive 6 of OCT8-15 emitters
2 gal plant to receive 1 of OCT8-15 emitter.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Irritrol 700 with DMR-100 Electric Remote Control Valve, with Omni-Reg 5-100psi regulator. Set pressure regulator at 40 PSI.
	Nibco T-113-LF Lead free Class 125 bronze gate shut off valve with wheel handle, same size as mainline pipe diameter at valve location. Size Range - 1/4" - 3"
BF	Febco LF825Y 1" Lead Free Reduced Pressure Backflow Preventer
A	Irritrol TC-08-MOO-R Hybrid Controller, 8- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
B	Irritrol TC-08-MOO-R Hybrid Controller, 8- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
C	Irritrol TC-08-MOO-R Hybrid Controller, 8- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
D	Irritrol TC-08-MOO-R Hybrid Controller, 8- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
	Irritrol CL Wireless Weather Sensing System 100-Receive and Transmitter Kit. Outdoor sensor, and receiver attaches to irritrol Controller. Compatible with Rain Dial-R, Total Control-R, KwikDial, adn MC-E controllers. Monitors weather data.
	Arroyo 150 mesh Y-Filter with flush valve, or approved equivalent, at drip remote control valves
	Irrigation Lateral Line. PVC Class 200 SDR 21 PVC Class 200 irrigation pipe. Only lateral transition pipe sizes 1" and above are indicated on the plan, with all others being 3/4" in size. 12" min. burry
— — — —	Irrigation Mainline. PVC Schedule 40 PVC Schedule 40 irrigation pipe. 18" min. burry
- - - - - - - -	Pipe Sleeve. PVC Class 315 SDR 13.5 24" MIN. BURRY

Valve Callout
- Valve Number
- Valve GPM
- Valve Size

IRRIGATION RUN TIME SCHEDULE NOTES:

1. IRRIGATION CONTROLLER RUN TIMES ARE NOT INCLUDED ON LANDSCAPE PLANS. IRRIGATION CONTROLLERS ARE ET BASED SMART CONTROLLERS THAT GENERATE OPTIMUM RUN TIME SCHEDULES BASED UPON LOCAL WEATHER CONDITIONS.
2. CONTROLLERS ARE INITIALLY PROGRAMMED WITH IRRIGATION SYSTEM COMPONENT INFORMATION, PLANT MATERIAL WATER USE REQUIREMENTS, SOIL TYPE, AND LOCAL MICRO CLIMATIC INFORMATION. CONTROLLERS AUTOMATICALLY GENERATE RUN TIME SCHEDULES FROM THIS INFORMATION. EACH DAY CONTROLLERS RECEIVES LOCAL WEATHER CONDITION DATA WIRELESS WEATHERS SENSORS, AND AUTOMATICALLY ADJUST THEIR WATERING SCHEDULES FOR OPTIMUM WATER CONSERVATION. EACH CONTROLLER HAS IT'S OWN WIRELESS WEATHER SENSOR, LOCATED ON SITE.

IRRIGATION SPECIFICATIONS:

1. Irrigation system shall be installed in conformance with all applicable local codes and ordinances by experienced workmen and a licensed Landscape Contractor who shall obtain all necessary permits and pay all required fees.
2. Prior to the start of construction, the Contractor shall verify with the City, Water District, and/or other governing agency(s) if a reclaimed water source will be available in the future for connection to the irrigation system. If local regulations so stipulate, then the Contractor shall follow all requirements, specifications, construction details, codes, etc., for the installation of irrigation systems utilizing reclaimed water sources for irrigation of landscaping.
3. The Contractor shall be responsible for any damage to existing facilities caused by or during the performance of his work. All repairs shall be made at no cost to the Owner.
4. This design is diagrammatic; install parallel lines in a common trench with minimum horizontal distance of 4" and lines not one above the other. Snake pipe in trenches. All piping, valves, etc., shown within paved areas is for design clarification only and shall be installed in planting areas where possible. Avoid any conflicts between the irrigation system, planting and architectural features.
5. Do not willfully install the irrigation system as shown on the drawings when it is obvious in the field that obstructions, grade differences or differences in the area dimensions exist that might not have been considered in the engineering. Such obstructions or differences should be brought to the attention of the Owner's authorized representative. In the event this notification is not performed, the Contractor shall assume full responsibility for any revisions necessary.
6. It is the responsibility of the Contractor to familiarize himself with all grade differences, location of walls, retaining walls etc. He shall coordinate his work with the General Contractor and other Subcontractors for the location and the installation of pipe sleeves through walls, under roadways, paving, structures, etc.
7. Due to the scale of the drawings, it is not possible to indicate all offsets, fittings, sleeves, etc., which may be required. The Contractor shall carefully investigate the structural and finished conditions affecting all of his work and plan his work accordingly, furnishing such fittings, etc., as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation system, planting, and architectural features.
8. Notify Landscape Architect of any other aspects of layout which will provide incomplete or insufficient water coverage of plant material and do not proceed until his instructions are obtained.
9. Electrical Contractor to supply 120 volt A.C. (2.5 AMP) service to controller location. Contractor to make final connection from electrical stub-out to controller. Paint conduit to controller with 2 coats Rustoleum brown paint if installed outdoors; color to be approved by Owner's representative. 120 volt A.C. J-Box to controller by others. All 120 volt A.C. and 24 volt connections to be made by Contractor.
10. Each controller shall have its own independent ground wire.
11. Program irrigation controller(s) to operate between the hours of 10:00 P.M. and 7:00 A.M.
12. Valve locations shown are diagrammatic. Install in ground cover/shrub areas.
13. Install valve boxes 12" from and perpendicular to walk, curb, building or landscape feature. At multiple valve box groups, each box shall be an equal distance from the walk, curb, lawn, etc., and each box shall be 12" apart. Short side of valve box shall be parallel to walk, curb, lawn, etc.
14. Install U.L. approved direct-burial wire #14 minimum and #14 common ground at 18" depth minimum. Splicing of 24 volt wires will not be permitted except in valve boxes. Leave a 24" coil of excess wire at each splice and 100 feet on center along wire run. Tape wire in bundles 10 feet on center. No taping permitted inside sleeves.
15. Install a spare control wire of a different color along the entire main line. Loop 36" excess wire into each single valve box and into one valve box in each group of valves.
16. Prior to trenching, call Underground Service Alert, 1-800-642-2444 to locate all cables, conduits, and other utilities and take proper precautions not to damage or disturb existing utilities.
17. All Main lines and Lateral lines under paving shall be in PVC sleeves which extend 12" into planting areas. All backfill shall be free of rocks greater than 1" diameter. For ring-tite PVC main line piping inside sleeves use 1120-315 PSI PVC plastic pipe with schedule 40 PVC couplings.
18. When applicable, Schedule 80, ASTM D2466 male adapters to be used where mainline connects to copper pipe service lines installed by others.
19. Copper pipe shall be joined to steel or cast iron pipe with a dielectric union.
20. In addition to the sleeves and conduits shown on the plans the Contractor shall be responsible for the installation of sleeves and conduits of sufficient size under all paved areas.
21. Locate quick coupling valve 12" from hardscape area.
22. The irrigation system design is based on the minimum operating Pressure (PSI) and Flow (GPM) shown on the irrigation drawings (see Irrigation Demand at P.O.C.). The Contractor shall verify the Static and Dynamic water pressure (PSI) and Flow Rate (GPM) at the point of connection (P.O.C.) prior to construction as follows:
    A. Static Pressure: take PSI reading at P.O.C. with no water flowing.
    B. Dynamic Pressure: install at P.O.C. a pressure (PSI) and flow gauge (GPM) assembly of suitable size* to take flow (GPM) readings in the range of the stated Irrigation Demand for the irrigation system design. Open valve or meter at P.O.C. until GPM flow reading equals or exceeds irrigation GPM demand. Note dynamic pressure and flow readings. If the GPM flow does not equal or exceed the GPM demand, note highest flow reading possible.
    C. Readings shall be taken at the following times: 1PM, 5PM, 9PM, 1AM, 5AM, 9AM.
    * Irrigation systems with high irrigation demand GPM flow rates, will require large capacity test gauge assemblies.

Submit to Owner's Representative and Landscape Architect results of Pressure and Flow Tests prior to beginning work. Note any discrepancies of 10 PSI or more or flow rates lower than stated Irrigation Demand on plans to Owner's Representative and Landscape Architect. If there are discrepancies of 10 PSI or more or flow rates lower than stated Irrigation Demand on plans, system may not perform correctly - do not proceed with irrigation system installation until corrective measures are determined. Note, Contractor shall be responsible for any corrective measures required to the irrigation system, at no additional cost to the Owner, if irrigation system is installed without required tests, and discrepancies in Pressure and Flow at the P.O.C. are discovered that prevent the irrigation system from functioning correctly.

23. Meter(s) indicated on the Drawing(s) is supplied and installed by others, unless otherwise indicated. The Contractor is responsible for furnishing all proper fittings.
24. All irrigation piping shall be subjected to hydrostatic pressure tests as follows before backfilling trenches: Valves, pumps, and accurately calibrated recording gauges shall be installed in at least two places. Supply lines shall be tested at 125 psi for at least 4 hours with an allowable loss of 5 psi. Lateral lines shall be tested at the existing static psi for at least 1 hour with an allowable loss of 5 psi. Any leaks shall be corrected and piping re-tested until the system meet the requirements. The Contractor shall notify the Owner's Representative at least 3 days in advance of the time that the irrigation system piping is to be tested. Submit written test results to Owner's Representative and Landscape Architect.
25. Contractor to notify all local jurisdictions for inspection and testing of installed backflow prevention device.
26. The entire irrigation system shall be operating properly before any lawn or ground cover is planted.
27. The Contractor shall provide Owner with a clean set of marked prints of "RECORD DRAWINGS" drawings. Reference all trenches, valves, controllers, splice boxes, quick couplers, backflow preventers, water meters, with dimensions to nearest building or paving.
28. The Contractor shall guarantee the irrigation system will be free of defects of workmanship and materials for a period of one year. All repairs necessary shall be made at no cost to the Owner, with the exception of repairs and labor cost made necessary by vandalism.

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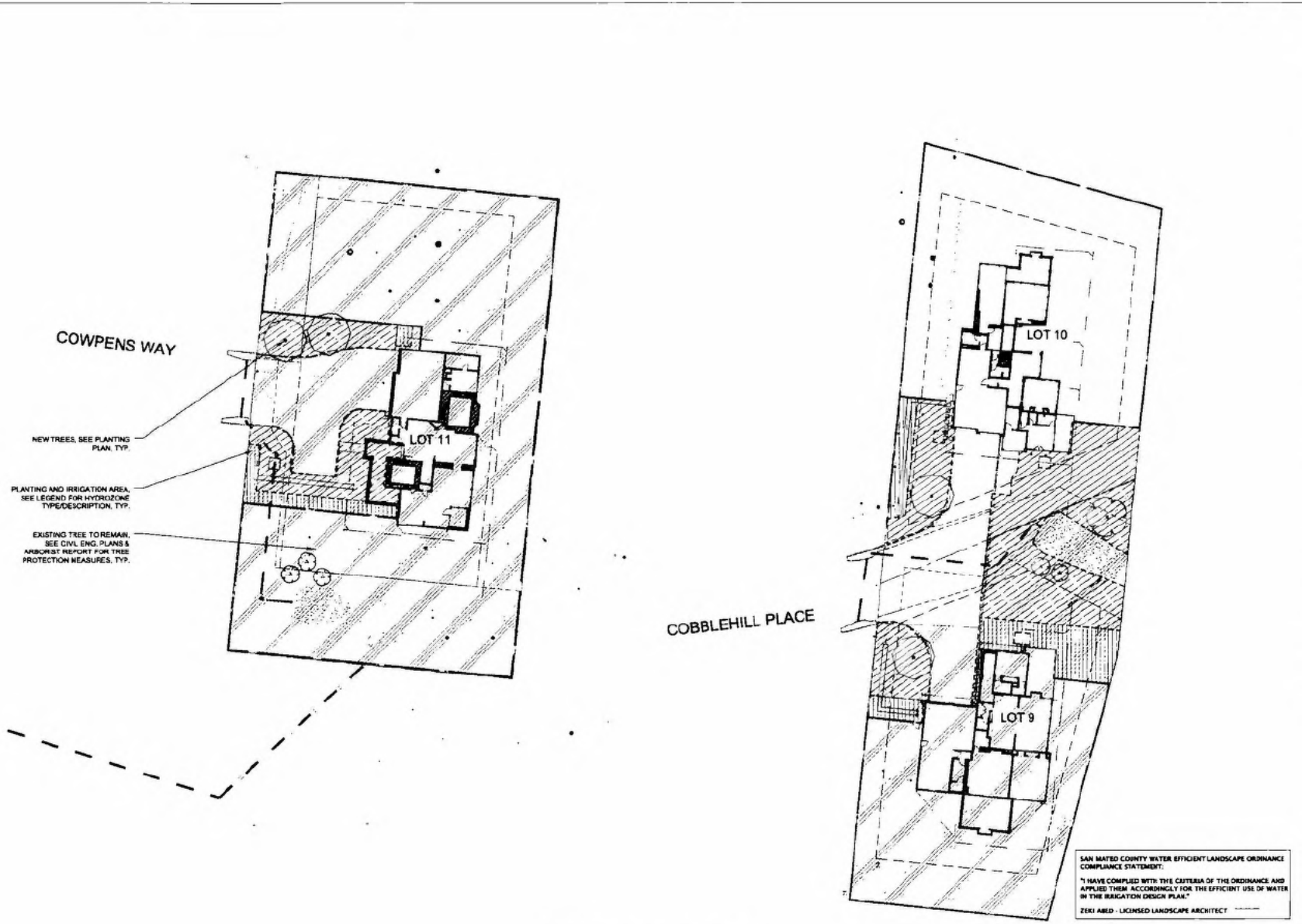
LANDSCAPE ARCHITECTS, INC.
87 NEUTRAL HILL WAY, NOVATO, CA. 94945 (415) 892-1161

PROJECT MANAGER: MW
DESIGNED: EO
DRAWN: EO
CHECKED: EO

PROJECT: HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
LANDSCAPE IMPROVEMENT PLANS
LOT 10

NO	DESCRIPTION	DATE

SHEET TITLE: IRRIGATION LEGEND & SPECIFICATIONS
SCALE: NA
ISSUE DATE: 02/18/18
PROJECT NO: V0219
SHEET NO: L4.1



SEE SHEET L4.3 FOR HYDROZONE LEGEND & LOT AREAS

CIVIL
CHAMBERLAIN GROUP
655 Skyway, Suite 250
San Carlos, CA 94070
(650) 595.5582

800.227.2600

LANDSCAPE ARCHITECT
VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.
81 14TH ST. SAN FRANCISCO, CA
87 PROJECT MGR. ARCHITECTURE INTERIOR

PROJECT MANAGER: ZA
DRAWN BY: MW
CHECKED BY: ZA

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO
CALIFORNIA

LANDSCAPE IMPROVEMENT PLANS
LOT 10

NO	DESCRIPTION	BY	DATE

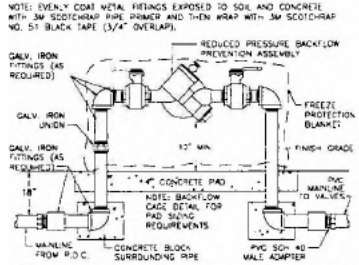
SHEET TITLE
HYDROZONE PLAN

SCALE
1" = 20'-0"

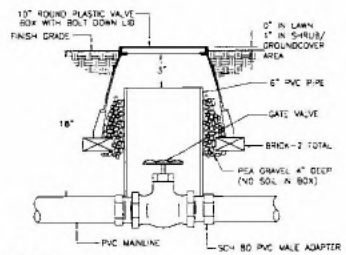
ISSUE DATE
02/18/16

PROJECT NO.
V021B

SHEET NO.
L4.2



1 REDUCED PRESSURE BACKFLOW PREVENTER DETAIL
NOT TO SCALE



2 GATE VALVE DETAIL
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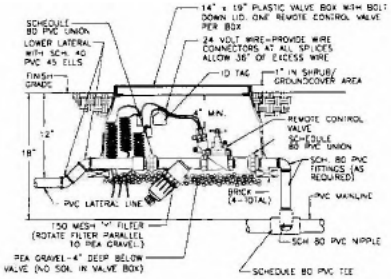
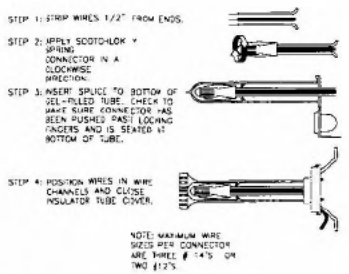
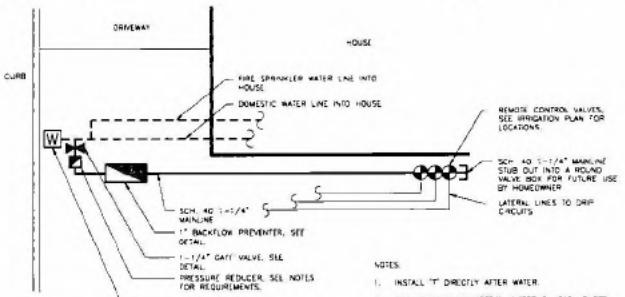


3 REMOTE CONTROL VALVE & "Y" FILTER DETAIL
NOT TO SCALE



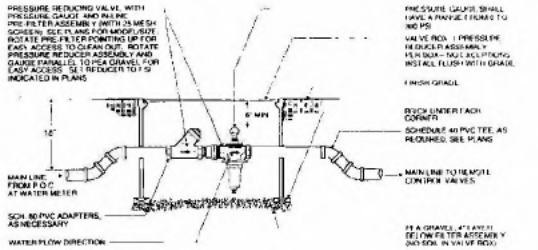
4 WIRE CONNECTION DETAIL
NOT TO SCALE



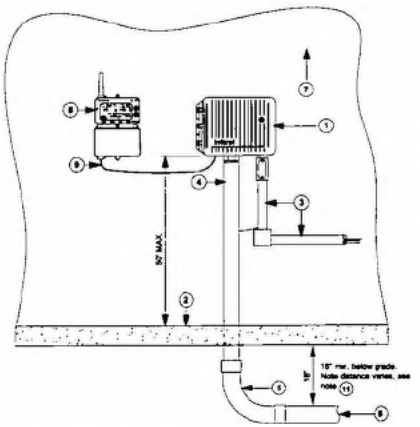
NOTES:
1. INSTALL "T" DIRECTLY AFTER WATER.
2. SEE POINT OF CONNECTION NOTES ON EACH SHEET, FOR PRESSURE VERIFICATION AND TESTING REQUIREMENTS.

5 IRRIGATION SYSTEM P.O.C. AT EACH LOT DETAIL
NOT TO SCALE

NOTES:
PRESSURE REDUCER SHALL BE 1-1/4" LEAD FREE WILKINS 500XLYDER (INCLUDES PRESSURE REDUCER & FILTER), SET AT 50 PSI SEE NOTES ON IRRIGATION PLANS FOR INSTALLATION REQUIREMENTS.

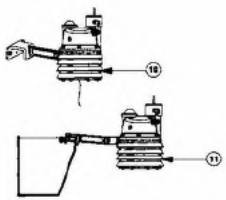


6 PRESSURE REDUCER DETAIL
NOT TO SCALE

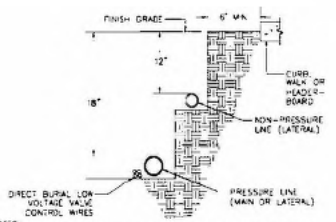


1. Irrigation controller. Install controller in location as directed by Owner's Representative.
2. Garage finish surface.
3. 1/2" UL approved electrical conduit, ring nut and junction box for 120V AC electrical power. Contractor to provide 120 volt AC electrical power to controller, see notes on Irrigation Plans.
4. PVC schedule 40 control wire conduit (size as required)
5. PVC sweep ell to conduit through bldg. to exterior planting area 18" below grade.
6. End conduit 12" beyond edge of bldg., 18" below grade.
7. Interior wall in garage area.
8. Climate Logic™ receiver module mounted near the compatible controller. Mount with screws at eye level.
9. Single connection cord plugged into controllers remote port.
10. Climate Logic™ weather sensor mounted outdoors on flat surface using screws. , see notes on Irrigation Plans.
11. Climate Logic™ weather sensor mounted on a rain gutter using QuickClip™ guttermount, see notes on Irrigation Plans.
11. Note: at lots where garage areas are elevated above grade, route conduit down side of bldg./structural piers out ails where possible, to 18" below grade. Paint exposed conduit to match house color as directed by Owner's Representative.

7 IRRIGATION CONTROLLER & WIRELESS WEATHER SENSOR DETAIL
NOT TO SCALE



NOTES:
1. Irrigation controller is not shown on the irrigation plan. Irrigation controller to be installed in garage as directed by Owner's Representative.
2. 120 volt AC power to controller per Electrical Plans.
3. Wireless weather sensor unit to be installed on edge of bldg. in area open to sky with full sun exposure, in location approved by Owner's Representative. Locate sensor unit within radio communication range of controller.
4. All electrical work must conform to local codes. Refer to product literature for additional installation requirements.



NOTES:
1. TRENCHING AND BACKFILLING SHALL BE PER STANDARD SPECIFICATIONS.
2. MINIMUM BACKFILL RELATIVE COMPACTION SHALL BE 90%.
3. BUNDLE CONTROL WIRES TOGETHER AND TAPE AT 10' INTERVALS.
4. 4" MIN. HORIZONTAL DISTANCE BETWEEN PIPES IN COMMON TRENCH.
5. ALL PLASTIC IRRIGATION PIPING TO BE SNAKED IN TRENCHES

8 IRRIGATION LINE TRENCHING
NOT TO SCALE

CLIENT:
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845 Skyway, Suite 250
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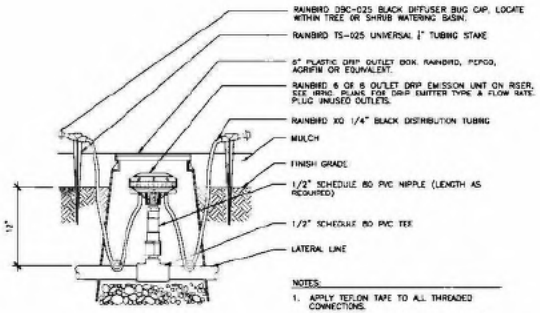
PROJECT NAME / LOCATION
HIGHLAND ESTATES
SAN MATEO, CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 10

NO.	DESCRIPTION	DATE

SHEET TITLE
IRRIGATION DETAILS

SCALE
AS SHOWN
DATE
02/18/16
PROJECT NO
V0210
SHEET NO.
L4.3



SECTION

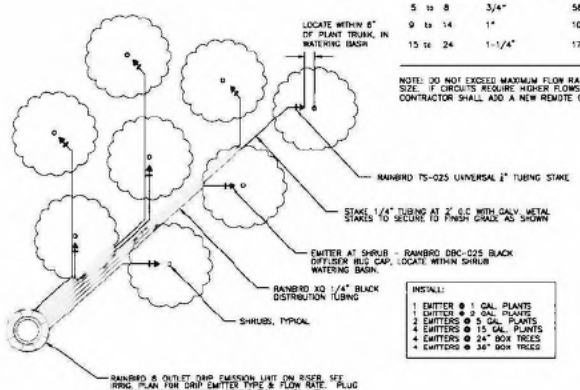
NOTES:

1. APPLY TEFLON TAPE TO ALL THREADED CONNECTIONS.
2. SEE DRIP LATERAL PIPE SIZING CHART FOR SIZING LATERAL LINES.
3. 1/4" DISTRIBUTION TUBING MAXIMUM LENGTH SHALL NOT EXCEED 30'.

DRIP SHRUB/GC LATERAL PIPE SIZING CHART

GPM FLOW RATES	SIZE OF CLASS 200 PVC PIPE	MAX. QUANTITY OF RAINBIRD 8-OUTLET DRIP EMISSION UNITS (WITH 1.0 GPH EMITTERS)
5 to 8	3/4"	58
9 to 14	1"	102
15 to 24	1-1/4"	178

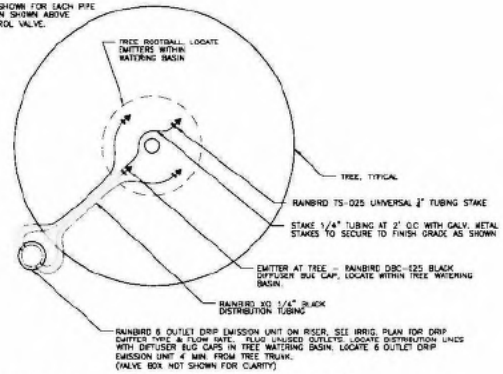
NOTE: DO NOT EXCEED MAXIMUM FLOW RATES SHOWN FOR EACH PIPE SIZE. IF CIRCUITS REQUIRE HIGHER FLOWS THAN SHOWN ABOVE CONTRACTOR SHALL ADD A NEW REMOTE CONTROL VALVE.



INSTALL:

1 EMITTER @	1 GAL. PLANTS
1 EMITTER @	2 GAL. PLANTS
2 EMITTERS @	5 GAL. PLANTS
4 EMITTERS @	15 GAL. PLANTS
4 EMITTERS @	24" BOX TREES
4 EMITTERS @	36" BOX TREES

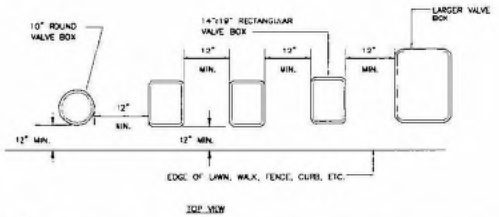
PLAN VIEW – RAINBIRD 8 OUTLET DRIP EMITTER LAYOUT @ SHRUBS/GROUND COVERS



PLAN VIEW – RAINBIRD 6 OUTLET DRIP EMITTER LAYOUT @ TREES

1 8-OUTLET & 6-OUTLET DRIP EMITTER ON RISER DETAIL

NOT TO SCALE



TOP VIEW

NOTES

1. CENTER BOX OVER VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA.
3. SET VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN AREA ONLY IF GROUND COVER/SHRUB AREA DOES NOT EXIST ADJACENT TO LAWN.
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOX EDGES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
6. VALVE BOXES SHALL HAVE BOLT DOWN LIDS WITH BOLTS INSTALLED.
7. VALVE BOXES SHALL BE BY CARSON, OR EQUIVALENT.

2 VALVE BOX LAYOUT DETAIL

NOT TO SCALE

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PROJECT MANAGER
DRAWN BY
CHECKED BY

PROJECT NAME / LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 10

REVISIONS NO.	DESCRIPTION	BY	DATE

SHEET TITLE
IRRIGATION DETAILS

SCALE:
AS SHOWN
ISSUE DATE:
02/18/16
PROJECT NO.
V0219
SHEET NO.
L4.4
OF

GENERAL NOTES:

1. Contractor shall verify all existing site conditions prior to beginning construction. Notify Owner's Representative of any discrepancies.
2. The Contractor shall provide all materials, labor and equipment to complete all landscape work as shown on the plans and specifications.
3. If there is a conflict with the utilities and the planting, the Owner's Representative is to be responsible for spotting new plant locations prior to the planting process.
4. The Contractor shall be responsible for any damage to existing utilities, pavement or improvements. All repairs shall be made at no expense to the Owner.
5. The Contractor shall notify the Owners Representative prior to beginning construction and shall keep the Owner's Representative informed of progress of work throughout landscape construction.
6. All work shall be installed in conformance with all applicable local codes and ordinances by experienced workmen and a licensed Contractor who shall obtain all necessary permits and pay all required fees.
7. Any requirement in the Plans and / or Notes and Specifications shall be considered binding. In case of discrepancies, the Owner's Representative shall be contacted immediately.
8. It is the Contractor's responsibility to schedule regular site visits by the Owner's Representative/Landscape Architect throughout landscape construction, at the beginning of the maintenance period, and final site review will be required.
9. Execute weekly cleaning of the site throughout the contract period to remove all waste materials, rubbish, plant containers, etc.
10. See Civil Engineer's improvement plans for all general grading information and notes.
11. All written dimensions supersede scaled distances. All dimensions are taken from back of curb, face of building, face of wall finish or face of fence.
12. Upon award of bid and prior to any construction, the Contractor shall perform the Percolation and Soils Testing as specified in the Planting Notes, if these tests have not already been performed. If drainage is found to be insufficient, or soils test results identify conditions requiring extraordinary or corrective measures, the Contractor shall immediately alert the Owner's Representative and Landscape Architect of any such problems, for corrective action and/or additional drainage treatment.

GRADING NOTES:

1. See General Notes and Civil Engineer's Grading Plans for additional information.
2. Rough grading and site drainage shall have been completed prior to Contractor's work. Verify all existing site conditions and report any discrepancies to Owner's Representative.
3. Contractor shall be responsible for finish grading. Verify positive drainage at a minimum 2% slope in landscape areas away from buildings and paved surfaces. Shrub areas shall be 1-1/2" below top of adjacent paving, headers, or curbs. No low spots which hold standing water will be permitted.
4. All salvageable, clean top soil from areas to be paved shall be stockpiled to be used as fill in planting areas.

CONSTRUCTION NOTES:

1. Concrete work: Install concrete work as detailed. Layout of concrete work shall be as shown on construction plans and as specified below.
   A. Layout shall be approved by Owner's representative/Landscape Architect prior to concrete pour. Contact Owner's Representative two days in advance.
2. Paving Installation:
   B. Concrete Materials: For paving, concrete shall be a 5 sack mix producing concrete having a 28 day strength not less than 2500 psi. For walls concrete shall be 6 sack mix.
1. Portland cement: Conforming to ASTM. C150, Type I or II. Total alkali content not to exceed 0.60%. Deliver cement and all materials in labeled, unopened containers.
2. Form coatings: Standard product resin type sealer. Do not use form oil or any oil-bearing material.
3. Concrete aggregates: Conform to ASTM C33. Maximum 3/4" size aggregate.
4. Base course aggregates: Conform to ASTM C33. Maximum 3/4" size aggregate.
5. Water: Clean and potable.
6. Forms: Form material is Sub-contractor's option.
7. Admixtures or finish retardants: For workability, where approved by Owner's representative, and admixture may be added in accordance with manufacturer's recommendations. Obtain approval of material prior to use.
8. Expansion joint material: 3/8" thick pre-molded joint filler, conforming to ASTM D1751 or D1752.
9. Reinforcing steel:
   a. Bars: Deformed, intermediate grade, conforming to ASTM A615, Grade 40 for sizes #5 and smaller.
   b. Tie wire: Annealed copper-bearing steel wire, minimum 18 gauge.
10. Welded wire mesh: 6" x 6" x #10.
11. Liquid curing compound as required: Thompson's approved standard product fugitive resin type, or equal conforming to ASTM C309, free of wax or oil, compatible with subsequently applied finishes or coverings, not deleterious to bond of cementitious materials to aggregate.
12. Patching mortar: One part Portland cement or equal (part white and part gray adjusted to match color of surrounding concrete) and 2-1/2 parts sand with the least water required to produce a workable mass. Rework this mortar until it is the stiffest consistency that will permit placing.

C. Concrete Installation:

1. Construct the subgrade true to grade and detail as shown. Compact subgrade to 90% maximum density at optimum moisture content.
2. Set forms with upper edges true to line and grade. Properly brace or tie together to maintain position and shape. Remove side forms not sooner than 12 hours after finishing has been completed. Form curves and straight sections for smooth and continuous lines. Secure Owner's representative's approval of subgrade compaction and moisture content and form alignment prior to pouring concrete.
3. Embedded items: Do not place any concrete until all inserted items such as sleeves, anchor bolts, wood, nails, dowels, etc. are installed in their proper locations, secured against displacement, cleaned, inspected and approved. Furnish ties and supports necessary to keep embedded items in place when concrete is placed.
4. Weather: Do not place concrete during rain unless approved measures are taken to prevent damage to concrete.
5. Deposit concrete evenly, consolidate with mechanical vibrators, particularly at side forms and strike off to indicated elevations and contour.
6. Concrete finishes shall be even surfaces of uniform texture and appearance, free of unsightly bulges, depressions and other imperfections and as follows:

   Medium broom finish: Broom with coarse bristled broom across width of flatwork to a uniformly roughened surface. Finished surface and edges shall be clean with uniform and reasonably straight lines. Submit Sample.

   Light broom finish: Broom with janitor's push broom type, with soft bristles, across width to a uniformly roughened surface. There shall be no deeply incised or obvious lines. Submit sample.

   Steel trowel finish: After floating, and no free water is evident and/or no cement sticks to the finger when touching slab, steel trowel until hard. All trowel marks eliminated. Final trowelling done when a ringing sound is produced as the trowel is moved over the surface.

   Joints: Joints shall be tooled with one-quarter inch (1/4") radius edging tool or as shown on plans.

   Edges: Edge slabs one-half (1/2") inch radius, edge curbs and other structures three-quarters inch (3/4") radius unless otherwise shown.

7. Remove flange marks: Remove flange marks resulting from tooling of edges by carefully trowelling out, unless specifically detailed in plans.

CARPENTRY NOTES:

A. Wood materials: See details for type of wood for each item.

1. Wood shall be selected for straightness and smoothness, size and grade as shown in plans.
   B. Workmanship: Carefully plan and layout the work as required. Properly accommodate the work of other trades. Accurately saw-cut and fit lumber into the respective locations, true to line, grade, and level, as indicated or required, and permanently secure in proper position with spikes, nails, lag screws, bolts, hangers, or other fastenings to make the work substantial and rigid in all parts and connections.
   C. Connections: Make connections between members tight, accurate and secure. Place fastenings without splitting wood; predrill when required. Drill bolt holes same size as bolt diameter. Drill holes for lag screws same size as thread root diameter, and counterbore, same depth and diameter as shank. Turn lag screws into place, do not drive. Provide bolts and lag screws with washers under every head and nut bearing on wood. Tighten bolts and lag screws at installation; carefully retighten just prior to closing in, or at completion of project.
   D. Finishing: As per plan.
   E. Redwood header layout: All curved sections shall be smooth and continuous. Layout shall be approved by Owner's representative.
2. Hardware:
   A. All metal bolts, nails, screws and other hardware shall be galvanized steel, sizes as shown on the plans.
   B. All visible hardware shall be painted with two coats of black rustproof paint or to match architectural colors. Color to be approved by Owner's representative.
   C. All hardware for metal gates to be approved by Owner's representative.
3. Metal:
   A. Provide complete shop drawings for all metal fabrication.
   B. Fabricate all exterior steel work in shop, including all welding. All metal work shall conform to ASTM specifications. Miter corners and angles of moldings or frames unless otherwise noted.
   C. Shop primer: One coat of primer, semi-quick drying. Painting: After material has been properly cleaned, apply shop prime coat of paint to all surfaces. Apply all paint in accordance with manufacturer's directions. Spot paint all abrasions and field connections after assembly.
   D. Installation: Set all work plumb, true, rigid and neatly trimmed out as detailed. Provide all necessary connections, anchor bolts etc. required to fit metal with other work.
   E. Protect all metal from damage to surface, profile or to shape from shop through construction to final acceptance of project.
   F. Color: Color to be approved by Owner's representative, submit sample for approval.
   G. All defective work shall be repaired or replaced as directed Owner's representative.
   H. All exposed site metal for utilities, irrigation, etc., shall be painted with one coat brown rustproof paint.

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PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 10

NO	DESCRIPTION	BY	DATE
REVISIONS			

SHEET TITLE
LANDSCAPE NOTES & SPECIFICATIONS
SCALE
DATE
02/18/16
PROJECT NO.
V9219
SHEET NO.
L5.0

PLANTING NOTES:

1. See General Notes.

2. Submittals: Contractor shall submit the following items to Owner's Representative and Landscape Architect for review/approval prior to beginning planting installation operations:

   A. Soils tests: Initial site soils test & post amendment installation test)

   B. Vendor data for landscape products, including: bark mulch, root barriers, fertilizers, soil amendments, and soil conditioners.

   C. Written results of percolation tests

3. The Contractor shall verify the availability of all landscape plants within 10 days following award of the contract. Discrepancies or other problems and all plant substitutions shall be resolved at this time. If a substitute is authorized by the Owner's Representative, it must be of the same size, value and quality as the original plant.

4. All trees and representative samples of shrubs/ground covers shall be inspected at the site for approval by the Owner's Representative and meet the following standards:

   A. Quality and size shall conform to the State of California Grading Code of Nursery Stock, No. 1 grade and to the current issue of the American Standard for Nursery Stock published by the American Association of Nurserymen. Use only nursery-grown stock. The Owner's Representative will inspect plants for approval prior to any installation.

   B. Plant material must be selected from nurseries that have been inspected by state or federal agencies.

   C. Nomenclature will be in accordance with Hortus III

   D. Plant materials will not be accepted that are overgrown, root-bound, or too recently canned so that the root system is not thoroughly established throughout the can. Pruning shall not be done prior to delivery except as authorized by the Owner's Representative.

5. Grading and Topsoil:

   A. See Grading Notes.

   B. Soil Test. Contractor shall submit three (3) representative soil samples to Soil and Plant Laboratory, Santa Clara or approved equal to be tested for agriculture suitability and fertility with pre-plant and post-plant recommendations, immediately following the completion of rough grading. Soil samples shall be taken from location determined by the Owner's Representative. Soil shall be certified as clean and free of hazardous materials or waste contamination. Notify Owner's Representative of any soils problems noted in the soils test report that could potentially affect/impact plant health, including but not limited to the following: high or low soil pH, poor soil drainage, excessive soil compaction, different soil types in the same test sample, deficient or excess nutrient levels, high salt levels, high boron or other elements and compounds toxic to plants, etc. Submit report to Landscape Architect and Owner's Representative for review and approval prior to beginning work. Do not proceed with any amending operations until soils report has been reviewed and approved.

   C. Compost to be used for soil amendment at the rate indicated by the soil analysis to bring the soil organic matter content to a minimum of 3.5% by dry weight or 2" of compost. Contractor may 1) import topsoil to meet organic matter content listed, or 2) submit soils report that identifies existing topsoil meets or exceeds the specified organic matter content. (Bay-Friendly score card item C.7 a-i)

      Soil amendment to be added as follows in all planting areas: (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purposes until determined by soil tests.)

      Amount per 1000 square feet.

      6 cubic yards Compost

      20 lbs. 5-20-20 fertilizer (Best's Cropmaker)

      10 lbs. 0-25-0 Single super phosphate

      10 lbs. Iron sulfate

   D. Soil amendment in all planting areas shall be uniformly spread and thoroughly incorporated to a soil depth of 6" minimum by repeated rotary hoe cultivation prior to planting.

   E. Post Amendment Installation Soil Testing for Compliance. After incorporating amendments, fertilizers and conditioners, Contractor shall take three (3) representative soil samples and have samples tested for Agricultural Suitability and Fertility by an approved soils analysis laboratory for compliance with original soil test report recommendations. Add any additional amendments, fertilizers and conditioners recommended by soils analysis laboratory at no cost to Owner. Notify Owner's Representative of any potential soils problems noted in the report. Submit report for amendment/fertilizer/conditioner compliance to Landscape Architect and Owner's Representative prior to beginning planting operations.

6. Tree and Shrub Planting:

   Prior to digging holes for final planting, the Contractor shall spot all trees as shown on the Drawings for approval by the Landscape Architect.

   A. Soil amendments and fertilizer shall have been incorporated into the soil prior to tree and shrub planting

   B. Dig pits as shown on Drawings

   C. After pits are dug, break sides and bottom of holes to open wall of pit for root penetration

   D. Percolation Test. All plant pits shall be tested for sufficient drainage prior to planting. Representative plant pits shall be dug (at least 2) at site upon award of Bid to test for general site subgrade drainage conditions. Individual planting pits shall also be tested again for sufficient drainage prior to planting. Contractor shall fill plant pits with water, to see if subsoil conditions will cause retention of water within plant pits overnight. If standing water is still observed after 12 hours, then Contractor shall alert Owner's Representative and Landscape Architect of the problem.

   E. Planting backfill mix for trees and shrubs shall be:

      Amount per Cubic Yard

      3/4 cubic yard On site soil

      1/4 cubic yard compost

      1.5 lbs. 6-20-20 fertilizer (Best's Cropmaker)

      2.5 lbs. 0-25-0 Single super phosphate

      1 lb. Iron sulfate

   (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purpose until determined by soil tests)

   F. Fertilize plants at the time of planting with Agriform 21 gram fertilizer packets, 20-10-5. 2 per 1 gallon can; 3 per 5 gallon can; 4 per 15 gallon can; specimen trees-3 per inch of caliper.

   G. Plants shall be erect after planting, and staked or guyed as detailed at the time of planting. Remove nursery stakes.

   H. Rootball crown shall be 2" above finish grade after watering and settling.

   I. Tree and shrub plantings shall be watered and flooded to eliminate air pockets within 2 hours of the time of planting.

   J. All vines shall be trained to posts, fences or walls by tying select individual branches with plastic covered wire ties as follows: ties shall be attached to wood surfaces with 3/4" galvanized iron staples and attached to stucco or masonry surfaces with epoxy as recommended by manufacturer. See planting details.

   K. All trees shall be planted 10'-0" minimum from buildings including overhangs and 5'-0" minimum from curbs, paving, fences, etc. Orient main branches of trees away from building. Should any discrepancies occur between field conditions and planting plans contact Owner's Representative. All trees closer than 5'-0" from curbs, foundations, sidewalks, or other hardscape items, shall be installed with linear root deflector panels protecting adjacent hardscape items, but never fully surrounding rootball. Install a 18" tall by 24 inch deep section of linear interlocking root deflector panels, centered on tree (5 feet on each side), located at curb, foundation, sidewalks, other hardscape items, unless otherwise indicated. See plans for detail.

   L. All trees shall be planted a minimum of 5'-0" away from storm drain, or other underground utility lines (or per code), and 10'-0" away from sanitary sewer lines (or per code), and 15'-0" minimum away from utility poles or light standards (or per code)

   M. All planting areas to recieve 3" layer of bark mulch, natural color, no dyes.

   N. All trees and shrubs shall have watering basins around them. Basin diameters shall be the same size as the tree or shrub's rootball. Basins shall be formed with level bottoms and 3 inch high walls. Planting areas to receive 3" depth of bark mulch unless otherwise indicated. Submit sample for approval.

   O. Soil amendments shall have been incorporated into the soil prior to planting.

   P. Clear planting areas of rocks and debris greater than 1" diameter.

   Q. Apply a pre-emergent herbicide, per manufacturer's directions.

   R. All planting areas with slopes greater than 2:1 shall have jute mesh installed as per detail, or per manufacturer recommendations.

   S. Thirty (30) days after planting, replace all dead plants and fill in bare areas. Top dress with 16-8-8 fertilizer at 7 lbs/1000 sq. ft. when ground is dry and thoroughly irrigate promptly after application.

   (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purpose until determined by soil tests)

7. NOT USED

8. Workmanship:

   Precautions shall be taken to avoid damage to existing plants, turf and structures. Any areas damaged shall be restored to their original condition.

9. Clean-up

   Keep all areas of work clean, neat and orderly at all times. Keep all paved areas clean during planting and maintenance operations.

10. Site Visits and Approvals

    The Contractor shall contact the Owner's Representative for review and approval of plant materials and plant locations. The maintenance period begins following acceptance of plant installation.

11. Maintenance

    A. Begin maintenance after each plant is installed and continue until Final Acceptance.

    B. Maintenance Period shall begin upon inspection and approval by Owner's Representative and shall be for 90 calendar days.

    C. Maintenance of new planting shall consist of watering, cultivating, weeding, mulching, re-staking, tightening and repairing of guys, resetting plants to proper grades or upright position, restoration of the planting saucer, and fertilizing and applying such sprays and invigorates as are necessary to keep the plantings free of insects and disease and in thriving condition.

    D. Protect planting areas and plants at all times against damage of all kinds, including frost, for duration of maintenance period. Maintenance includes temporary protection fences, barriers, covers during frost and signs as required for protection. If any plants become damaged or injured, treat or replace as directed by Landscape Architect at no additional cost to Owner.

13. Guarantee

    A. Replacement trees shall be in thriving condition 3 years from the date of final acceptance. Any replacement trees which have lost at least 30% of their normal foliage or are not in vigorous growing condition shall be replaced.

    B. All other trees, shrubs, grasses, ground covers shall be in thriving condition 1 year from the date of final acceptance. Replace any trees which have lost at least 30% of their normal foliage or are not in vigorous growing condition.

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PROJECT NAME:
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

DRAWING TITLE:
LANDSCAPE IMPROVEMENT PLANS
LOT 10

NO	DESCRIPTION	BY	DATE
1	-	-	-
2	-	-	-
3	-	-	-

SHEET TITLE:
LANDSCAPE NOTES & SPECIFICATIONS

SCALE:

DATE
02/18/16

PROJECT NO
V0219

SHEET NO
L5.1
OF

HIGHLAND ESTATES

LOT 11 – LANDSCAPE PLANS

VICINITY MAP

SITE MAP

SHEET INDEX

SHEET NUMBER	SHEET TITLE
L0.0	COVER SHEET
L1.0	CALLOUT PLAN
L2.0	PLANTING PLAN
L3.0-L3.1	LANDSCAPE DETAILS
L4.0-L4.1	IRRIGATION PLAN & LEGEND
L4.2	HYDROZONE PLAN
L4.3-L4.4	IRRIGATION DETAILS
L5.0-L5.1	LANDSCAPE SPECIFICATIONS

REVISION LOG

DATE	SHEET NUMBER	DESCRIPTION

CLIENT
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PROJECT LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

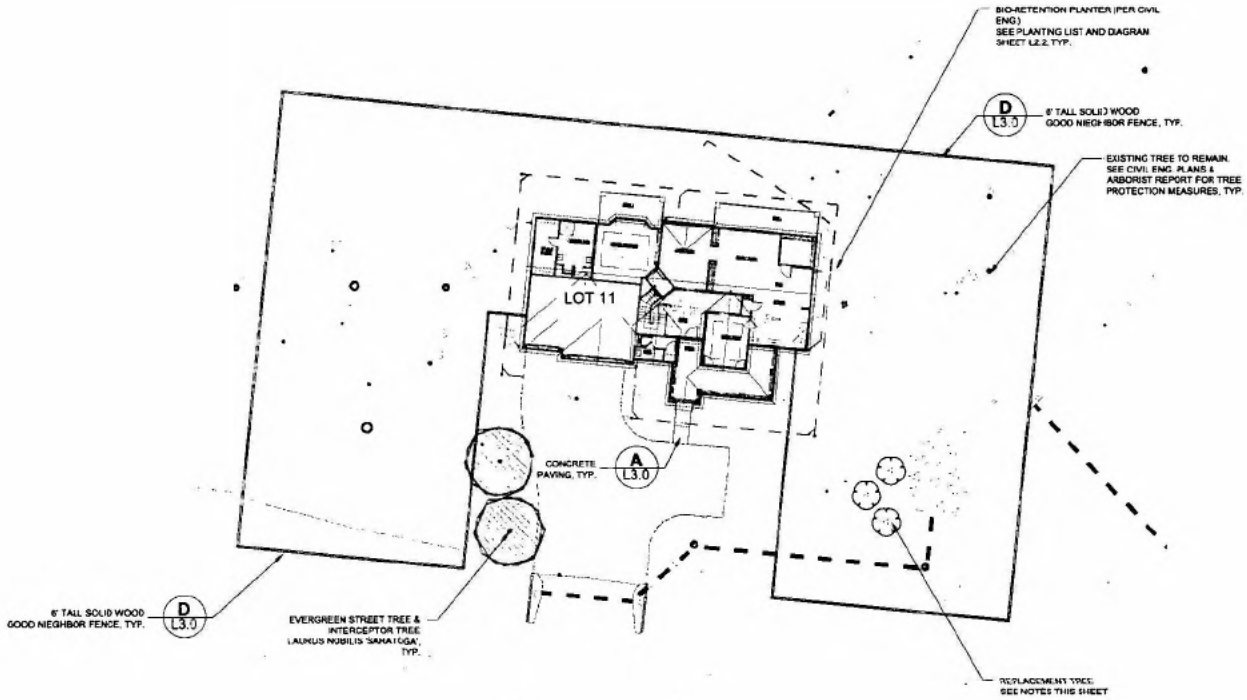
LANDSCAPE IMPROVEMENT PLANS
LOT 11

DRAWN BY MW
CHECKED BY MW
APPROVED BY MW

REVISIONS
NO DESCRIPTION DATE BY

SHEET TITLE
COVER SHEET

SCALE
NTS
ISSUE DATE
02/18/16
PROJECT NO.
V0219
SHEET NO.
L0.0



NOTES:

1. NO PLANTING OR IRRIGATION SHALL OCCUR UNDER THE CANOPIES OF THE EXISTING OAK TREES. FIELD ADJUST NEW REPLACEMENT TREES AS NEEDED.

TREE LEGEND:

	STORMWATER CREDIT/EVERGREEN INTERCEPTOR TREES LAURUS NOBILIS 'SARATOGA' 11 TOTAL WITHIN 25' OF IMPERVIOUS SURFACE.
	PROPOSED REPLACEMENT TREES - SEE L2.2 FOR COMPLETE TREE SPECIES/LEGEND TOTAL SITE: 23 REPLACEMENT TREES REQUIRED 33 REPLACEMENT TREES PROVIDED LOT 11 3 REPLACEMENT TREES PROVIDED
*	EXISTING TREES TO REMAIN, TYP. SEE CIVIL PLANS AND ARBORISTS REPORT FOR TREE PROTECTION MEASURES

0 8 16 32 64

CLIENT
CHAMBERLAIN GROUP
835 Styway, Suite 250
San Carlos, Ca 94070
(800) 395.0002

800.227.2600

VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.
37 MED RIVER SAN RAFAEL CA

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO
CALIFORNIA

LANDSCAPE IMPROVEMENT PLANS
LOT 11

NO	DESCRIPTION	BY	DATE

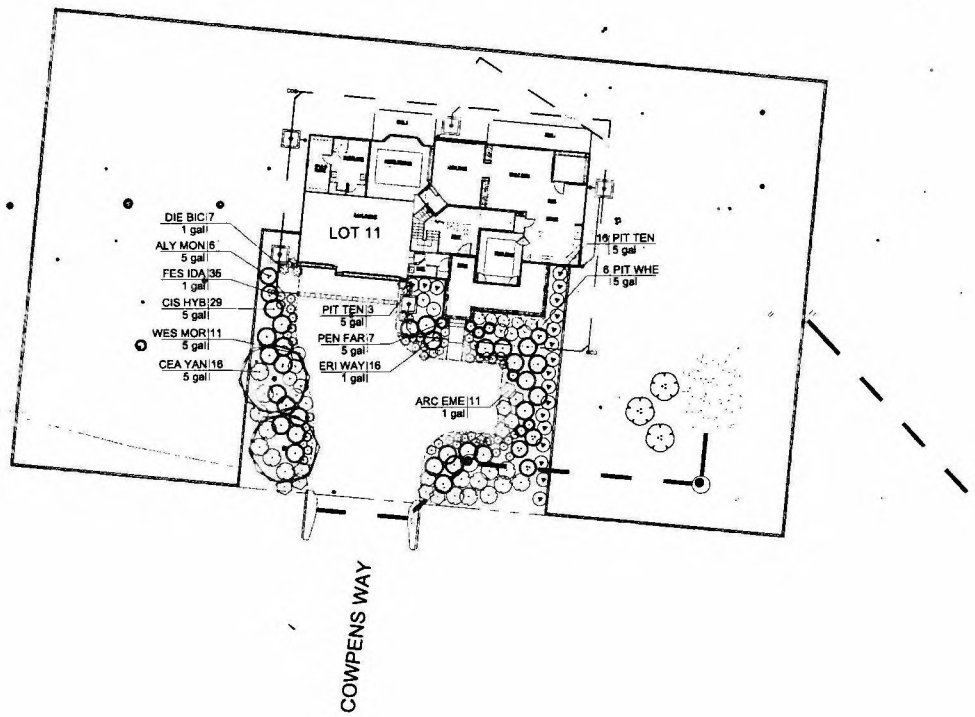
SHEET TITLE
CALLOUT & LAYOUT PLAN

SCALE
1/16" = 1'-0"

ISSUE DATE
02/18/16

PROJECT NO.
V0219

SHEET NO.
L1.0



PLANTING NOTES:

1. SEE CIVIL ENG PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. **NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES. CONTRACTOR TO FIELD ADJUST AS NECESSARY.**
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.
4. IRRIGATION DRIP SYSTEM SHALL BE ADJUSTED AS REQ'D FOR OPTIMUM WATER SAVINGS AND NO RUN OFF.

EROSION CONTROL NOTES:

1. LEAVE EROSION CONTROL JUTE MESH ON ALL SLOPES. CUT HOLES FOR NEW SHRUBS AS NEEDED.

EXISTING OAK TREE NOTES:

1. SEE CIVIL ENG. PLANS & ARBORIST REPORT FOR TREE PROTECTION MEASURES, TYP.
2. NO NEW PLANTING OR IRRIGATION SHALL OCCUR UNDER ANY EXISTING OAK TREES CONTRACTOR TO FIELD ADJUST AS NECESSARY.
3. CONTRACTOR SHALL PROTECT EXISTING OAK TREES FROM IRRIGATION & ANY POTENTIAL IRRIGATION RUN OFF.

SAN MATEO COUNTY WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE STATEMENT:

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN."

ZEKI ABED - LICENSED LANDSCAPE ARCHITECT _____

0 8 16 32 64

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PROJECT LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 11

REVISIONS NO	DESCRIPTION	DATE

SHEET TITLE
PLANTING PLAN

SCALE: 1/16" = 1'-0"
ISSUE DATE: 02/18/16
PROJECT NO: V0219
SHEET NO: L2.0

BIO-RETENTION PLANTERS ON THE NORTH & NORTHEAST SIDES OF BUILDINGS

5 GAL	CORNUS SERICEA "ISANTI"	QTY: 1
1 GAL	CAREX PRAEGRACILUS	QTY: CAN-TO-CAN FULL

ALTERNATIVE:

5 GAL	CARPENTERIA CALIFORNICA	QTY: 1
1 GAL	CAREX PRAEGRACILUS	QTY: CAN-TO-CAN FULL

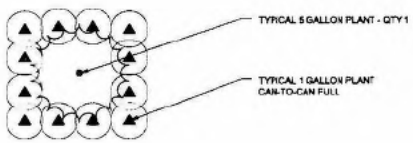
BIO-RETENTION PLANTERS ON THE SOUTH & SOUTHWEST SIDES OF BUILDINGS

5 GAL	MUHLENBERGIA RIGENS	QTY: 1
1 GAL	MIMULUS AURANTIACUS & CAREX PRAEGRACILUS (ALTERNATING)	QTY: CAN-TO-CAN FULL

NOTES:

1. CONTRACTOR TO HAND WATER PLANTS IN BIO-RETENTION PLANTERS UNTIL ESTABLISHED.
2. SEE CIVIL ENGINEER'S PLANS AND SPECIFICATIONS FOR BIO-RETENTION SOIL MIX.
3. PLANT SPECIES LISTED ABOVE ARE APPROVED FOR USE IN BIO-PLANTERS PER THE SAN MATEO COUNTY STORMWATER MEASURES PLANT LIST

PLANTING DIAGRAM:



PLANTING LIST

TREES	CODE	BOTANICAL NAME	COMMON NAME	CONT	QTY	REMARKS
	ARB HYB	Arbutus x 'Marina'	Arbutus Standard	15 gal	2	Replacement Tree
	ARC MAN	Arctostaphylos manzanita MULTI-TRUNK	Manzanita	15 gal	10	Multi-Trunk Replacement Tree
	CER OCC	Cercis occidentalis - MULTI-TRUNK	Western Redbud	15 gal	15	Multi-trunk Replacement Tree
	LAU SAR	Laurus nobilis 'Saratoga'	Sweet Bay	15 gal	12	Street Tree/Interceptor Tree Evergreen
	QUE AGR	Quercus agrifolia	Coast Live Oak	15 gal	1	Replacement tree
	SAM MEX	Sambucus mexicana - MULTI-TRUNK	Mexican Elderberry	15 gal	5	Multi-Trunk Replacement tree

PLANTING LIST (cont.)

SHRUBS	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
	ACA COG	Acacia cognata 'Cousin Itt'	River Wattle	5 gal	17
	ALY MON	Alyogyne huegelii 'Monterey Bay'	Blue Hibiscus	5 gal	11
	ARB ELF	Arbutus unedo 'Elfin King'	Dwarf Strawberry Tree	5 gal	8
	ARC EME	Arctostaphylos x 'Emerald Carpet'	Emerald Carpet Manzanita	1 gal	121
	CEA YAN	Ceanothus griseus horizontalis 'Yankee Point'	California Lilac	5 gal	100
	CEA CON	Ceanothus x 'Concha'	California Lilac	5 gal	7
	CIS LAD	Cistus ladanifer	Crimson Spot Rockrose	5 gal	31
	CIS PUL	Cistus pulverulentus 'Sunset'	Rockrose	5 gal	34
	CIS PRO	Cistus salvifolius 'Prostratus'	Sageleaf Rockrose	5 gal	54
	CIS HYB	Cistus x hyoridus	White Rockrose	5 gal	58
	CIT MEY	Citrus x meyeri	Meyer Lemon	5 gal	3
	DIE BIC	Dietes bicolor	Fortnight Lily	1 gal	47
	ERI WAY	Erigeron glaucus 'Wayne Roderick'	Seaside Daisy	1 gal	36
	GRE NOE	Grevillea x 'Noelii'	Grevillea	5 gal	45
	LAV ASS	Lavatera assurgentiflora	Mallow	5 gal	9
	PEN FAR	Pennisetum x 'Fairy Tails'	Evergreen Fountain Grass	5 gal	12
	PIT TEN	Pittosporum tenuifolium 'Marjorie Channon'	Tawhiwhi	5 gal	30
	PIT CRE	Pittosporum tobira 'Cream De Mint' TM	Cream De Mint Dwarf Mock Orange	5 gal	15
	PIT WHE	Pittosporum tobira 'Wheelers Dwarf'	Wheeler's Dwarf Mock Orange	5 gal	34
	PRU BRI	Prunus caroliniana 'Bright 'N Tight' TM	Bright 'N Tight Carolina Laurel	5 gal	44
	RHA MOU	Rhamnus californica 'Mound San Bruno'	California Coffeeberry	5 gal	120
	RHA SEA	Rhamnus californica 'Seaview'	California Coffee Berry	5 gal	22
	ROS AMB	Rosa x 'Flower Carpet Amber'	Amber Carpet Rose	2 gal	65
	ROS RED	Rosa x 'Flower Carpet Red'	Rose	2 gal	35
	WES MOR	Westringia fruticosa 'Morning Light'	Morning Light Coast Rosemary	5 gal	11

GRASSES	CODE	BOTANICAL NANE	COMMON NAME	SIZE	QTY
	FES IDA	Festuca idahoensis	Idaho Fescue	1 gal	84

GROUND COVERS	CODE	BOTANICAL NAME	COMMON NAME	CONT	SPACING	QTY
	CAR PAN	Carex pansa	Sanddune Sedge	4" pot	8" o.c.	13 sf

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LANDSCAPE ARCHITECTS, INC.
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P (415) 781-1185 F (415) 781-1186

PROJECT MANAGER

PROJECT APPLICATION

HIGHLAND ESTATES

SAN MATEO CALIFORNIA

LANDSCAPE IMPROVEMENT PLANS
LOT 11

NO.	DATE	BY	DESCRIPTION

SHEET TITLE

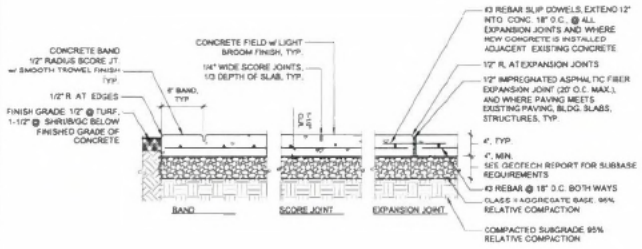
PLANTING LEGEND

SCALE: NTS

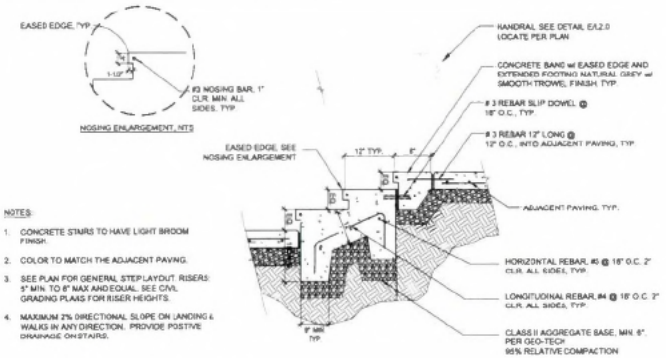
ISSUE DATE: 02/18/16

PROJECT NO: V0218

SHEET NO: L2.1



A CONCRETE PAVING
1" = 1'-0"



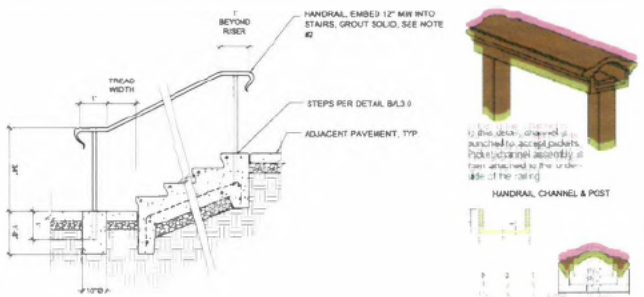
NOTES:

1. CONCRETE STAIRS TO HAVE LIGHT BROOM FINISH.
2. COLOR TO MATCH THE ADJACENT PAVING.
3. SEE PLAN FOR GENERAL STEP LAYOUT. RISERS: 5" MIN. TO 8" MAX AND EQUAL. SEE CIVIL GRADING PLANS FOR RISER HEIGHTS.
4. MAXIMUM 2% DIRECTIONAL SLOPE ON LANDING & WALKS IN ANY DIRECTION. PROVIDE POSITIVE DRAINAGE ON STAIRS.

B CONCRETE STEPS
3/4" = 1'-0"

CONCRETE NOTES:

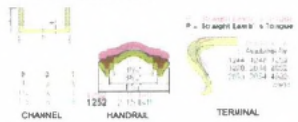
1. SCORING PATTERN TO MEET ALL ACI INTERNATIONAL GUIDELINES.
2. ALL FORMWORK/SCORING/PROPOSED JOINT SPACING TO BE APPROVED AND REVIEWED BY OWNERS' REPRESENTATIVE PRIOR TO POURING.
3. ALL SCORING/CONTRACTION JOINTS TO BE MINIMUM 1/3 DEPTH OF SLAB.
4. DISTANCE BETWEEN CONTRACTION JTS TO BE MAXIMUM 24 TIMES SLAB THICKNESS. ALL CONTRACTION JTS TO BE CONTINUOUS NOT STAGGERED OR OFFSET. REFER TO ACI INTL. CCS-1 SERIES GUIDELINES FOR ALL CONCRETE WORK. ANY DISCREPANCIES WITH DRAWINGS TO BE BROUGHT TO ATTENTION OF OWNER/ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
5. CONCRETE PANELS TO BE AS SQUARE AS PRACTICAL. NEVER MAKE LONG SIDE MORE THAN 1-1/2 TIMES LENGTH OF SHORT SIDE. NO ONE PANEL TO BE MORE THAN 100 SQ. FT.
6. INSTALL EXPANSION JOINTS WHERE NEW PAVING MEETS EXISTING PAVING, WALLS, CURBS, FOUNDATIONS, OR OTHER FIXED OBJECTS, AND CHANGES IN WALK DIRECTIONS.
7. CONCRETE COLOR TO BE NATURAL GRAY.
8. BROOM FINISH SHALL BE PERPENDICULAR TO PATH OF TRAVEL.
9. CONTRACTOR SHALL COORDINATE INSTALLATION OF REBAR SLIP DOWELS WHERE DRIVEWAY MEETS GARAGE CONCRETE PAD WITH OWNER'S REPRESENTATIVE AND PROJECT STRUCTURAL ENGINEER. DOWELS SHALL BE #4 REBAR SPACED 24" O.C. EXTENDING 12" INTO DRIVEWAY AND GARAGE PAD, OR AS SPECIFIED BY STRUCTURAL ENGINEER. CONTRACTOR SHALL ONLY INSTALL REBAR DOWELS IF APPROVED BY OWNER'S REPRESENTATIVE AND PROJECT STRUCTURAL ENGINEER. SUBMIT TO OWNER'S REPRESENTATIVE PROPOSED DOWEL LOCATIONS.
10. FOR ALL PAVING DETAILS SHOWN, THE PAVING PROFILE, AGGREGATE, SUBBASE PREPARATION & COMPACTION PER GEOTECH ENGINEER, TYP. PROFILES ARE SHOWN FOR DESIGN INTENT & BIDDING PURPOSES ONLY. SEE GEOTECH REPORT FOR PAVING & SUBBASE REQUIREMENTS.



HANDRAIL CHANNEL & POST

HANDRAIL NOTES:

1. HANDRAILS TO BE 1-5/16" MODEL H2601 ALUMINUM HANDRAIL WITH LAMBS TONGUE TERMINUS AS SHOWN. ALUMINUM CHANNEL SHALL BE MODEL C2100512. POSTS SHALL BE 1" SQUARE STEEL BAR WELDED TO BASE OF CHANNEL.
2. PRIME AND PAINT WITH ZINC-RICH PRIMER AND 2 COATS ENAMEL. COLOR TO BE DARK BRONZE. SUBMIT PAINT SAMPLE TO OWNER FOR APPROVAL.
3. AVAILABLE THROUGH R&B WAGNER, INC. (888) 243-8914.

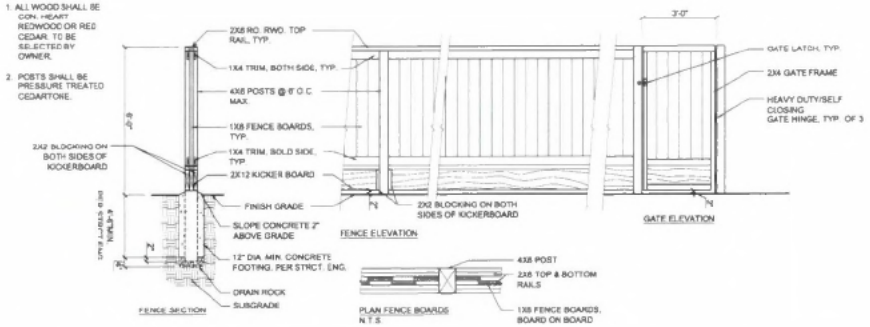


HANDRAIL MAKE AND MODEL

C HANDRAIL
1/2" = 1'-0"

NOTES:

1. ALL WOOD SHALL BE CON. HEART REDWOOD OR RED CEDAR. TO BE SELECTED BY OWNER.
2. POSTS SHALL BE PRESSURE TREATED CEDARTONE.



D 6' TALL WOOD FENCE & GATE
NTS

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CHANGEMAKER GROUP
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94103 T: (415) 861-1410

PROJECT NAME / LOCATION
HIGHLAND ESTATES
CALIFORNIA
SAN MATEO
LANDSCAPE IMPROVEMENT PLANS
LOT 11

NO.	DESCRIPTION	BY	DATE

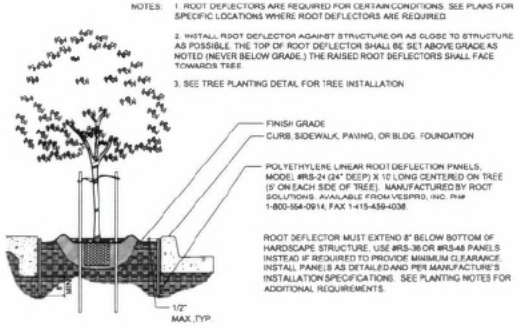
SHEET TITLE
LANDSCAPE DETAILS

SCALE
AS NOTED

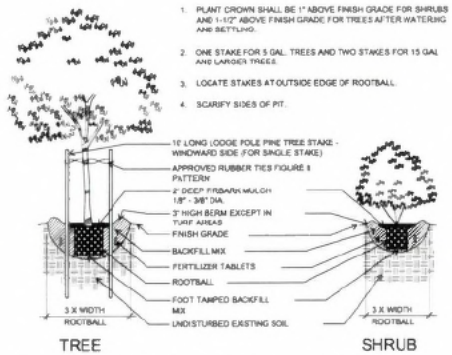
ISSUE DATE
02/18/16

PROJECT NO.
V0219

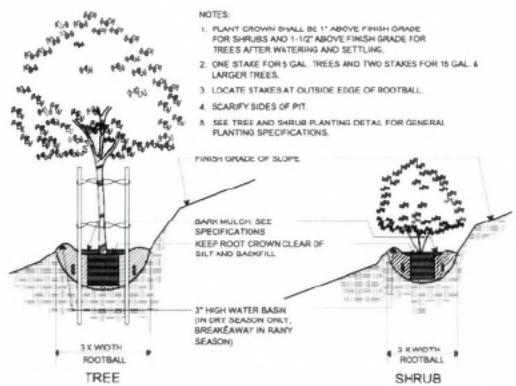
SHEET NO.
L3.0



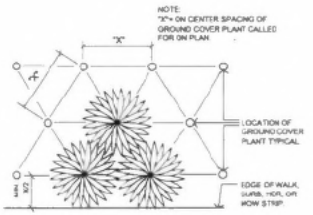
A ROOT DEFLECTOR
NTS



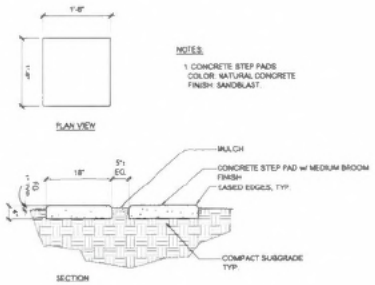
B TREE AND SHRUB PLANTING
NTS



C HILLSIDE TREE AND SHRUB PLANTING
NTS



D GROUNDCOVER PLANTING
NTS



E CONCRETE STEP PADS
3/4" = 1'-0"

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(650) 595.5582

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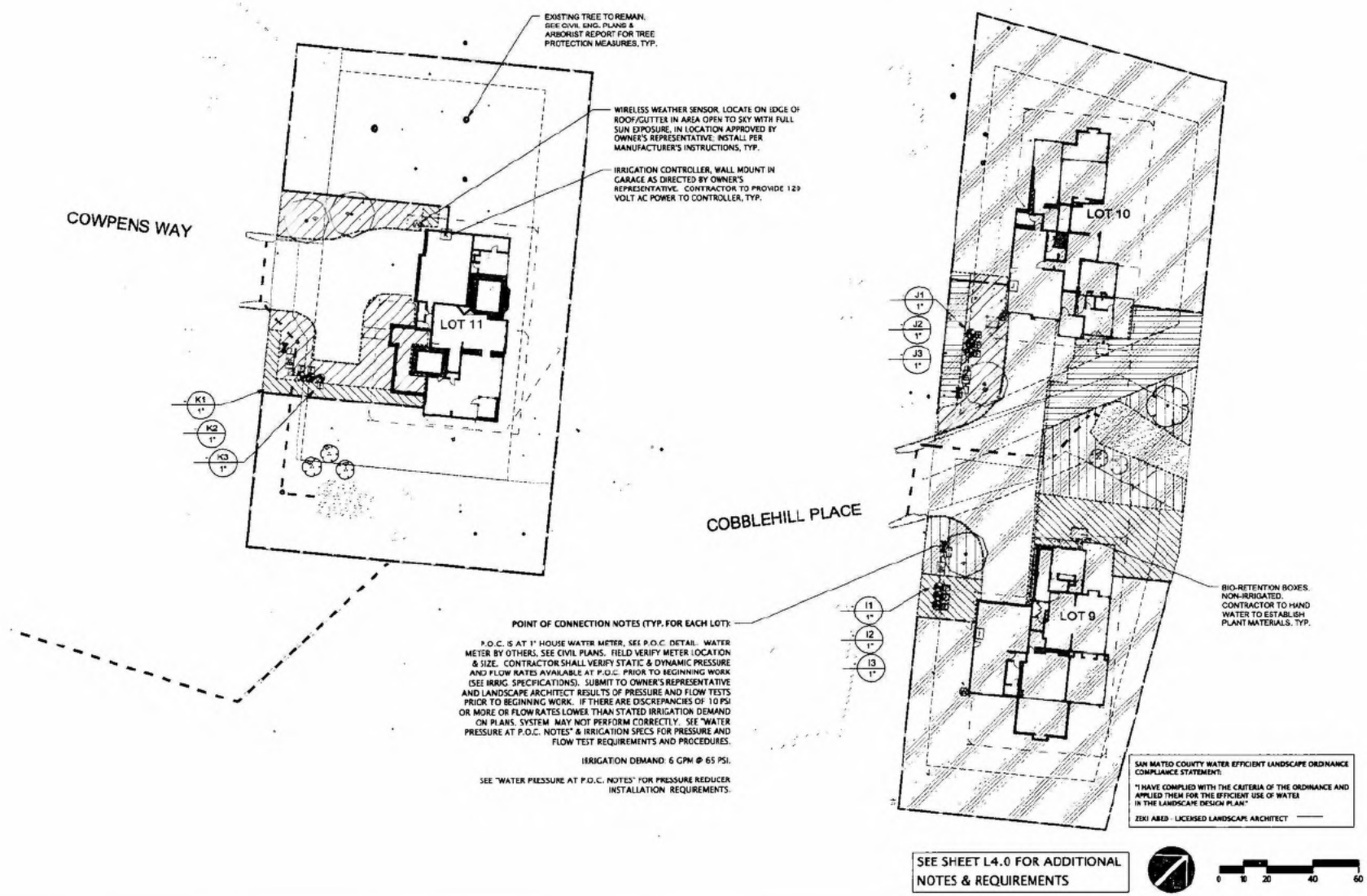
VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.
PROJECT MANAGER MW
DRAWN BY MW
CHECKED BY

PROJECT NAME / LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
LANDSCAPE IMPROVEMENT PLANS
LOT 11

NO.	DESCRIPTION	DATE

SHEET TITLE
LANDSCAPE DETAILS

SCALE
AS NOTED
ISSUE DATE
02/18/16
PROJECT NO.
V0219
SHEET NO.
L3.1



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VAN DORN ABED LANDSCAPE ARCHITECTS, INC.

PROJECT MANAGER: ZA
DESIGNED BY: ZA
DRAWN BY: BC
CHECKED BY: ZA

PROJECT LOCATION:
HIGHLAND ESTATES
SAN MATEO
CALIFORNIA

LANDSCAPE IMPROVEMENT PLANS
LOT 11

NO.	DESCRIPTION	DATE

SHEET TITLE:
IRRIGATION PLAN

SCALE:
1" = 20'-0"

ISSUE DATE:
02/18/16

PROJECT NO.
V0219

SHEET NO.:
L4.0

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	PVC lateral line to drip area with Rainbird 5-outlet emitter units. Route PVC lateral line thru drip area and install required quantity of Octabubblers necessary to irrigate plants in the drip area.
	Rain Bird XBT-6 Six multi-outlet drip emitter/bubbler Six Outlet, Pressure Compensating, with 1.0 GPH Black Drip Emitters at each emitter outlet. Comes with 1/2" FPT Inlet x Barb Outlet. Install DBC-025 Diffuser Bug Caps at end of each emitters 1/4" distribution line. Install 4 (four) 1/4" distribution lines with Diffuser Bug Caps at 5Gal & 15Gal trees. Install 6 (six) 1/4" distribution lines with Diffuser Bug Caps at 24"Box trees. Plug unused emitter outlets
A1	Areas to Receive Drip Emitters Rain Bird XBD51-PRS-WXB-10 Xeri-Bird 6 Multi Outlet Emission Device with Xeri-Bug emitters at 1gph each, with built-in 200 mesh filter. Pressure Regulator in-stem Emitter Notes. 1 gal plant to receive 1 of OCT8-10 emitter. 5 gal plant to receive 2 of OCT8-10 emitters. 15 gal plant to receive 4 of OCT8-10 emitters. 24"box plant to receive 5 of OCT8-10 emitters 2 gal plant to receive 1 of OCT8-10 emitter.

NOTE: DRIP AREA PATTERNS SHOWN FOR DESIGN CLARITY

A1 A1 A1
A1 A1 A1

CONTROLLER VALVE CIRCUIT NO.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Irritrol 700 with OWR-100 Electric Remote Control Valve, with Omni-Reg 5-100psi regulator. Set pressure regulator at 40 PSI
	Nibco T-113-LF Lead free Class 125 bronze gate shut off valve with wheel handle, same size as mainline pipe diameter at valve location. Size Range - 1/4" - 3"
BF	Febco LF825Y 1" Lead Free Reduced Pressure Backflow Preventer
A	Irritrol TC-08-MOD-R Hybrid Controller, 8- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
B	Irritrol TC-08-MOD-R Hybrid Controller, 8- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
C	Irritrol TC-08-MOD-R Hybrid Controller, 8- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
D	Irritrol TC-08-MOD-R Hybrid Controller, 8- Station, Modular Model, with Plastic Cabinet. Climate Logic compatible, and Remote-Ready.
	Irritrol CL Wireless Weather Sensing System. 100-Receive and Transmitter Kit. Outdoor sensor, and receiver attaches to Irritrol Controller. Compatible with Rain Dial-R, Total Control-R, RainDial, adn MC-E controllers. Monitors weather data
	Amiad 150 mesh Y-Filter with flush valve, or approved equivalent, at drip remote control valves
	Irrigation Lateral Line: PVC Class 200 SDR 21 PVC Class 200 irrigation pipe. Only lateral transition pipe sizes 1" and above are indicated on the plan, with all others being 3/4" in size. 12" min. burry.
	Irrigation Mainline. PVC Schedule 40 PVC Schedule 40 irrigation pipe. 18" min. burry.
	Pipe Sleeve. PVC Class 315 SDR 13.5 24" MIN. BURRY

Valve Callout
- Valve Number
- Valve GPM
- Valve Size

IRRIGATION RUN TIME SCHEDULE NOTES:

1. IRRIGATION CONTROLLER RUN TIMES ARE NOT INCLUDED ON LANDSCAPE PLANS. IRRIGATION CONTROLLERS ARE ET BASED SMART CONTROLLERS THAT GENERATE OPTIMUM RUN TIME SCHEDULES BASED UPON LOCAL WEATHER CONDITIONS.
2. CONTROLLERS ARE INITIALLY PROGRAMMED WITH IRRIGATION SYSTEM COMPONENT INFORMATION, PLANT MATERIAL WATER USE REQUIREMENTS, SOIL TYPE, AND LOCAL MICRO CLIMATIC INFORMATION. CONTROLLERS AUTOMATICALLY GENERATE RUN TIME SCHEDULES FROM THIS INFORMATION. EACH DAY CONTROLLERS RECEIVES LOCAL WEATHER CONDITION DATA WIRELESS WEATHERS SENSORS, AND AUTOMATICALLY ADJUST THEIR WATERING SCHEDULES FOR OPTIMUM WATER CONSERVATION. EACH CONTROLLER HAS IT'S OWN WIRELESS WEATHER SENSOR, LOCATED ON-SITE.

IRRIGATION SPECIFICATIONS:

1. Irrigation system shall be installed in conformance with all applicable local codes and ordinances by experienced workmen and a licensed Landscape Contractor who shall obtain all necessary permits and pay all required fees.
2. Prior to the start of construction, the Contractor shall verify with the City, Water District, and/or other governing agency(s) if a reclaimed water source will be available in the future for connection to the irrigation system. If local regulations so stipulate, then the Contractor shall follow all requirements, specifications, construction details, codes, etc., for the installation of irrigation systems utilizing reclaimed water sources for irrigation of landscaping.
3. The Contractor shall be responsible for any damage to existing facilities caused by or during the performance of his work. All repairs shall be made at no cost to the Owner.
4. This design is diagrammatic. Install parallel lines in a common trench with minimum horizontal distance of 4" and lines not one above the other. Snake pipe in trenches. All piping, valves etc., shown within paved areas is for design clarification only and shall be installed in planting areas where possible. Avoid any conflicts between the irrigation system, planting and architectural features.
5. Do not willfully install the irrigation as shown on the drawings when it is obvious in the field that obstructions, grade differences or differences in the area dimensions exist that might not have been considered in the engineering. Such obstructions or differences should be brought to the attention of the Owner's authorized representative. In the event this notification is not performed, the Contractor shall assume full responsibility for any revisions necessary.
6. It is the responsibility of the Contractor to familiarize himself with all grade differences, location of walls, retaining walls etc. He shall coordinate his work with the General Contractor and other Subcontractors for the location and the installation of pipe sleeves through walls, under roadways, paving, structures, etc.
7. Due to the scale of the drawings, it is not possible to indicate all offsets, fittings, sleeves, etc., which may be required. The Contractor shall carefully investigate the structural and finished conditions affecting all of his work and plan his work accordingly, furnishing such fittings, etc., as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation system, planting, and architectural features.
8. Notify Landscape Architect of any other aspects of layout which will provide incomplete or insufficient water coverage of plant material and do not proceed until his instructions are obtained.
9. Electrical Contractor to supply 120 volt A.C. (2.5 AMP) service to controller location. Contractor to make final connection from electrical stub-out to controller. Paint conduit to controller with 2 coats Rustoleum brown paint if installed outdoors; color to be approved by Owner's representative. 120 volt A.C. J-Box to controller by others. All 120 volt A.C. and 24 volt connections to be made by Contractor.
10. Each controller shall have its own independent ground wire.
11. Program irrigation controller(s) to operate between the hours of 10:00 P.M. and 7:00 A.M.
12. Valve locations shown are diagrammatic. Install in ground cover/shrub areas.
13. Install valve boxes 12" from and perpendicular to walk, curb, building or landscape feature. At multiple valve box groups, each box shall be an equal distance from the walk, curb, lawn, etc., and each box shall be 12" apart. Short side of valve box shall be parallel to walk, curb, lawn, etc.
14. Install U.L. approved direct-burial wire #14 minimum and #14 common ground at 16" depth minimum. Splicing of 24 volt wires will not be permitted except in valve boxes. Leave a 24" coil of excess wire at each splice and 100 feet on center along wire run. Tape wire in bundles 10 feet on center. No taping permitted inside sleeves.
15. Install a spare control wire of a different color along the entire main line. Loop 36" excess wire into each single valve box and into one valve box in each group of valves.
16. Prior to trenching, call Underground Service Alert, 1-800-642-2444 to locate all cables, conduits, and other utilities and take proper precautions not to damage or disturb existing utilities.
17. All Main lines and Lateral lines under paving shall be in PVC sleeves which extend 12" into planting areas. All backfill shall be free of rocks greater than 1" diameter. For ring-tite PVC main line piping inside sleeves use 1120-315 PSI PVC plastic pipe with schedule 40 PVC couplings.
18. When applicable, Schedule 80, ASTM D2466 male adapters to be used where mainline connects to copper pipe service lines installed by others.
19. Copper pipe shall be joined to steel or cast iron pipe with a dielectic union.
20. In addition to the sleeves and conduits shown on the plans the Contractor shall be responsible for the installation of sleeves and conduits of sufficient size under all paved areas.
21. Locate quick coupling valve 12" from hardscape area.
22. The irrigation system design is based on the minimum operating Pressure (PSI) and Flow (GPM) shown on the irrigation drawings (see Irrigation Demand at P.O.C.). The Contractor shall verify the Static and Dynamic water pressure (PSI) and Flow Rate (GPM) at the point of connection (P.O.C.) prior to construction as follows:
    - A. Static Pressure: take PSI reading at P.O.C. with no water flowing.
    - B. Dynamic Pressure: install at P.O.C. a pressure (PSI) and flow gauge (GPM) assembly of suitable size* to take flow (GPM) readings in the range of the stated Irrigation Demand for the irrigation system design. Open valve or meter at P.O.C. until GPM flow reading equals or exceeds irrigation GPM demand. Note dynamic pressure and flow readings. If the GPM flow does not equal or exceed the GPM demand, note highest flow reading possible.
    - C. Readings shall be taken at the following times: 1PM, 5PM, 9PM, 1AM, 5AM, 9AM.
    - * irrigation systems with high irrigation demand GPM flow rates, will require large capacity test gauge assemblies.

Submit to Owner's Representative and Landscape Architect results of Pressure and Flow Tests prior to beginning work. Note any discrepancies of 10 PSI or more or flow rates lower than stated Irrigation Demand on plans to Owner's Representative and Landscape Architect. If there are discrepancies of 10 PSI or more or flow rates lower than stated Irrigation Demand on plans, system may not perform correctly - do not proceed with irrigation system installation until corrective measures are determined. Note, Contractor shall be responsible for any corrective measures required to the irrigation system, at no additional cost to the Owner. If irrigation system is installed without required tests, and discrepencies in Pressure and Flow at the P.O.C. are discovered that prevent the irrigation system from functioning correctly.

23. Meter(s) indicated on the Drawing(s) is supplied and installed by others, unless otherwise indicated. The Contractor is responsible for furnishing all proper fittings.
24. All irrigation piping shall be subjected to hydrostatic pressure tests as follows before backfilling trenches: Valves, pumps, and accurately calibrated recording gauges shall be installed in at least two places. Supply lines shall be tested at 125 psi for at least 4 hours with an allowable loss of 5 psi. Laterals lines shall be tested at the existing static psi for at least 1 hour with an allowable loss of 5 psi. Any leaks shall be corrected and piping re-tested until the system meet the requirements. The Contractor shall notify the Owner's Representative at least 3 days in advance of the time that the irrigation system piping is to be tested. Submit written test results to Owner's Representative and Landscape Architect.
30. Contractor to notify all local jurisdictions for inspection and testing of installed backflow prevention device.
31. The entire irrigation system shall be operating properly before any lawn or ground cover is planted.
32. The Contractor shall provide Owner with a clean set of marked prints of "RECORD DRAWINGS" drawings. Reference all trenches, valves, controllers, splice boxes, quick couplers, backflow preventers, water meters, with dimensions to nearest building or paving.
33. The Contractor shall guarantee the irrigation system will be free of defects of workmanship and materials for a period of one year. All repairs necessary shall be made at no cost to the Owner, with the exception of repairs and labor cost made necessary by vandalism.

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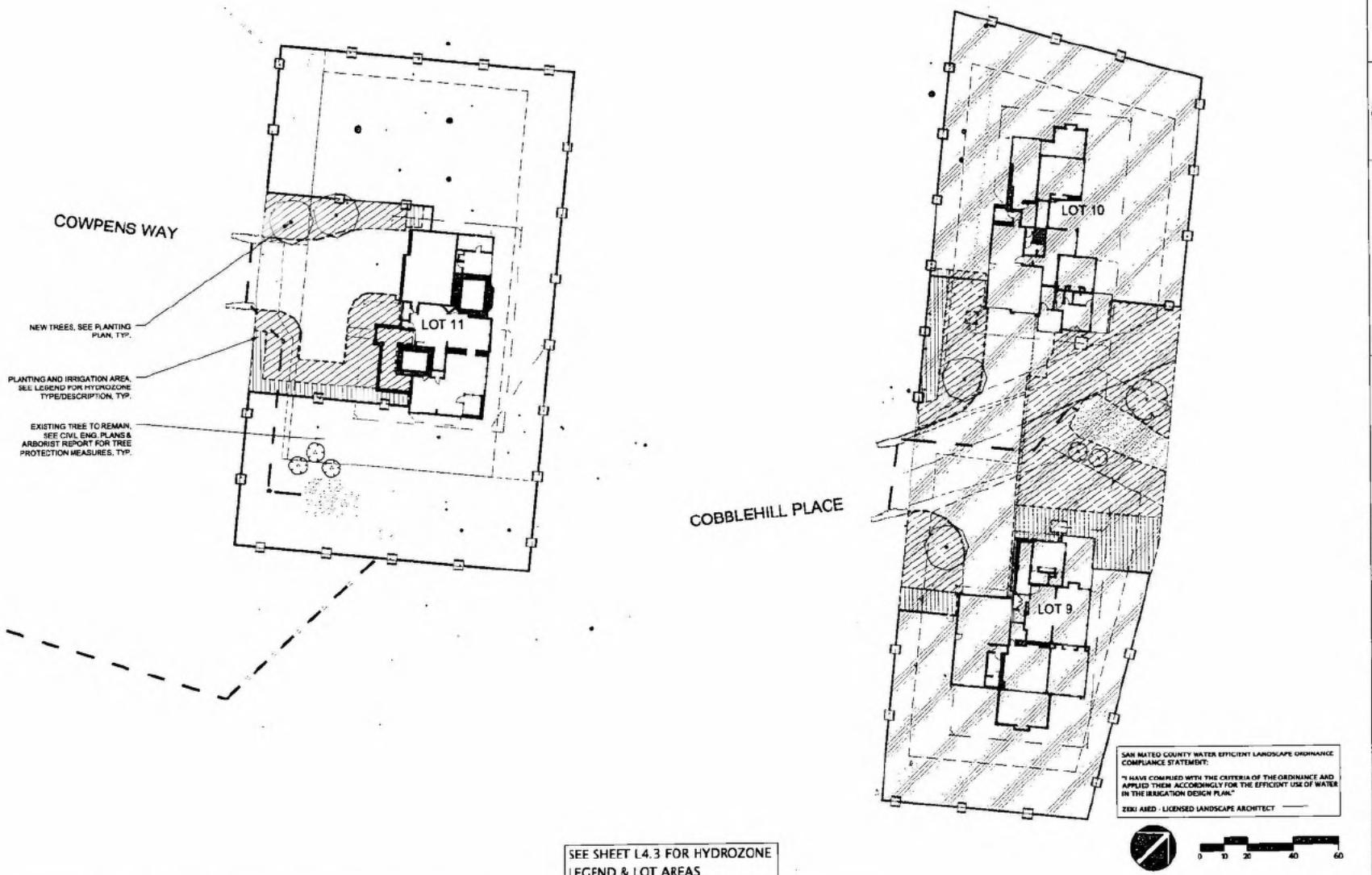
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

LANDSCAPE IMPROVEMENT PLANS
LOT 11

IRRIGATION LEGEND & SPECIFICATIONS

SCALE: NA
ISSUE DATE: 02/16/16
PROJECT NO: V0219
SHEET NO: L4.1



SEE SHEET L4.3 FOR HYDROZONE LEGEND & LOT AREAS

SAN MATEO COUNTY WATER EFFICIENT LANDSCAPE ORDINANCE COMPLIANCE STATEMENT:

"I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN."

ZEKI ABED - LICENSED LANDSCAPE ARCHITECT

0 10 20 40 60

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PROJECT MANAGER: ZA
DESIGNED BY: ZA
DRAWN BY: ZA
CHECKED BY: ZA

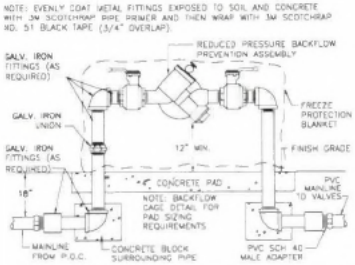
PROJECT LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 11

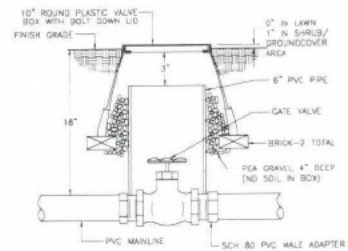
NO.	DESCRIPTION	DATE
1		
2		
3		

SHEET TITLE
HYDROZONE PLAN

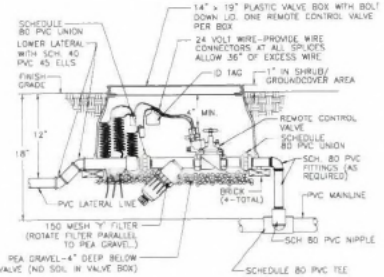
SCALE: 1" = 20'-0"
ISSUE DATE: 02/18/16
PROJECT NO: V0219
SHEET NO: L4.2



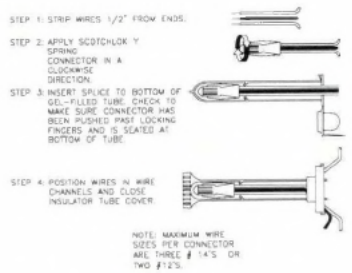
1 REDUCED PRESSURE BACKFLOW PREVENTER DETAIL
NOT TO SCALE



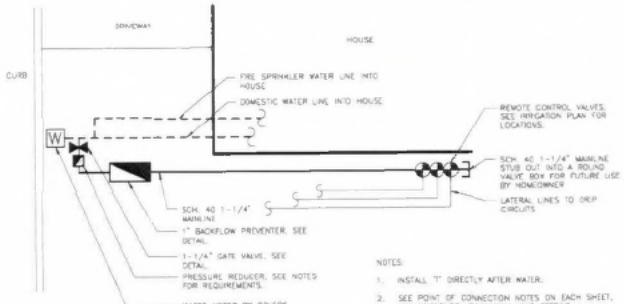
2 GATE VALVE DETAIL
NOT TO SCALE



3 REMOTE CONTROL VALVE & 'Y' FILTER DETAIL
NOT TO SCALE



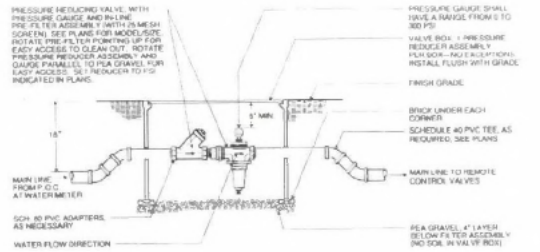
4 WIRE CONNECTION DETAIL
NOT TO SCALE



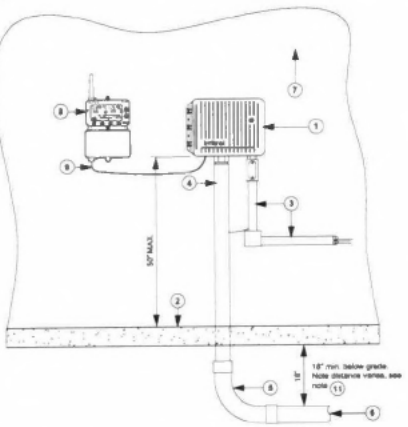
NOTES:
1. INSTALL 'T' DIRECTLY AFTER WATER.
2. SEE POINT OF CONNECTION NOTES ON EACH SHEET, FOR PRESSURE VERIFICATION AND TESTING REQUIREMENTS.

5 IRRIGATION SYSTEM P.O.C. AT EACH LOT DETAIL
NOT TO SCALE

NOTES:
PRESSURE REDUCER SHALL BE 1-1/4" LEAD FREE WILKINS 500XLYSBR (INCLUDES PRESSURE REDUCER & FILTER), SET AT 50 PSI. SEE NOTES ON IRRIGATION PLANS FOR INSTALLATION REQUIREMENTS.

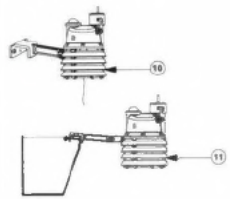


6 PRESSURE REDUCER DETAIL
NOT TO SCALE

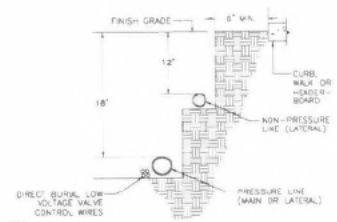


1. Irrigation controller. Install controller in location as directed by Owner's Representative.
2. Garage finish surface.
3. 1/2" UL approved electrical conduit, ring nut and junction box for 120V AC electrical power. Contractor to proved 120 volt AC electrical power to controller, see notes on Irrigation Plans.
4. PVC schedule 40 control wire conduit (size as required)
5. PVC sweep 90 to conduit through bldg. to exterior planting area 18" below grade.
6. End conduit 12" beyond edge of bldg., 18" below grade.
7. Interior wall in garage area.
8. Climate Logic™ receiver module mounted near the compatible controller. Mount with screws at eye level.
9. Single connection cord plugged into controllers remote port.
10. Climate Logic™ weather sensor mounted outdoors on flat surface using screws, , see notes on Irrigation Plans.
11. Climate Logic™ weather sensor mounted on a rain gutter using QuickClip™ guttermount, see notes on Irrigation Plans.
11. Note: at lots where garage areas are elevated above grade, route conduit down side of bldg./structural piers out site where possible, to 18" below grade. Paint exposed conduit to match house color as directed by Owner's Representative.

7 IRRIGATION CONTROLLER & WIRELESS WEATHER SENSOR DETAIL
NOT TO SCALE



NOTES:
1. Irrigation controller is not shown on the irrigation plan. Irrigation controller to be installed in garage as directed by Owner's Representative.
2. 120 volt AC power to controller per Electrical Plans.
3. Wireless weather sensor unit to be installed on edge of bldg. in area open to sky with full sun exposure, in location approved by Owner's Representative. Locate sensor unit within radio communication range of controller.
4. All electrical work must conform to local codes. Refer to product literature for additional installation requirements.



NOTES:
1. TRENCHING AND BACKFILLING SHALL BE PER STANDARD SPECIFICATIONS.
2. MINIMUM BACKFILL RELATIVE COMPACTION SHALL BE 90%.
3. BUNDLE CONTROL WIRES TOGETHER AND TAPE AT 10' INTERVALS.
4. 4" MIN. HORIZONTAL DISTANCE BETWEEN PIPES IN COMMON TRENCH.
5. ALL PLASTIC IRRIGATION PIPING TO BE SNAKED IN TRENCHES.

8 IRRIGATION LINE TRENCHING
NOT TO SCALE

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PROJECT MANAGER
DESIGNED BY
DRAWN BY
CHECKED BY

PROJECT NAME/LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
DRAWING TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 11

NO.	DESCRIPTION	DATE
1		
2		
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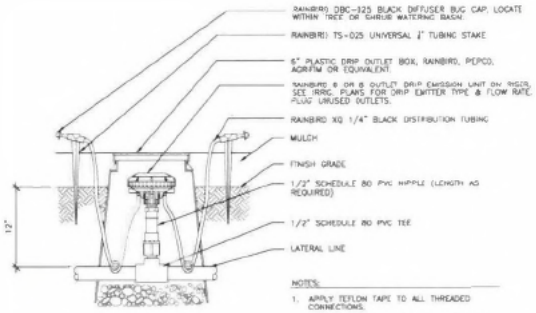
SHEET TITLE
IRRIGATION DETAILS

SCALE
AS SHOWN

ISSUE DATE
02/18/16

PROJECT NO
V0219

SHEET NO
L4.3



SECTION

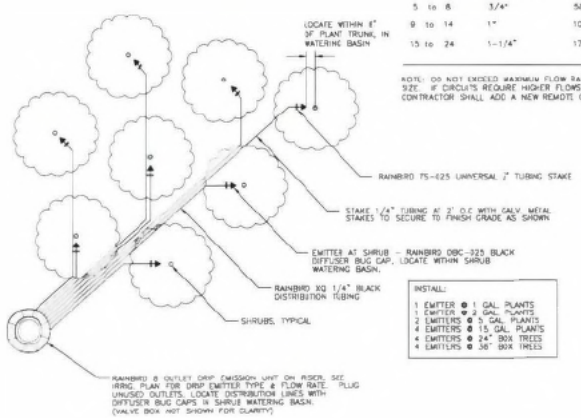
NOTES:

1. APPLY TEFLON TAPE TO ALL THREADED CONNECTIONS.
2. SIZE DRIP LATERAL PIPE SIZING CHART FOR SIZING LATERAL LINES.
3. 1/4" DISTRIBUTION TUBING MAXIMUM LENGTH SHALL NOT EXCEED 20'

DRIP SHRUB/GC LATERAL PIPE SIZING CHART

GPM FLOW RATES	SIZE OF CLASS 200 PVC PIPE	MAX. QUANTITY OF RAINBIRD 8-OUTLET DRIP EMISSION UNITS (WITH 1.0 GPM EMITTERS)
5 to 8	3/4"	58
9 to 14	1"	102
15 to 24	1-1/4"	178

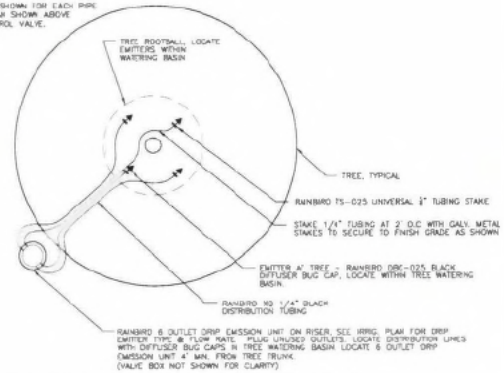
NOTE: DO NOT EXCEED MAXIMUM FLOW RATES SHOWN FOR EACH PIPE SIZE. IF CIRCUITS REQUIRE HIGHER FLOWS THAN SHOWN ABOVE CONTRACTOR SHALL ADD A NEW REMOTE CONTROL VALVE.



INSTALL:

1 EMITTER @ 1 GAL. PLANTS
1 EMITTER @ 2 GAL. PLANTS
2 EMITTERS @ 5 GAL. PLANTS
4 EMITTERS @ 15 GAL. PLANTS
4 EMITTERS @ 24" BOX TREES
4 EMITTERS @ 36" BOX TREES

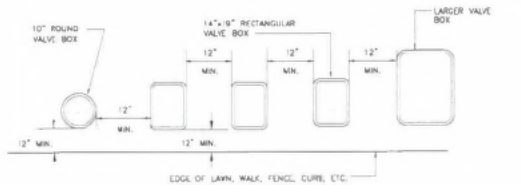
PLAN VIEW – RAINBIRD 8 OUTLET DRIP EMITTER LAYOUT @ SHRUBS/GROUND COVERS



PLAN VIEW – RAINBIRD 6 OUTLET DRIP EMITTER LAYOUT @ TREES

1 8-OUTLET & 6-OUTLET DRIP EMITTER ON RISER DETAIL

NOT TO SCALE



TOP VIEW

NOTES:

1. CENTER BOX OVER VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA.
3. SET VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN AREA ONLY IF GROUND COVER/SHRUB AREA DOES NOT EXIST ADJACENT TO LAWN.
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOX EDGES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
6. VALVE BOXES SHALL HAVE BOLT DOWN LIDS WITH BOLTS INSTALLED.
7. VALVE BOXES SHALL BE BY CARSON, OR EQUIVALENT.

2 VALVE BOX LAYOUT DETAIL

NOT TO SCALE

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PROJECT NAME / LOCATION
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

SHEET TITLE
LANDSCAPE IMPROVEMENT PLANS
LOT 11

NO	DESCRIPTION	DATE
1		
2		
3		

SHEET TITLE
IRRIGATION DETAILS

SCALE
AS SHOWN

ISSUE DATE
02/16/16

PROJECT NO.
Y0219

SHEET NO.
L4.4

GENERAL NOTES:

1. Contractor shall verify all existing site conditions prior to beginning construction. Notify Owner's Representative of any discrepancies.
2. The Contractor shall provide all materials, labor and equipment to complete all landscape work as shown on the plans and specifications.
3. If there is a conflict with the utilities and the planting, the Owner's Representative is to be responsible for spotting new plant locations prior to the planting process.
4. The Contractor shall be responsible for any damage to existing utilities, pavement or improvements. All repairs shall be made at no expense to the Owner.
5. The Contractor shall notify the Owner's Representative prior to beginning construction and shall keep the Owner's Representative informed of progress of work throughout landscape construction.
6. All work shall be installed in conformance with all applicable local codes and ordinances by experienced workmen and a licensed Contractor who shall obtain all necessary permits and pay all required fees.
7. Any requirement in the Plans and / or Notes and Specifications shall be considered binding. In case of discrepancies, the Owner's Representative shall be contacted immediately.
8. It is the Contractor's responsibility to schedule regular site visits by the Owner's Representative/Landscape Architect throughout landscape construction, at the beginning of the maintenance period, and final site review will be required.
9. Execute weekly cleaning of the site throughout the contract period to remove all waste materials, rubbish, plant containers, etc.
10. See Civil Engineer's Improvement plans for all general grading information and notes.
11. All written dimensions supersede scaled distances. All dimensions are taken from back of curb, face of building, face of wall finish or face of fence.
12. Upon award of bid and prior to any construction, the Contractor shall perform the Percosteon and Soils Testing as specified in the Planting Notes. If these tests have not already been performed, if drainage is found to be insufficient, or soils test results identify conditions requiring extraordinary or corrective measures, the Contractor shall immediately alert the Owner's Representative and Landscape Architect of any such problems, for corrective action and/or additional drainage treatment.

GRADING NOTES:

1. See General Notes and Civil Engineer's Grading Plans for additional information.
2. Rough grading and site drainage shall have been completed prior to Contractor's work. Verify all existing site conditions and report any discrepancies to Owner's Representative.
3. Contractor shall be responsible for finish grading. Verify positive drainage at a minimum 2% slope in landscape areas away from buildings and paved surfaces. Shrub areas shall be 1-1/2" below top of adjacent paving, headers, or curbs. No low spots which hold standing water will be permitted.
4. All salvageable, clean top soil from areas to be paved shall be stockpiled to be used as fill in planting areas.

CONSTRUCTION NOTES:

1. Concrete work: Install concrete work as detailed. Layout of concrete work shall be as shown on construction plans and as specified below.
   A. Layout shall be approved by Owner's representative/Landscape Architect prior to concrete pour. Contact Owner's Representative two days in advance.
2. Paving Installation
   B. Concrete Materials: For paving, concrete shall be a 5 sack mix producing concrete having a 28 day strength not less than 2500 psi. For walls concrete shall be 6 sack mix.
1. Portland cement: Conforming to ASTM, C150, Type I or II. Total alkali content not to exceed 0.60%. Deliver cement and all materials in labeled, unopened containers.
2. Form coatings: Standard product resin type sealer. Do not use form oil or any oil-bearing material.
3. Concrete aggregates: Conform to ASTM C33. Maximum 3/4" size aggregate.
4. Base course aggregates: Conform to ASTM C33. Maximum 3/4" size aggregate.
5. Water: Clean and potable.
6. Forms: Form material is Sub-contractor's option.
7. Admixtures or finish retardants: For workability, where approved by Owner's representative, and admixture may be added in accordance with manufacturer's recommendations. Obtain approval of material prior to use.
8. Expansion joint material: 3/8" thick pre-molded joint filler, conforming to ASTM D1751 or D1752.
9. Reinforcing steel:
   a. Bars: Deformed, intermediate grade, conforming to ASTM A615, Grade 40 for sizes #5 and smaller.
   b. Tie wire: Annealed copper-bearing steel wire, minimum 16 gauge.
10. Welded wire mesh: 6" x 6" x #10.
11. Liquid curing compound as required: Thompson's approved standard product fugitive resin type, or equal conforming to ASTM C309, free of wax or oil, compatible with subsequently applied finishes or coverings, not deleterious to bond of cementitious materials to aggregate.
12. Patching mortar: One part Portland cement or equal (part white and part grey adjusted to match color of surrounding concrete) and 2-1/2 parts sand with the least water required to produce a workable mass. Rework this mortar until it is the stiffest consistency that will permit placing.
   C. Concrete Installation:
1. Construct the subgrade true to grade and detail as shown. Compact subgrade to 90% maximum density at optimum moisture content.
2. Set forms with upper edges true to line and grade. Properly brace or tie together to maintain position and shape. Remove side forms not sooner than 12 hours after finishing has been completed. Form curves and straight sections for smooth and continuous lines. Secure Owner's representative's approval of subgrade compaction and moisture content and form alignment prior to pouring concrete.
3. Embedded items: Do not place any concrete until all inserted items such as sleeves, anchor bolts, wood, nails, dowels, etc. are installed in their proper locations, secured against displacement, cleaned, inspected and approved. Furnish ties and supports necessary to keep embedded items in place when concrete is placed.
4. Weather: Do not place concrete during rain unless approved measures are taken to prevent damage to concrete.
5. Deposit concrete evenly, consolidate with mechanical vibrators, particularly at side forms and strike off to indicated elevations and contour.
6. Concrete finishes shall be even surfaces of uniform texture and appearance, free of unsightly bulges, depressions and other imperfections and as follows:

   Medium broom finish: Broom with coarse bristled broom across width of flatwork to a uniformly roughened surface. Finished surface and edges shall be clean with uniform and reasonably straight lines. Submit Sample.

   Light broom finish: Broom with janitor's push broom type, with soft bristles, across width to a uniformly roughened surface. There shall be no deeply incised or obvious lines. Submit sample.

   Steel trowel finish: After floating, and no free water is evident and/or no cement sticks to the finger when touching slab, steel trowel until hard. All trowel marks eliminated. Final trowelling done when a ringing sound is produced as the trowel is moved over the surface.

   Joints: Joints shall be tooled with one-quarter inch (1/4") radius edging tool or as shown on plans.

   Edges: Edge slabs one-half (1/2") inch radius, edge curbs and other structures three-quarters inch (3/4") radius unless otherwise shown.
7. Remove flange marks: Remove flange marks resulting from tooling of edges by carefully troweling out, unless specifically detailed in plans.

CARPENTRY NOTES:

A. Wood materials. See details for type of wood for each item.

1. Wood shall be selected for straightness and smoothness, size and grade as shown in plans.
   B. Workmanship: Carefully plan and layout the work as required. Properly accommodate the work of other trades. Accurately saw-cut and fit lumber into the respective locations, true to line, grade, and level, as indicated or required, and permanently secure in proper position with spikes, nails, lag screws, bolts, hangers, or other fastenings to make the work substantial and rigid in all parts and connections.
   C. Connections: Make connections between members tight, accurate and secure. Place fastenings without splitting wood; predrill when required. Drill bolt holes same size as bolt diameter. Drill holes for lag screws same size as thread root diameter, and counterbore, same depth and diameter as shank. Turn lag screws into place, do not drive. Provide bolts and lag screws with washers under every head and nut bearing on wood. Tighten bolts and lag screws at installation; carefully retighten just prior to closing in, or at completion of project.
   D. Finishing: As per plan.
   E. Redwood header layout: All curved sections shall be smooth and continuous. Layout shall be approved by Owner's representative.
2. Hardware
   A. All metal bolts, nails, screws and other hardware shall be galvanized steel, sized as shown on the plans.
   B. All visible hardware shall be painted with two coats of black rustproof paint or to match architectural colors. Color to be approved by Owner's representative.
   C. All hardware for metal gates to be approved by Owner's representative.
3. Metal:
   A. Provide complete shop drawings for all metal fabrication.
   B. Fabricate all exterior steel work in shop, including all welding. All metal work shall conform to ASTM specifications. Miter corners and angles of moldings or frames unless otherwise noted.
   C. Shop primer: One coat of primer, semi-quick drying. Painting: After material has been properly cleaned, apply shop prime coat of paint to all surfaces. Apply all paint in accordance with manufacturer's directions. Spot paint all scrapions and field connections after assembly.
   D. Installation: Set all work plumb, true, rigid and neatly trimmed out as detailed. Provide all necessary connections, anchor bolts etc. required to fit metal with other work.
   E. Protect all metal from damage to surface, profile or to shape from shop through construction to final acceptance of project.
   F. Color: Color to be approved by Owner's representative, submit sample for approval.
   G. All defective work shall be repaired or replaced as directed Owner's representative.
   H. All exposed site metal for utilities, irrigation, etc., shall be painted with one coat brown rustproof paint.

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PROJECT MANAGER:
DRAWN BY:
CHECKED BY:

ITEM/ISSUES NO.	DESCRIPTION	BY	DATE

PROJECT NAME/LOCATION:
HIGHLAND ESTATES
SAN MATEO CALIFORNIA

DRAWING TITLE:
LANDSCAPE IMPROVEMENT PLANS
LOT 11

SHEET TITLE:
LANDSCAPE NOTES & SPECIFICATIONS

SCALE:
-

ISSUE DATE:
02/18/16

PROJECT NO.:
V0219

SHEET NO.:
L5.0

PLANTING NOTES:

1. See General Notes.

2. Submittals: Contractor shall submit the following items to Owner's Representative and Landscape Architect for review/approval prior to beginning planting installation operations.

   A. Soils tests: Initial site soils test & post amendment installation test)

   B. Vendor data for landscape products, including, bark/mulch, root barriers, fertilizers, soil amendments, and soil conditioners.

   C Written results of percolation tests.

3. The Contractor shall verify the availability of all landscape plants within 10 days following award of the contract. Discrepancies or other problems and all plant substitutions shall be resolved at this time. If a substitute is authorized by the Owner's Representative, it must be of the same size, value and quality as the original plant.

4. All trees and representative samples of shrubs/ground covers shall be inspected at the site for approval by the Owner's Representative and meet the following standards.

   A. Quality and size shall conform to the State of California Grading Code of Nursery Stock No. 1 grade and to the current issue of the American Standard for Nursery Stock published by the American Association of Nurserymen. Use only nursery-grown stock. The Owner's Racresentative will inspect plants for approval prior to any installation.

   B. Plant material must be selected from nurseries that have been inspected by state or federal agencies.

   C Nomenclature will be in accordance with Hortus III.

   D. Plant materials will not be accepted that are overgrown, root-bound, or too recently canned so that the root system is not thoroughly established throughout the can. Pruning shall not be done prior to delivery except as authorized by the Owner's Representative

5 Grading and Topsoil:

   A. See Grading Notes.

   B. Soil Test: Contractor shall submit three (3) representative soil samples to Soil and Plant Laboratory, Santa Clara or approved equal to be tested for agricultural suitability and fertility with pre-plant and post-plant recommendations, immediately following the completion of rough grading. Soil samples shall be taken from location determined by the Owner's Representative. Soil shall be certified as clean and free of hazardous material or waste contamination. Notify Owner's Representative of any soils problems noted in the soils test report that could potentially effect/impact plant health, including but not limited to the following: high or low soil pH, poor soil drainage, excessive soil compaction, different soil types in the same test sample, deficient or excess nutrient levels, high salt levels, high boron or other elements and compounds toxic to plants, etc. Submit report to Landscape Architect and Owner's Representative for review and approval prior to beginning work. Do not proceed with any amending operations until soils report has been reviewed and approved.

   C Compost to be used for soil amendment at the rate indicated by the soil analysis to bring the soil organic matter content to a minimum of 3.5% by dry weight or 2" of compost. Contractor may 1) import topsoil to meet organic matter content listed, or 2) submit soils report that identifies existing topsoil meets or exceeds the specified organic matter content. (Bay-Friendly score card item C.7 +1)

   Soil amendment to be added as follows in all planting areas: (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purpose until determined by soil tests.)

   Amount per 1000 square feet:

   6 cubic yards Compost

   20 lbs. 5-20-20 fertilizer (Best's Copmaker)

   10 lbs. 0-25-0 Single super phosphate

   10 lbs. iron sulfate

   D Soil amendment in all planting areas shall be uniformly spread and thoroughly incorporated to a soil depth of 8" minimum by repeated rotary hoe cultivation prior to planting.

   E. Post Amendment Installation Soil Testing for Compliance: After incorporating amendments, fertilizers and conditioners, Contractor shall take three (3) representative soil samples and have samples tested for Agricultural Suitability and Fertility by an approved soils analysis laboratory for compliance with original soil test report recommendations. Add any additional amendments, fertilizers and conditioners recommended by soils analysis laboratory at no cost to Owner. Notify Owner's Representative of any potential soils problems noted in the report. Submit report for amendment/fertilizer/conditioner compliance to Landscape Architect and Owner's Representative prior to beginning planting operations.

6. Tree and Shrub Planting:

   Prior to digging holes for final planting, the Contractor shall spot all trees as shown on the Drawings for approval by the Landscape Architect.

   A. Soil amendments and fertilizer shall have been incorporated into the soil prior to tree and shrub planting

   B. Dig pits as shown on Drawings

   C After pits are dug, break sides and bottom of holes to open wall of pit for root penetration

   D. Percolation Test: All plant pits shall be tested for sufficient drainage prior to planting. Representative plant pits shall be dug (at least 2) at site upon award of Bid to test for general site subgrade drainage conditions. Individual planting pits shall also be tested again for sufficient drainage prior to planting. Contractor shall fill plant pits with water to see if subsoil conditions will cause retention of water within plant pits overnight. If standing water is still observed after 12 hours, then Contractor shall alert Owner's Representative and Landscape Architect of the problem.

   E. Planting backfill mix for trees and shrubs shall be:

   Amount per Cubic Yard:

   3/4 cubic yard On site soil

   1/4 cubic yard compost

   1.5 lbs. 5-20-20 fertilizer (Best's Copmaker)

   2.5 lbs. 0-25-0 Single super phosphate

   1 lb. Iron sulfate

   (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purpose until determined by soil tests)

   F. Fertilize plants at the time of planting with Agriform 21-gram fertilizer packets: 20-10-5: 2 per 1 gallon can; 3 per 5 gallon can, 4 per 15 gallon can, specimen trees-3 per inch of caliper.

   G. Plants shall be erect after planting, and staked or guyed as detailed at the time of planting. Remove nursery stakes.

   H. Rootball crown shall be 2" above finish grade after watering and settling.

   I. Tree and shrub plantings shall be watered and flooded to eliminate air pockets within 2 hours of the time of planting

   J. All vines shall be trained to posts, fences or walls by tying select individual branches with plastic covered wire ties as follows: ties shall be attached to wood surfaces with 3/4" galvanized iron staples and attached to stucco or masonry surfaces with epoxy as recommended by manufacturer. See planting details.

   K. All trees shall be planted 10'-0" minimum from buildings including overhangs and 5'-0" minimum from curbs, paving, fences, etc. Orient main branches of trees away from building. Should any discrepancies occur between field conditions and planting plans contact Owner's Representative. All trees closer than 5'-0" from curbs, foundations, sidewalks, or other hardscape items, shall be installed with linear root deflector panels protecting adjacent hardscape items, but never fully surrounding rootball. Install a 10 foot by 24 inch deep section of linear interlocking root deflector panels, centered on tree (5 feet on each side), located at curb, foundation, sidewalks, other hardscape items, unless otherwise indicated. See plans for detail.

   L All trees shall be planted a minimum of 5'-0" away from storm drain, or other underground utility lines (or per code), and 10'-0" away from sanitary sewer lines (or per code), and 15'-0" minimum away from utility poles or light standards (or per code).

   M. All planting areas to recieve 3" layer of bark mulch, natural color, no dyes

   N All trees and shrubs shall have watering basins around them. Basin diameters shall be the same size as the tree or shrub's rootball. Basins shall be formed with level bottoms and 3 inch high walls. Planting areas to receive 3" depth of bark mulch unless otherwise indicated. Submit sample for approval

   O. Soil amendments shall have been incorporated into the soil prior to planting.

   P. Clear planting areas of rocks and debris greater than 1" diameter.

   Q. Apply a pre-emergent herbicide, per manufacturer's directions.

   R. All planting areas with slopes greater than 2:1 shall have jute mesh installed as per detail, or per manufacturer recommendations.

   S. Thirty (30) days after planting, replace all dead plants and fill in bare areas. Top dress with 16-8-8 fertilizer at 7 lbs./1000 sq. ft. when ground is dry and thoroughly irrigate promptly after application

   (Applied rates of soil amendment and commercial fertilizer shall be used for bidding purpose until determined by soil tests)

7. NOT USED

8. Workmanship:

   Precautions shall be taken to avoid damage to existing plants, turf and structures. Any areas damaged shall be restored to their original condition.

9. Clean-up:

   Keep all areas of work clean, neat and orderly at all times. Keep all paved areas clean during planting and maintenance operations.

10. Site Visits and Approvals:

    The Contractor shall contact the Owner's Representative for review and approval of plant materials and plant locations. The maintenance period begins following acceptance of plant installation.

11. Maintenance:

    A. Begin maintenance after each plant is installed and continue until Final Acceptance.

    B. Maintenance Period shall begin upon inspection and approval by Owner's Representative and shall be for 60 calendar days.

    C. Maintenance of new planting shall consist of watering, cultivating, weeding, mulching, re-staking, tightening and repairing of guys, resetting plants to proper grades or upright position, reformation of the planting saucer, and furnishing and applying such sprays and irrigorates as are necessary to keep the plantings free of insects and disease and in thriving condition.

    D Protect planting areas and plants at all times against damage of all kinds, including frost, for duration of maintenance period. Maintenance includes temporary protection fences, barriers, covers during frost and signs as required for protection. If any plants become damaged or injured, treat or replace as directed by Landscape Architect at no additional cost to Owner.

13 Guarantee:

    A. Replacement trees shall be in thriving condition 3 years from the date of final acceptance. Any replacement trees which have lost at least 30% of their normal foliage or are not in vigorous growing condition shall be replaced.

    B All other trees, shrubs, grasses, ground covers shall be in thriving condition 1 year from the date of final acceptance. Replace any trees which have lost at least 30% of their normal foliage or are not in vigorous growing condition.

CIVIL
CHAMBERLAIN GROUP
805 Silvera, Suite 250
San Carlos, CA 94070
(650) 595.5588

800.227.2600

VAN DORN ABED
LANDSCAPE ARCHITECTS, INC.
81 14TH ST. SAN FRANCISCO, CA
ph 415 861 8100 fax 861 8144

PROJECT MANAGER: KW
DRAWN BY: KW
CHECKED BY: ZZ

PROJECT NAME/LOCATION:
HIGHLAND ESTATES
SAN MATEO CALIFORNIA
DRAWING TITLE:
LANDSCAPE IMPROVEMENT PLANS
LOT 11

NO	DESCRIPTION	BY	DATE
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

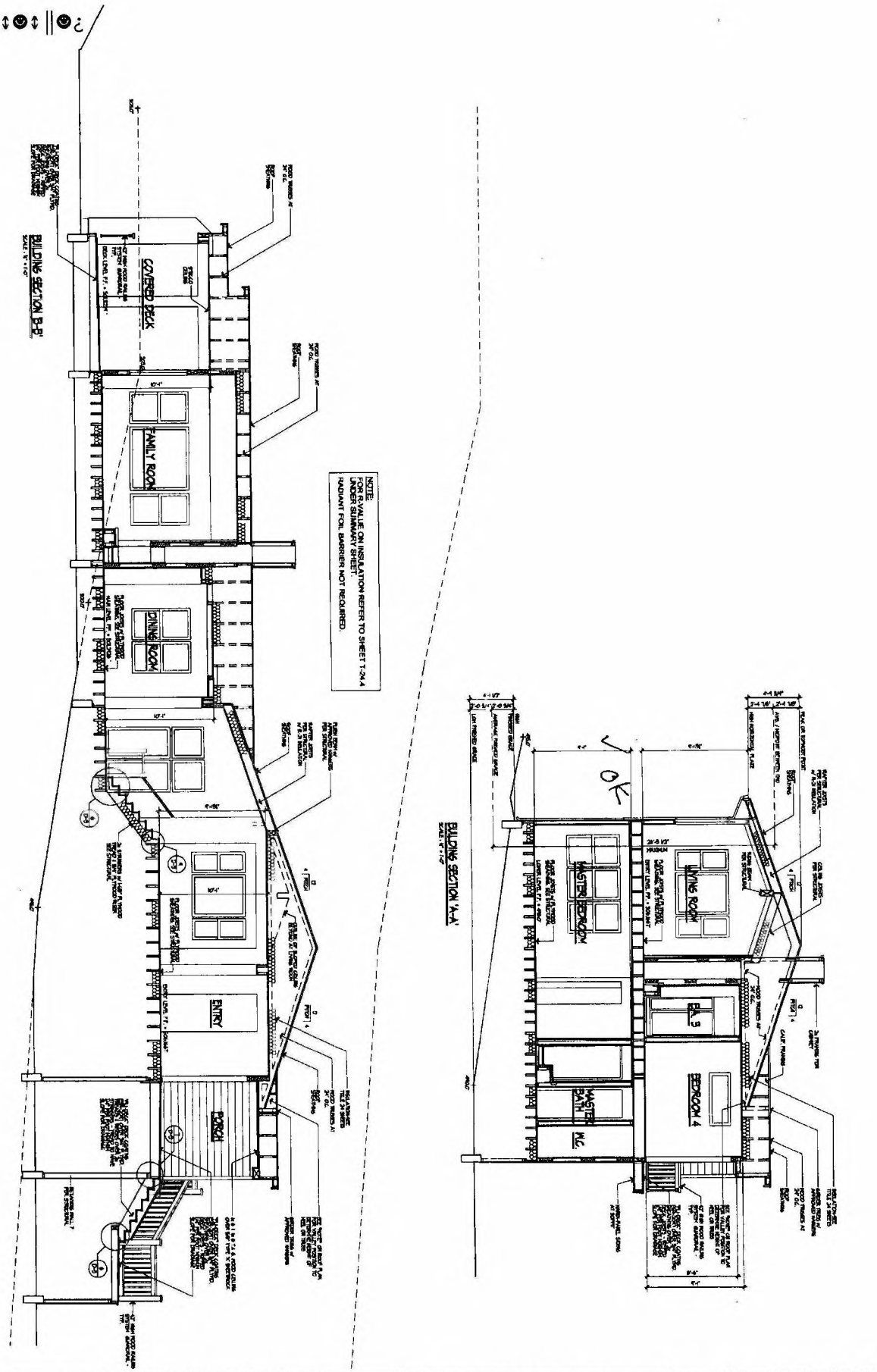
SHEET TITLE:
LANDSCAPE NOTES & SPECIFICATIONS

SEAL

ISSUE DATE:
02/18/16

PROJECT NO:
V0219

SHEET NO:
L5.1



10-6

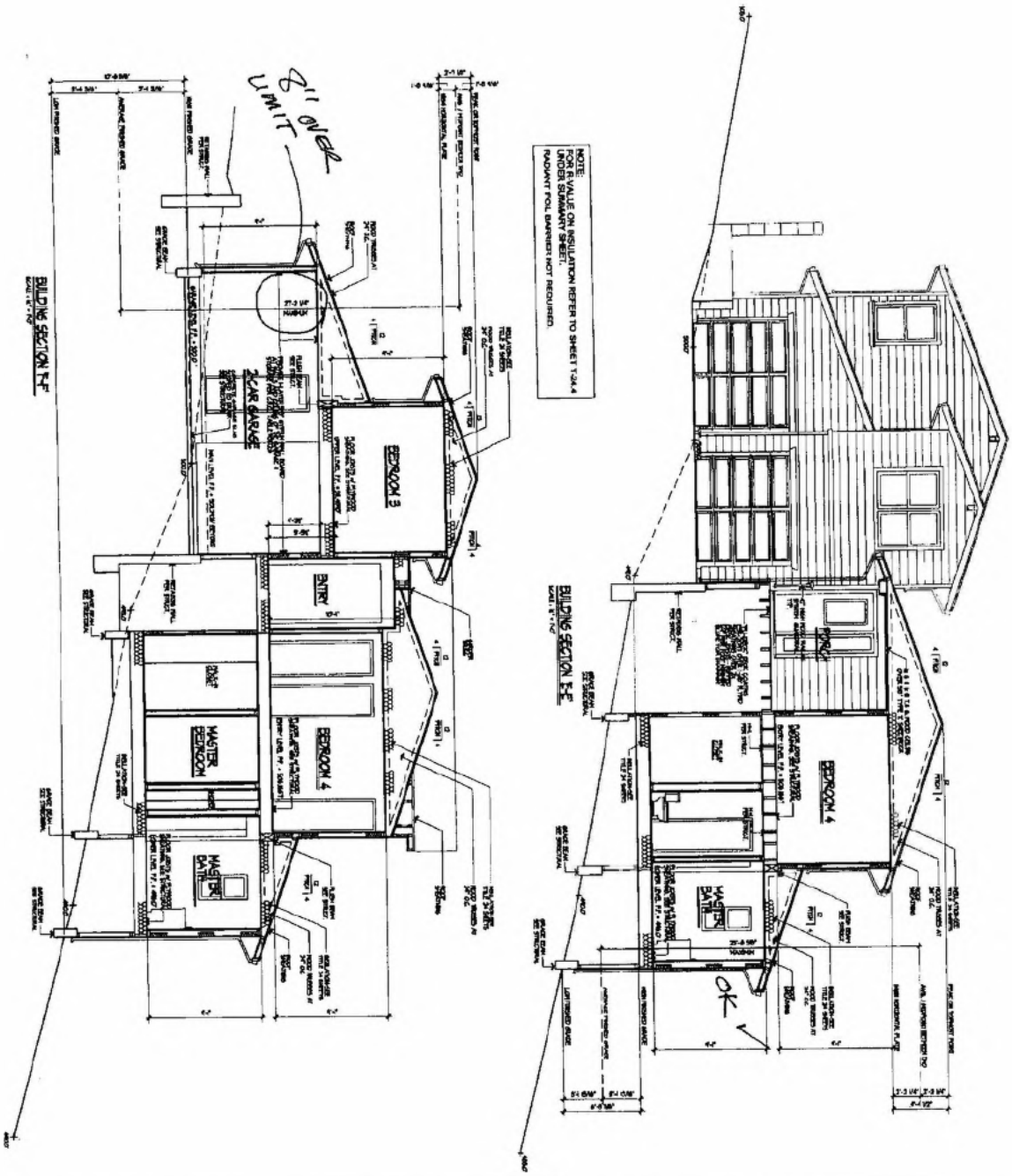
LOT No. 10

BUILDING SECTIONS

"HIGHLAND ESTATES, LOT 10"
2184 COBBLEHILL PLACE
SAN MATEO, CALIFORNIA

TICONDEROGA PARTNERS, LLC

Mark Gross & Associates, Inc.
Architecture • Planning



10-8

LOT No. 10

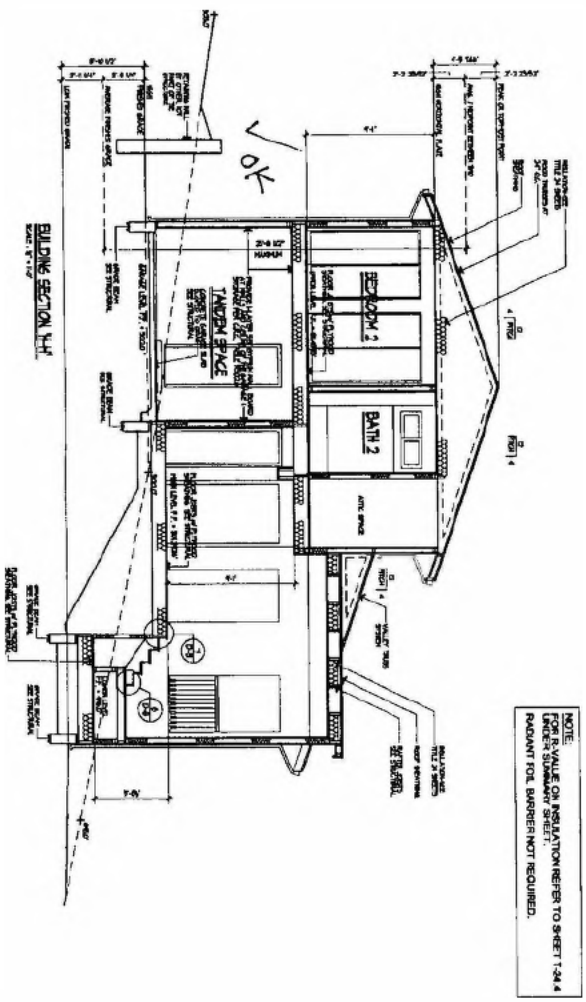
BUILDING SECTIONS

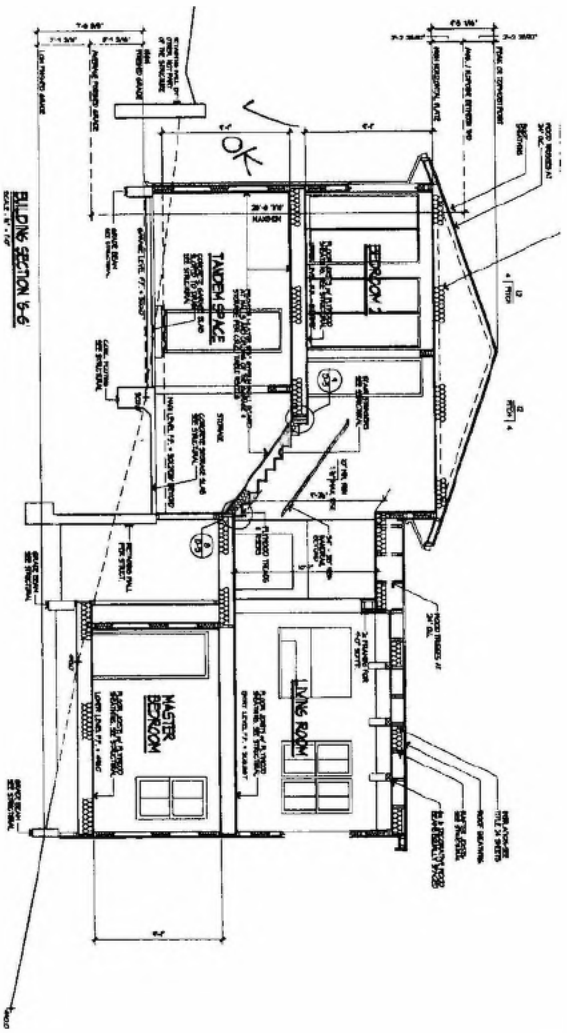
"HIGHLAND ESTATES, LOT 10"
2184 COBBLEHILL PLACE
SAN MATEO, CALIFORNIA

TICONDEROGA PARTNERS, LLC

Mark Grose & Associates, Inc.

Architecture · Planning





10-9

LOT No. 10

BUILDING SECTIONS

"HIGHLAND ESTATES, LOT 10"
2184 COBBLEHILL PLACE
SAN MATEO, CALIFORNIA

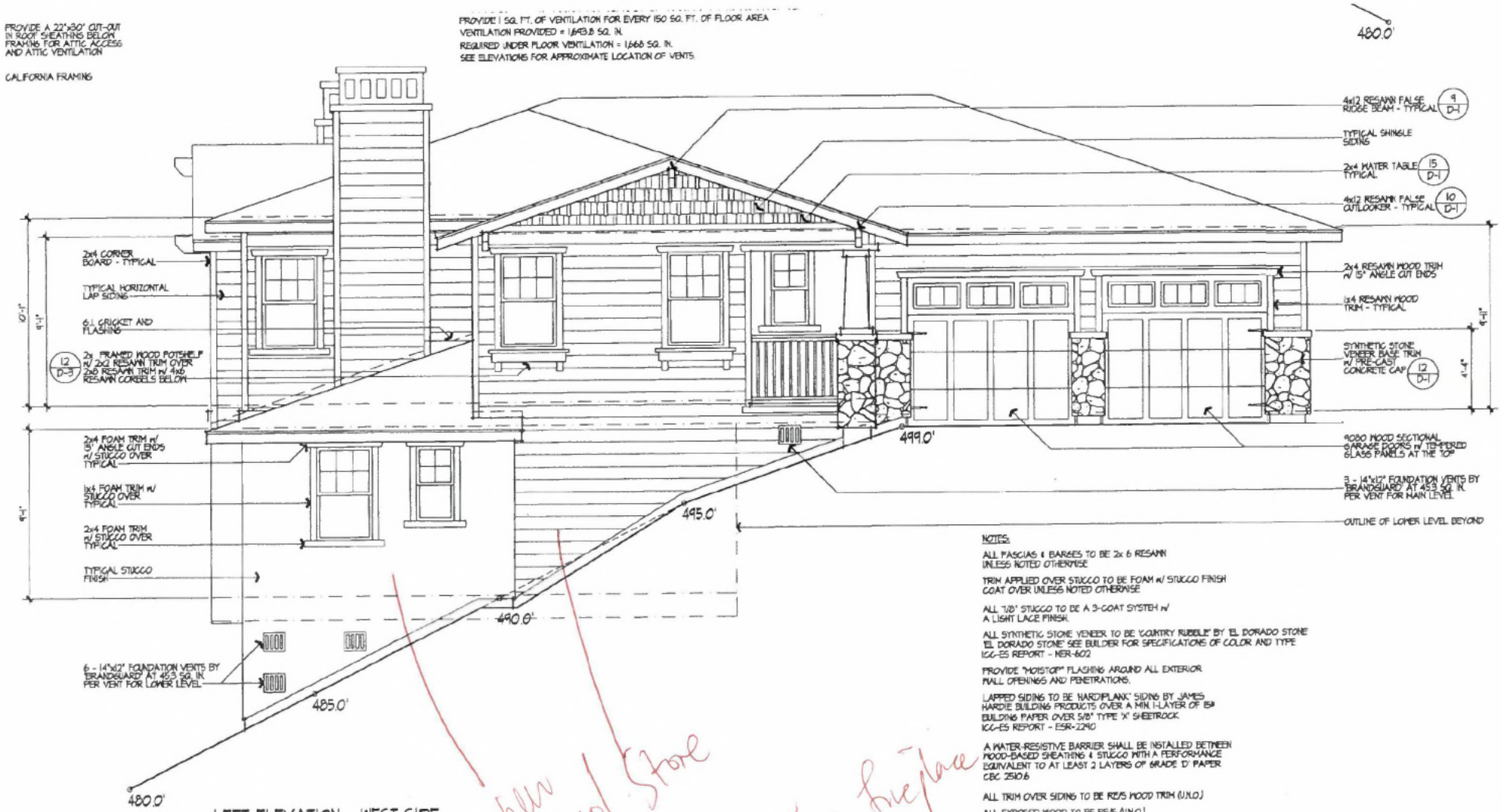
TICONDEROGA PARTNERS, LLC

Mark Gross & Associates, Inc.
Architecture + Planning

PROVIDE A 22"x30" CUT-OUT IN ROOF SHEATHING BELOW FRAMING FOR ATTIC ACCESS AND ATTIC VENTILATION

CALIFORNIA FRAMING

PROVIDE 1 SQ. FT. OF VENTILATION FOR EVERY 150 SQ. FT. OF FLOOR AREA
VENTILATION PROVIDED = 1,693.8 SQ. IN.
REQUIRED UNDER FLOOR VENTILATION = 1,668 SQ. IN.
SEE ELEVATIONS FOR APPROXIMATE LOCATION OF VENTS



LEFT ELEVATION - WEST SIDE

SCALE: 1/4"=1'-0"

LOT 9

NOTES:

ALL FASCIAS & BARGES TO BE 2x 6 RESAWN UNLESS NOTED OTHERWISE

TRIM APPLIED OVER STUCCO TO BE FOAM W/ STUCCO FINISH COAT OVER UNLESS NOTED OTHERWISE

ALL 7/8" STUCCO TO BE A 3-COAT SYSTEM W/ A LIGHT LACE FINISH.

ALL SYNTHETIC STONE VENEER TO BE 'COUNTRY RUBBLE' BY 'EL DORADO STONE' 'EL DORADO STONE' SEE BUILDER FOR SPECIFICATIONS OF COLOR AND TYPE ICC-ES REPORT - NER-602

PROVIDE "MOISTOP" FLASHING AROUND ALL EXTERIOR WALL OPENINGS AND PENETRATIONS.

LAPPED SIDING TO BE 'HARDIPLANK' SIDING BY JAMES HARDIE BUILDING PRODUCTS OVER A MIN. 1-LAYER OF 15# BUILDING PAPER OVER 5/8" TYPE 'X' SHEETROCK ICC-ES REPORT - ESR-2290

A WATER-RESISTIVE BARRIER SHALL BE INSTALLED BETWEEN WOOD-BASED SHEATHING & STUCCO WITH A PERFORMANCE EQUIVALENT TO AT LEAST 2 LAYERS OF GRADE 'D' PAPER CBC 2510.6

ALL TRIM OVER SIDING TO BE RE/S WOOD TRIM (U.N.O.)

ALL EXPOSED WOOD TO BE RE/S (U.N.O.)

SEE T-24 SHEETS FOR WINDOW REQUIREMENTS

[redacted]

REAR ELEVATION - NORTH SIDE

SCALE: 1/4"=1'-0"

Lot 11

FRONT ELEVATION - SOUTH SIDE

SCALE: 1/4"=1'-0"

NOTES:

ALL FASCIAS & BARGES TO BE 2x 6 RESAWN UNLESS NOTED OTHERWISE

TRIM APPLIED OVER STUCCO TO BE FOAM W/ STUCCO FINISH COAT OVER UNLESS NOTED OTHERWISE

ALL "3/8" STUCCO TO BE A 3-COAT SYSTEM W/ A LIGHT LACE FINISH

ALL SYNTHETIC STONE VENEER TO BE "COUNTRY RUBBLE" BY "EL DORADO STONE" "EL DORADO STONE" SEE BUILDER FOR SPECIFICATIONS OF COLOR AND TYPE ICC-ES REPORT - NER-403

LAPPED SIDING TO BE HARDIPLANK SIDING BY JAMES HARDIE BUILDING PRODUCTS OVER A MIN 1 LAYER OF 5# BUILDING PAPER OVER 5/8" TYPE 'X' SHEETROCK ICC-ES REPORT - ESR-2290

A WATER-RESISTIVE BARRIER SHALL BE INSTALLED BETWEEN WOOD-BASED SHEATHING & STUCCO WITH A PERFORMANCE EQUIVALENT TO AT LEAST 2 LAYERS OF GRADE 'D' PAPER. CBC 2510.9

ALL TRIM OVER SIDING TO BE RES WOOD TRIM (U.N.O.)

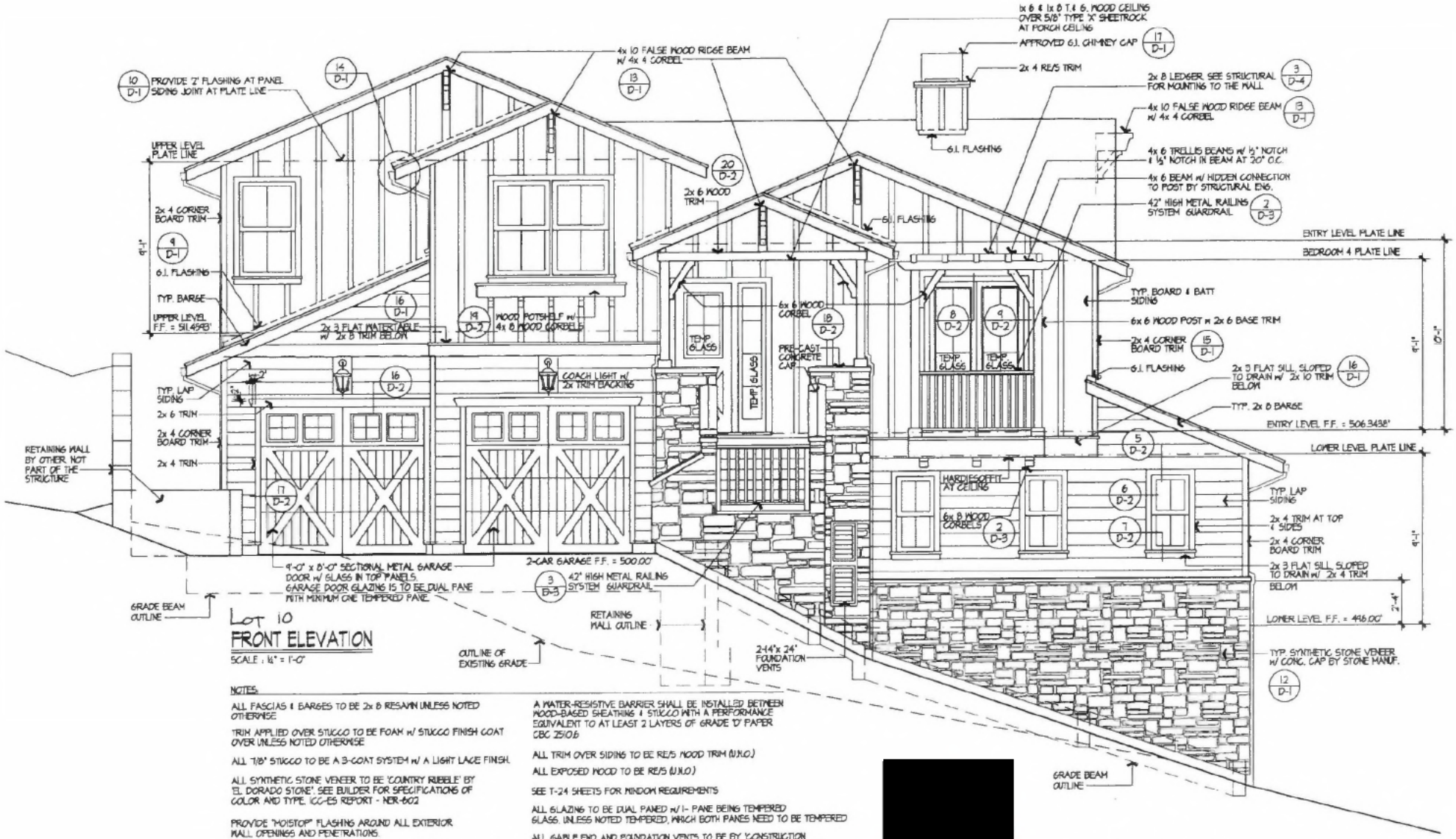
FOUNDATION VENTILATION DATA MAIN LEVEL UNDERFLOOR AREA

522 SQ. FT. AT/150 = .015 SQ. FT. x 1440 SQ. IN. = 886 SQ. IN. VENTILATION AREA REQUIRED

MAIN LEVEL UNDERFLOOR VENTILATION REQUIRED = 886 SQ. IN.

PROVIDE 10 - 14"x 10" FOUNDATION VENTS BY 'BRANDMARK' AT 113 SQ. IN. PER VENT
VENTILATION PROVIDED = 1130 SQ. IN.
SEE ELEVATIONS FOR APPROXIMATE LOCATION OF VENTS.

FOUNDATION VENTILATION DATA LOWER LEVEL UNDERFLOOR AREA



LOT 10
FRONT ELEVATION

SCALE : ¼" = 1'-0"

NOTES:

ALL FASCIAS & BARGES TO BE 2x 8 RESAWN UNLESS NOTED OTHERWISE

TRIM APPLIED OVER STUCCO TO BE FOAM w/ STUCCO FINISH COAT OVER UNLESS NOTED OTHERWISE

ALL 7/8" STUCCO TO BE A 3-COAT SYSTEM w/ A LIGHT LACE FINISH.

ALL SYNTHETIC STONE VENEER TO BE 'COUNTRY RUBBLE' BY 'EL DORADO STONE'. SEE BUILDER FOR SPECIFICATIONS OF COLOR AND TYPE. ICC-ES REPORT - NER-602

PROVIDE 'MOISTOP' FLASHING AROUND ALL EXTERIOR WALL OPENINGS AND PENETRATIONS.

BOARD & BATT SIDING TO BE 'HARDIPANEL- 'CEDARMILL' VERTICAL SIDING BY JAMES HARDIE BUILDING PRODUCTS OVER A MIN. 1-LAYER OF 15# BUILDING PAPER. SIDING IS A NON-COMBUSTIBLE MATERIAL. ICC-ES REPORT - ESR-2290
PROVIDE 1x 4 BATTENS AT APPROXIMATELY 24" O.C.

A WATER-RESISTIVE BARRIER SHALL BE INSTALLED BETWEEN WOOD-BASED SHEATHING & STUCCO WITH A PERFORMANCE EQUIVALENT TO AT LEAST 2 LAYERS OF GRADE 'D' PAPER CBC 2510.6

ALL TRIM OVER SIDING TO BE RE/S WOOD TRIM (U.N.O.)

ALL EXPOSED WOOD TO BE RE/S (U.N.O.)

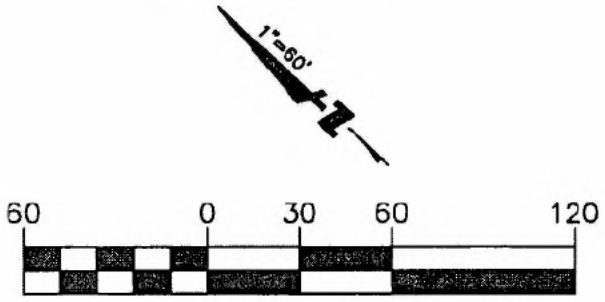
SEE T-24 SHEETS FOR WINDOW REQUIREMENTS

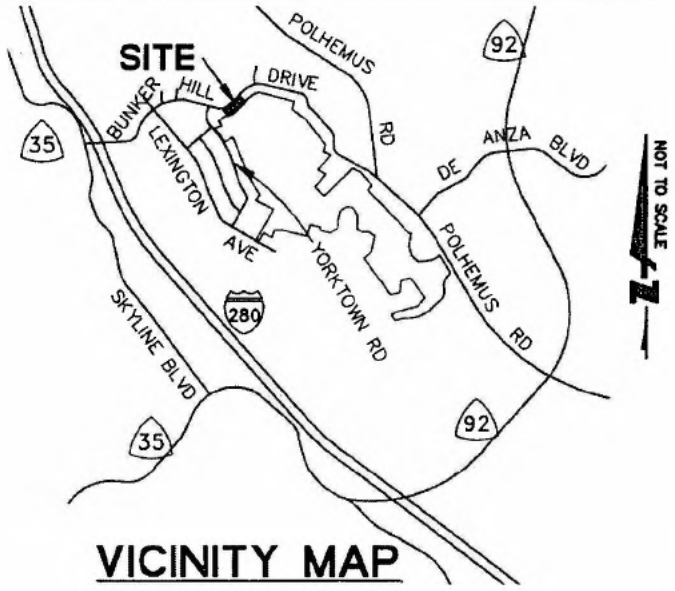
ALL GLAZING TO BE DUAL PANED w/ 1- PANE BEING TEMPERED GLASS. UNLESS NOTED TEMPERED, WHICH BOTH PANES NEED TO BE TEMPERED

ALL GABLE END AND FOUNDATION VENTS TO BE BY 'CONSTRUCTION METALS INC. MUST BE A 'VULCAN VENT TO MEET THE EMBER RESISTANCE REQUIREMENTS OF SECTION R327.8 OF THE C.R.C.

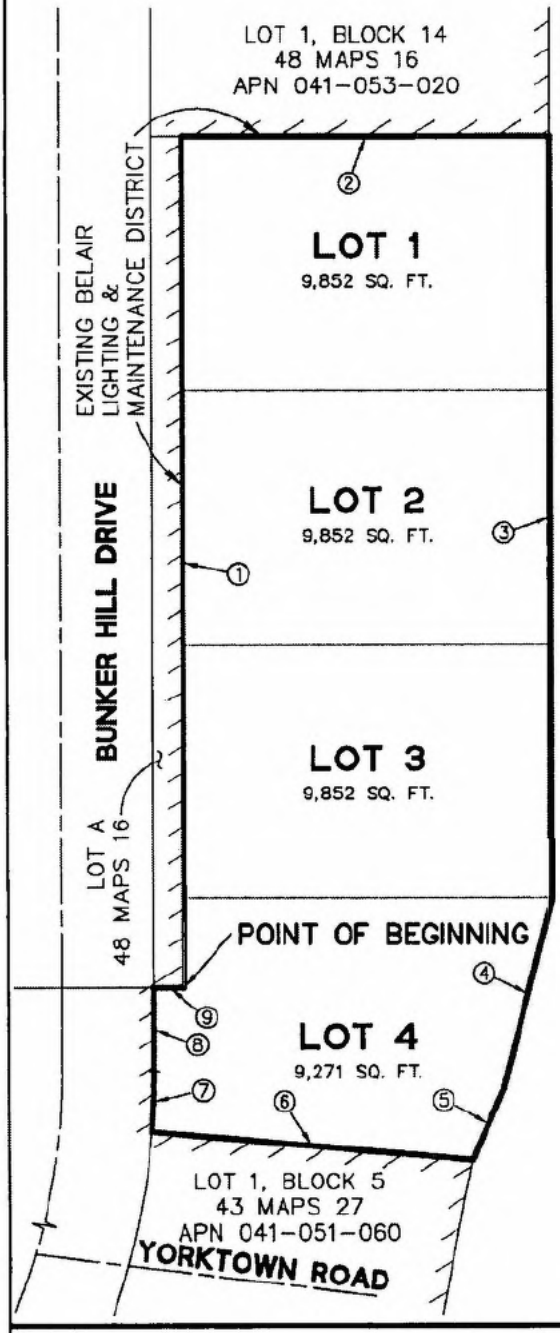
ALL DORMER VENTS TO BE 'O'HAGEN' VENTS TO MEET THE EMBER RESISTANCE REQUIREMENTS OF SECTION R327.8 OF THE C.R.C.

EXHIBIT "A"





VICINITY MAP



COURSES:

1.	N47°00'00"E	275.00'
2.	S43°00'00"E	120.00'
3.	S47°00'00"W	246.30'
4.	S61°35'41"W	63.74'
5.	S70°57'45"W	25.09'
6.	N38°03'00"W(R)	105.00'
7.	R=230.00', Δ=04°57'00",	L=19.87'
8.	N47°00'00"E	27.00'
9.	S43°00'00"E	10.00'

0.89 ACRES

LEGEND

EXISTING BEL-AIRE LIGHTING AND MAINTENANCE DISTRICT BOUNDARY

PROPOSED ANNEXATION

DESIGNATED REMAINDER (UNSURVEYED)
DOC #92-093032

NOTE:
LOTS 1 THROUGH 4 ARE FROM PROPOSED PARCEL MAP NO. 1094 (NOT YET RECORDED).

DISCLAIMER:
"FOR ANNEXATION PURPOSES ONLY. THIS DESCRIPTION OF LAND IS NOT A LEGAL PROPERTY DESCRIPTION AS DEFINED IN THE SUBDIVISION MAP ACT AND MAY NOT BE USED AS THE BASIS FOR AN OFFER FOR SALE OF THE LAND DESCRIBED."

BkF
ENGINEERS / SURVEYORS / PLANNERS
255 SHORELINE DR
SUITE 200
REDWOOD CITY, CA 94065
650-482-6300
650-482-6399 (FAX)

Subject EXHIBIT "A"-PROPOSED ANNEXATION
BEL-AIRE LIGHTING & MAINTENANCE DISTRICT
Job No. 19950168
By CRM Date 11/9/12 Chkd. CRC
SHEET 2 OF 2

BkF

ENGINEERS
SURVEYORS
PLANNERS

EXHIBIT "A"

PROPOSED ANNEXATION OF THE LANDS OF TICONDEROGA PARTNERS, LLC TO THE BEL-AIRE LIGHTING AND MAINTENANCE DISTRICT HIGHLAND ESTATES, SAN MATEO (APN: 041-101-290)

All that real property situate in an unincorporated area of the County of San Mateo, State of California, being a portion of the lands as described in that certain Grant Deed filed for record on March 14, 2008, as Document Number 2008-027480 in the Office of the Recorder for the County of San Mateo, State of California, being more particularly described as follows:

BEGINNING at the southwesterly terminus of the course labeled "53. NORTH 47°00'00" EAST 275.00 FEET" as shown on said document, said point also being the southerly corner of Lot A as said lot is shown on that certain map entitled "TRACT NO. 762, THE HIGHLANDS UNIT NO. 8", filed for record on December 18, 1957 in Volume 48 of Maps at Pages 16 and 17, San Mateo County Records;

(1) Thence along the northwesterly line of the lands described in said document, North 47°00'00" East 275.00 feet;

(2) Thence continuing along said northwesterly line, South 43°00'00" East 120.00 feet;

(3) Thence leaving said northwesterly line, South 47°00'00" West 246.30 feet;

(4) Thence South 61°35'41" West 63.74 feet;

(5) Thence South 70°57'45" West 25.09 feet to a point on said northwesterly line;

(6) Thence, continuing along said northwesterly line, North 38°03'00" West 105.00 feet to the beginning of a non-tangent curve, concave to the northwest, from which point a radial line bears North 38°03'00" West;

(7) Thence continuing along said northwesterly line, northeasterly along said curve with a radius of 230.00 feet, through a central angle of 04°57'00", along an arc length of 19.87 feet;

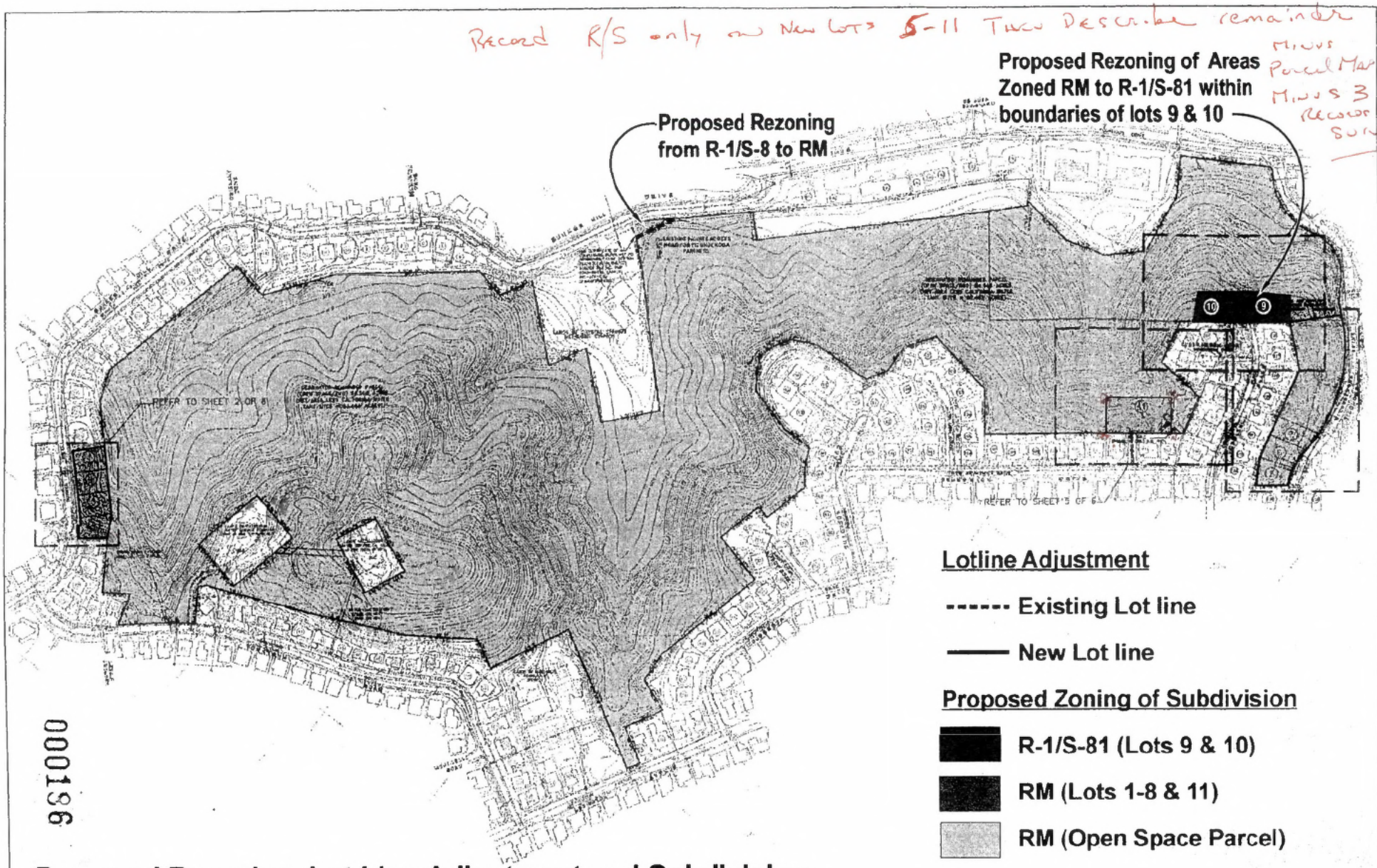
(8) Thence continuing along said northwesterly line, North 47°00'00" East 27.00 feet;

(9) Thence continuing along said northwesterly line, South 43°00'00" East 10.00 feet to the POINT OF BEGINNING

Containing an area of 0.89 acres, more or less.

For annexation purposes only. This description of land is not a legal property description as defined in the Subdivision Map Act and may not be used as the basis for an offer for sale of the land described.

Record R/S only on New Lots 5-11 Then Describe remainder Minus Parcel Map Ref Minus 3 Record of Survey



000186

Proposed Rezoning, Lot Line Adjustment and Subdivision

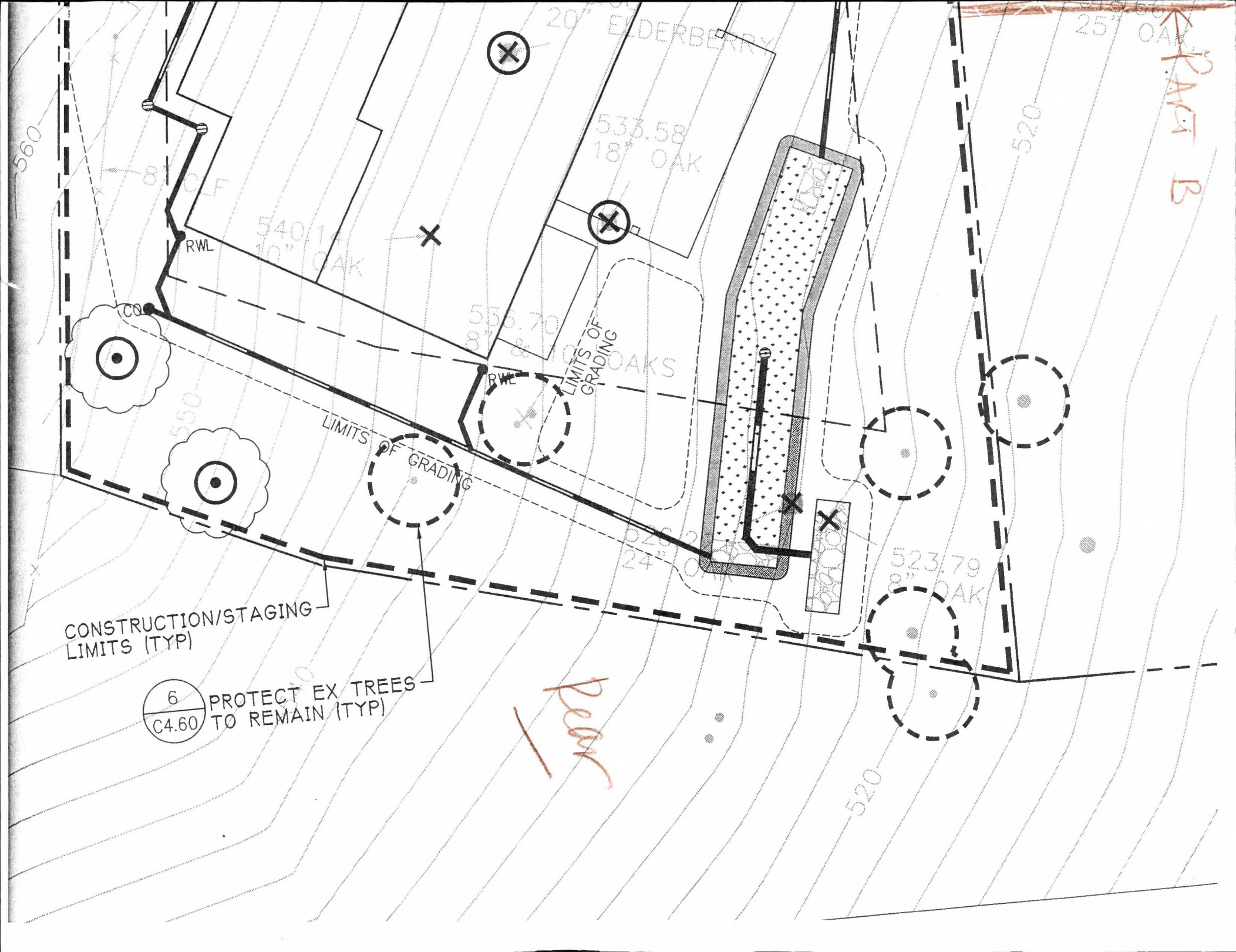
San Mateo County Board of Supervisors' Meeting

Applicant: **Jack Chamberlain**

Attachment: **J**

File Numbers: **PLN 2006-00357**


STRUCTION/STAGING
ITS (TYP)
WM
GAS
CO
PROPERTY LINE
LIMITS OF GRADING
RWL
560
550
540
554.09
(2) 12" OAKS
543.54
8" OAK
550.38
12" OAK
547.14
12" OAK
556.92
(2) 8" OAKS
555.60
8" OAK
555.33
10" OAK
4' WOOD FENCE


20" ELDERBERRY
533.58
18" OAK
540.12
10" OAK
555.70
8" & 10" OAKS
RWL
RWL
CO
LIMITS OF GRADING
LIMITS OF GRADING
523.79
8" OAK
25" OAK
560
550
520
CONSTRUCTION/STAGING LIMITS (TYP)
6
C4.60
PROTECT EX TREES TO REMAIN (TYP)
Pear
PART B

OWNER'S STATEMENT

WE HEREBY STATE THAT WE ARE THE OWNERS OF OR HAVE SOME RIGHT, TITLE, OR INTEREST IN AND TO THE REAL PROPERTY INCLUDED WITHIN THE SUBDIVISION SHOWN UPON THE HEREIN MAP; THAT WE ARE THE ONLY PERSONS WHOSE CONSENT IS NECESSARY TO PASS CLEAR TITLE TO SAID REAL PROPERTY; AND THAT WE CONSENT TO THE PREPARATION AND RECORDATION OF SAID MAP AND SUBDIVISION AS SHOWN WITHIN THE DISTINCTIVE BORDER LINE.

AS OWNERS:

TICONDEROGA PARTNERS LLC, A CALIFORNIA LIMITED LIABILTIY COMPANY

BY: _____ _____
NAME TITLE

AS TRUSTEE:

FIRST AMERICAN TITLE COMPANY

BY: _____ _____
NAME TITLE

AS TRUSTEE:

FIRST AMERICAN TITLE INSURANCE COMPANY, A CALIFORNIA CORPORATION

BY: _____ _____
NAME TITLE

OWNER'S ACKNOWLEDGMENT

STATE OF CALIFORNIA
COUNTY OF _____

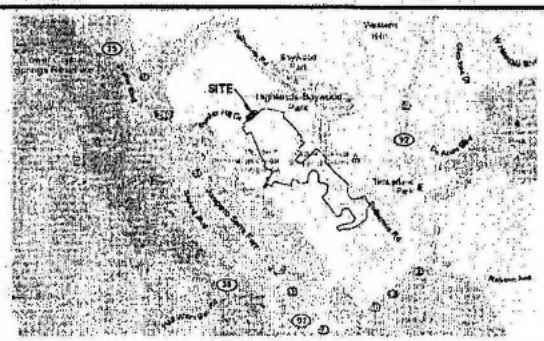
ON _____ BEFORE ME, _____ A NOTARY PUBLIC, PERSONALLY APPEARED _____ WHO PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE /THEY EXECUTED THE SAME IN HIS/HER/THEIR AUTHORIZED CAPACITY(IES) AND BY HIS/HER/THEIR SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S), OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

I CERTIFY UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING PARAGRAPH IS TRUE AND CORRECT.

WITNESS MY HAND:

SIGNATURE _____

_____
NAME (TYPED OR PRINTED), NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE.
PRINCIPAL COUNTY OF BUSINESS: _____
COMMISSION EXPIRES: _____
COMMISSION # OF NOTARY: _____



VICINITY MAP

NOT TO SCALE

TRUSTEE'S ACKNOWLEDGMENT

STATE OF CALIFORNIA
COUNTY OF _____

ON _____ BEFORE ME, _____ A NOTARY PUBLIC, PERSONALLY APPEARED _____ WHO PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE /THEY EXECUTED THE SAME IN HIS/HER/THEIR AUTHORIZED CAPACITY(IES) AND BY HIS/HER/THEIR SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S), OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

I CERTIFY UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING PARAGRAPH IS TRUE AND CORRECT.

WITNESS MY HAND:

SIGNATURE _____

_____
NAME (TYPED OR PRINTED), NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE.
PRINCIPAL COUNTY OF BUSINESS: _____
COMMISSION EXPIRES: _____
COMMISSION # OF NOTARY: _____

TRUSTEE'S ACKNOWLEDGMENT

STATE OF CALIFORNIA
COUNTY OF _____

ON _____ BEFORE ME, _____ A NOTARY PUBLIC, PERSONALLY APPEARED _____ WHO PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE /THEY EXECUTED THE SAME IN HIS/HER/THEIR AUTHORIZED CAPACITY(IES) AND BY HIS/HER/THEIR SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S), OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

I CERTIFY UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING PARAGRAPH IS TRUE AND CORRECT.

WITNESS MY HAND:

SIGNATURE _____

_____
NAME (TYPED OR PRINTED), NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE.
PRINCIPAL COUNTY OF BUSINESS: _____
COMMISSION EXPIRES: _____
COMMISSION # OF NOTARY: _____

SURVEYOR'S STATEMENT

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE AT THE REQUEST OF TICONDEROGA PARTNERS LLC ON APRIL 2011. I HEREBY STATE THAT THIS PARCEL MAP SUBSTANTIALLY CONFORMS TO THE APPROVED OR CONDITIONALLY APPROVED TENTATIVE MAP, IF ANY, AND THAT ALL MONUMENTS ARE OF THE CHARACTER AND OCCUPY THE POSITIONS INDICATED, OR THAT THEY WILL BE SET IN THOSE POSITIONS BEFORE SEPTEMBER 2013, AND THAT THE MONUMENTS ARE, OR WILL BE, SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED.

DATE: _____

LICENSED LAND SURVEYOR — CHARLES R. CIARDI — No. 7321 — STATE OF CALIFORNIA

_____
CHARLES R. CIARDI, P.L.S. 7321

COUNTY SURVEYOR'S STATEMENT

I HEREBY STATE THAT I HAVE EXAMINED THIS MAP AND THAT THE SUBDIVISION AS SHOWN HEREON IS SUBSTANTIALLY THE SAME AS IT APPEARED ON THE TENTATIVE MAP, IF REQUIRED, AND ANY APPROVED ALTERATIONS THEREOF; THAT ALL THE PROVISIONS OF THE CALIFORNIA "SUBDIVISION MAP ACT" AND OF THE "SAN MATEO COUNTY ORDINANCE" APPLICABLE AT THE TIME OF APPROVAL OF THE TENTATIVE MAP, IF REQUIRED, HAVE BEEN COMPLIED WITH; AND THAT I AM SATISFIED THAT THE MAP IS TECHNICALLY CORRECT.

DATE: _____ BY: _____
BRIAN C. LEE,
DEPUTY DIRECTOR OF PUBLIC WORKS
R.C.E. #28573

CLERK OF THE BOARD STATEMENT

I HEREBY STATE THAT THE BOARD OF SUPERVISORS OF SAN MATEO COUNTY, STATE OF CALIFORNIA, DO HEREBY CERTIFY THAT CERTIFICATES HAVE BEEN FILED AND DEPOSITS HAVE BEEN MADE IN CONFORMANCE WITH THE REQUIREMENTS OF SECTIONS 66492 AND 66493 OF THE GOVERNMENT CODE OF THE STATE OF CALIFORNIA.

DATED: _____ BY: _____
CLERK OF THE BOARD OF SUPERVISORS
SAN MATEO COUNTY, STATE OF CALIFORNIA

BY: _____
DEPUTY

COUNTY RECORDER'S STATEMENT

FILED THIS ____ DAY OF _____ 20__ AT ____ M. IN VOLUME ____ OF PARCEL MAPS AT PAGES ____ AND ____ AT THE REQUEST OF BKF ENGINEERS.

MARK CHURCH, SAN MATEO COUNTY RECORDER

FILE NO. _____ BY: _____
DEPUTY RECORDER

FEE: _____

PARCEL MAP NO.

LANDS OF TICONDEROGA PARTNERS LLC
BEING A RESUBDIVISION OF A PORTION OF PARCEL ONE OF THAT CERTAIN GRANT DEED RECORDED MARCH 14, 2008 AS DOCUMENT NUMBER 2008-027480 OF OFFICIAL RECORDS, SAN MATEO COUNTY
UNINCORPORATED SAN MATEO COUNTY CALIFORNIA
SEPTEMBER 2011

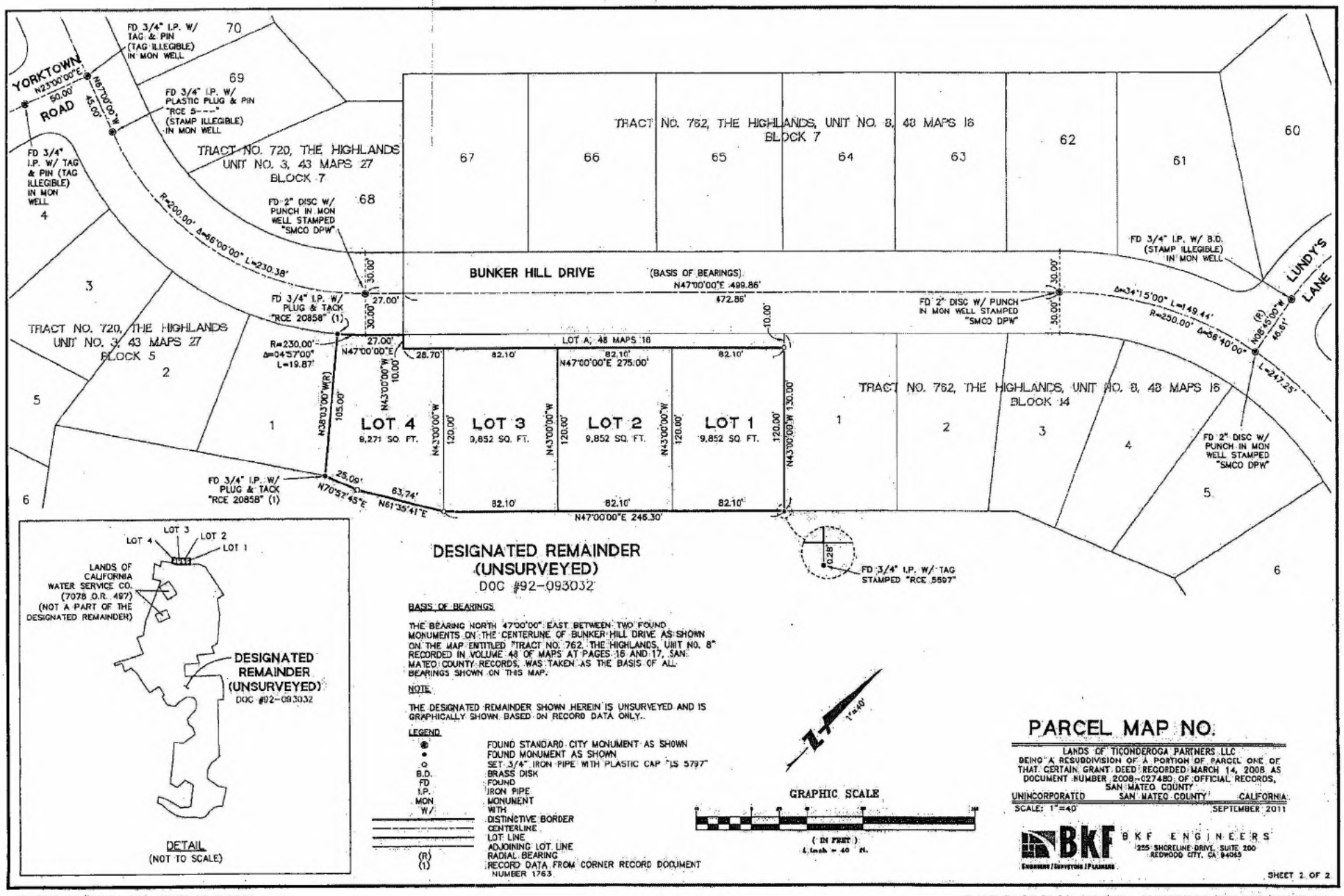
BKF ENGINEERS
255 SHORELINE DRIVE, SUITE 200
REDWOOD CITY, CA 94065
ENGINEERS | SURVEYORS | PLANNERS

20090010

SHEET 1 OF 2

PLOT DATE: 09-28-11 12:56pm GMW

9/29/2011 MAP CHECK SUBMITTAL
1st + extra



DETAIL
(NOT TO SCALE)

DESIGNATED REMAINDER (UNSURVEYED)

DOC #92-093032

BASIS OF BEARINGS

THE BEARING NORTH 47°00'00" EAST BETWEEN TWO FOUND MONUMENTS ON THE CENTERLINE OF BUNKER HILL DRIVE AS SHOWN ON THE MAP ENTITLED "TRACT NO. 762, THE HIGHLANDS, UNIT NO. 8" RECORDED IN VOLUME 48 OF MAPS AT PAGES 16 AND 17, SAN MATEO COUNTY RECORDS, WAS TAKEN AS THE BASIS OF ALL BEARINGS SHOWN ON THIS MAP.

NOTE

THE DESIGNATED REMAINDER SHOWN HEREIN IS UNSURVEYED AND IS GRAPHICALLY SHOWN BASED ON RECORD DATA ONLY.

LEGEND

⊗	FOUND STANDARD CITY MONUMENT AS SHOWN
•	FOUND MONUMENT AS SHOWN
○	SET 3/4" IRON PIPE WITH PLASTIC CAP "LS 5797"
B.D.	BRASS DISK
FD	FOUND
I.P.	IRON PIPE
MON	MONUMENT
W/	WITH
	DISTINCTIVE BORDER
	CENTERLINE
	LOT LINE
	ADJOINING LOT LINE
(R)	RADIAL BEARING
(1)	RECORD DATA FROM CORNER RECORD DOCUMENT NUMBER 1763

GRAPHIC SCALE
1"=40'
(IN FEET)
1 inch = 40 ft.

PARCEL MAP NO.

LANDS OF TICONDEROGA PARTNERS, LLC
BEING A RESUBDIVISION OF A PORTION OF PARCEL ONE OF THAT CERTAIN GRANT DEED RECORDED MARCH 14, 2008 AS DOCUMENT NUMBER 2008-027480, OF OFFICIAL RECORDS, SAN MATEO COUNTY
UNINCORPORATED SAN MATEO COUNTY CALIFORNIA
SCALE: 1"=40' SEPTEMBER 2011

BKF ENGINEERS
255 SHORELINE DRIVE, SUITE 200
REDWOOD CITY, CA 94065

SHEET 2 OF 2

DRAWING NAME: F:\1jur05\50105\Mapping\Parcel Map\Parcel Map Sheet 2.dwg
PLOT DATE: 09-29-11 12:57pm MARK

9/29/2011 MAP CHECK SUBMITTAL

OWNER'S STATEMENT

WE HEREBY STATE THAT WE ARE THE OWNERS OF OR HAVE SOME RIGHT, TITLE, OR INTEREST IN AND TO THE REAL PROPERTY INCLUDED WITHIN THE SUBDIVISION SHOWN UPON THE HEREIN MAP; THAT WE ARE THE ONLY PERSONS WHOSE CONSENT IS NECESSARY TO PASS CLEAR TITLE TO SAID REAL PROPERTY; AND THAT WE CONSENT TO THE PREPARATION AND RECORDATION OF SAID MAP AND SUBDIVISION AS SHOWN WITHIN THE DISTINCTIVE BORDER LINE.

AS OWNERS:

TICONDEROGA PARTNERS LLC, A CALIFORNIA LIMITED LIABILTIY COMPANY

BY: _____ _____
NAME TITLE

AS TRUSTEE:

FIRST AMERICAN TITLE COMPANY

BY: _____ _____
NAME TITLE

AS TRUSTEE:

FIRST AMERICAN TITLE INSURANCE COMPANY, A CALIFORNIA CORPORATION

BY: _____ _____
NAME TITLE

OWNER'S ACKNOWLEDGMENT

STATE OF CALIFORNIA
COUNTY OF _____

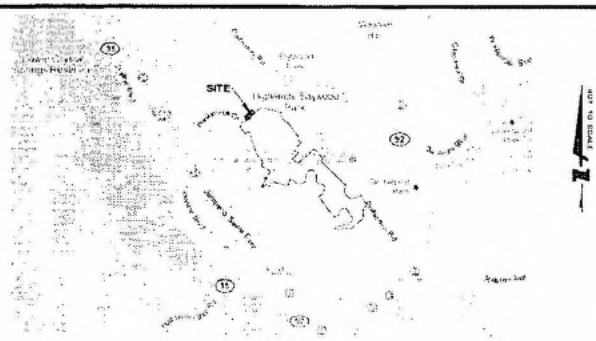
ON _____ BEFORE ME, _____ A NOTARY PUBLIC, PERSONALLY APPEARED _____
WHO PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE /THEY EXECUTED THE SAME IN HIS/HER/THEIR AUTHORIZED CAPACITY(IES) AND BY HIS/HER/THEIR SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S), OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

I CERTIFY UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING PARAGRAPH IS TRUE AND CORRECT.

WITNESS MY HAND:

SIGNATURE _____

_____
NAME (TYPED OR PRINTED), NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE.
PRINCIPAL COUNTY OF BUSINESS: _____
COMMISSION EXPIRES: _____
COMMISSION # OF NOTARY: _____



VICINITY MAP

TRUSTEE'S ACKNOWLEDGMENT

STATE OF CALIFORNIA
COUNTY OF _____

ON _____ BEFORE ME, _____ A NOTARY PUBLIC, PERSONALLY APPEARED _____
WHO PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE /THEY EXECUTED THE SAME IN HIS/HER/THEIR AUTHORIZED CAPACITY(IES) AND BY HIS/HER/THEIR SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S), OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

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WITNESS MY HAND:

SIGNATURE _____

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NAME (TYPED OR PRINTED), NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE.
PRINCIPAL COUNTY OF BUSINESS: _____
COMMISSION EXPIRES: _____
COMMISSION # OF NOTARY: _____

TRUSTEE'S ACKNOWLEDGMENT

STATE OF CALIFORNIA
COUNTY OF _____

ON _____ BEFORE ME, _____ A NOTARY PUBLIC, PERSONALLY APPEARED _____
WHO PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE /THEY EXECUTED THE SAME IN HIS/HER/THEIR AUTHORIZED CAPACITY(IES) AND BY HIS/HER/THEIR SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S), OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

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SIGNATURE _____

_____
NAME (TYPED OR PRINTED), NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE.
PRINCIPAL COUNTY OF BUSINESS: _____
COMMISSION EXPIRES: _____
COMMISSION # OF NOTARY: _____

SURVEYOR'S STATEMENT

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE AT THE REQUEST OF TICONDEROGA PARTNERS LLC ON APRIL 2011. I HEREBY STATE THAT THIS PARCEL MAP SUBSTANTIALLY CONFORMS TO THE APPROVED OR CONDITIONALLY APPROVED TENTATIVE MAP, IF ANY, AND THAT ALL MONUMENTS ARE OF THE CHARACTER AND OCCUPY THE POSITIONS INDICATED, OR THAT THEY WILL BE SET IN THOSE POSITIONS BEFORE SEPTEMBER 2013, AND THAT THE MONUMENTS ARE, OR WILL BE, SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED.

DATE: _____

LICENSED LAND SURVEYOR — CHARLES R. CIARDI — No. 7321 — STATE OF CALIFORNIA

_____
CHARLES R. CIARDI, P.L.S. 7321

COUNTY SURVEYOR'S STATEMENT

I HEREBY STATE THAT I HAVE EXAMINED THIS MAP AND THAT THE SUBDIVISION AS SHOWN HEREON IS SUBSTANTIALLY THE SAME AS IT APPEARED ON THE TENTATIVE MAP, IF REQUIRED, AND ANY APPROVED ALTERATIONS THEREOF; THAT ALL THE PROVISIONS OF THE CALIFORNIA "SUBDIVISION MAP ACT" AND OF THE "SAN MATEO COUNTY ORDINANCE" APPLICABLE AT THE TIME OF APPROVAL OF THE TENTATIVE MAP, IF REQUIRED, HAVE BEEN COMPLIED WITH; AND THAT I AM SATISFIED THAT THE MAP IS TECHNICALLY CORRECT.

DATE: _____

BY: _____
BRIAN C. LEE,
DEPUTY DIRECTOR OF PUBLIC WORKS
R.C.E. #26573

CLERK OF THE BOARD STATEMENT

I HEREBY STATE THAT THE BOARD OF SUPERVISORS OF SAN MATEO COUNTY, STATE OF CALIFORNIA, DO HEREBY CERTIFY THAT CERTIFICATES HAVE BEEN FILED AND DEPOSITS HAVE BEEN MADE IN CONFORMANCE WITH THE REQUIREMENTS OF SECTIONS 66492 AND 66493 OF THE GOVERNMENT CODE OF THE STATE OF CALIFORNIA.

DATED: _____

BY: _____
CLERK OF THE BOARD OF SUPERVISORS
SAN MATEO COUNTY, STATE OF CALIFORNIA

BY: _____
DEPUTY

COUNTY RECORDER'S STATEMENT

FILED THIS _____ DAY OF _____ 20____ AT _____M. IN

VOLUME _____ OF PARCEL MAPS AT PAGES ____ AND ____ AT THE REQUEST OF BKF ENGINEERS.

MARK CHURCH, SAN MATEO COUNTY RECORDER

FILE NO. _____

BY: _____
DEPUTY RECORDER

FEE: _____

PARCEL MAP NO.

LANDS OF TICONDEROGA PARTNERS LLC
BEING A RESUBDIVISION OF A PORTION OF PARCEL ONE OF THAT CERTAIN GRANT DEED RECORDED MARCH 14, 2008 AS DOCUMENT NUMBER 2008-027480 OF OFFICIAL RECORDS, SAN MATEO COUNTY
UNINCORPORATED SAN MATEO COUNTY CALIFORNIA
SEPTEMBER 2011

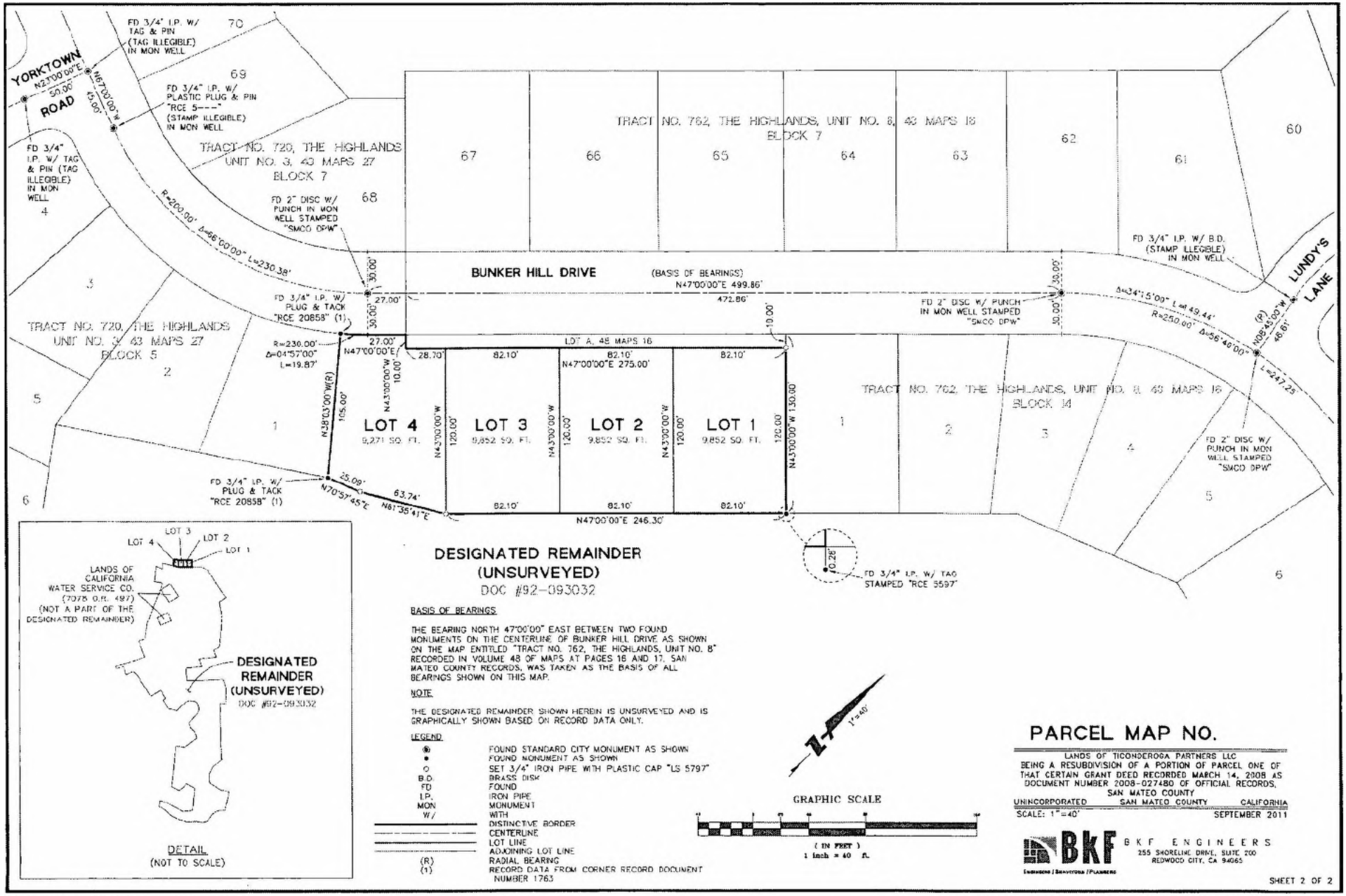
BKF ENGINEERS
255 SHORELINE DRIVE, SUITE 200
REDWOOD CITY, CA 94065
ENGINEERS | SURVEYORS | PLANNERS

20090010

SHEET 1 OF 2

DRAWING NAME: K:\Surv95\0018PM\Mapping\Parcel Map\Parcel Map Sheet 1.dwg
PLOT DATE: 09-29-11 12:04pm mark

9/29/2011 MAP CHECK SUBMITTAL
1st check



DESIGNATED REMAINDER (UNSURVEYED)

DOC #92-093032

BASIS OF BEARINGS

THE BEARING NORTH 47°00'00" EAST BETWEEN TWO FOUND MONUMENTS ON THE CENTERLINE OF BUNKER HILL DRIVE AS SHOWN ON THE MAP ENTITLED "TRACT NO. 762, THE HIGHLANDS, UNIT NO. 8" RECORDED IN VOLUME 48 OF MAPS AT PAGES 16 AND 17, SAN MATEO COUNTY RECORDS, WAS TAKEN AS THE BASIS OF ALL BEARINGS SHOWN ON THIS MAP.

NOTE

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LEGEND

◉	FOUND STANDARD CITY MONUMENT AS SHOWN
•	FOUND MONUMENT AS SHOWN
○	SET 3/4" IRON PIPE WITH PLASTIC CAP "LS 5797"
B.D.	BRASS DISK
FD	FOUND
I.P.	IRON PIPE
MON	MONUMENT
W/	WITH
	DISTINCTIVE BORDER
	CENTERLINE
	LOT LINE
	ADJOINING LOT LINE
(R)	RADIAL BEARING
(1)	RECORD DATA FROM CORNER RECORD DOCUMENT NUMBER 1763

GRAPHIC SCALE

1"=40'

(IN FEET)
1 inch = 40 ft.

PARCEL MAP NO.

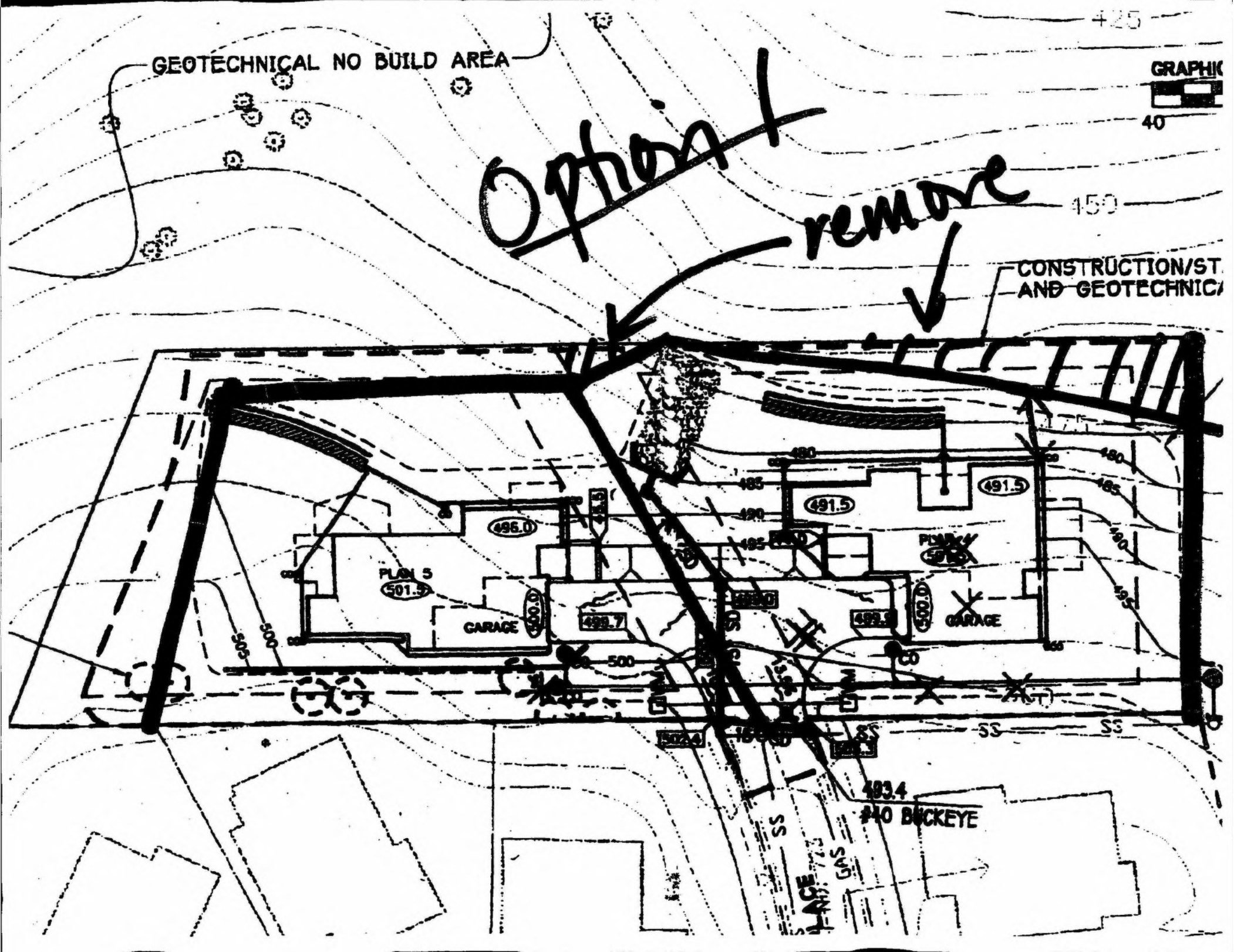
LANDS OF TICONDEROGA PARTNERS LLC
BEING A RESUBDIVISION OF A PORTION OF PARCEL ONE OF THAT CERTAIN GRANT DEED RECORDED MARCH 14, 2008 AS DOCUMENT NUMBER 2008-027480 OF OFFICIAL RECORDS, SAN MATEO COUNTY
UNINCORPORATED SAN MATEO COUNTY CALIFORNIA
SCALE: 1"=40' SEPTEMBER 2011

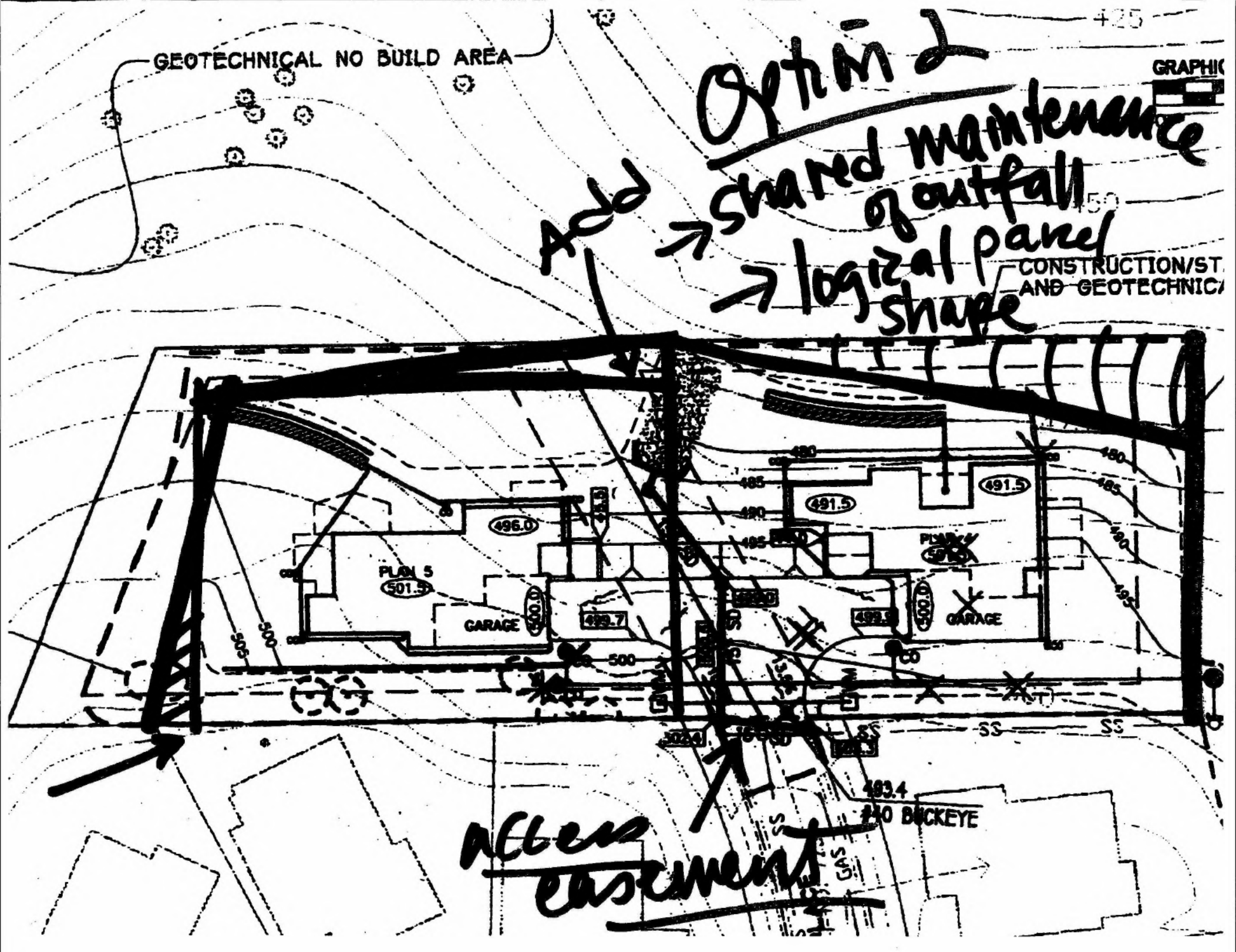
BKF ENGINEERS
255 SHORELINE DRIVE, SUITE 200
REDWOOD CITY, CA 94065
ENGINEERS / SURVEYORS / PLANNERS

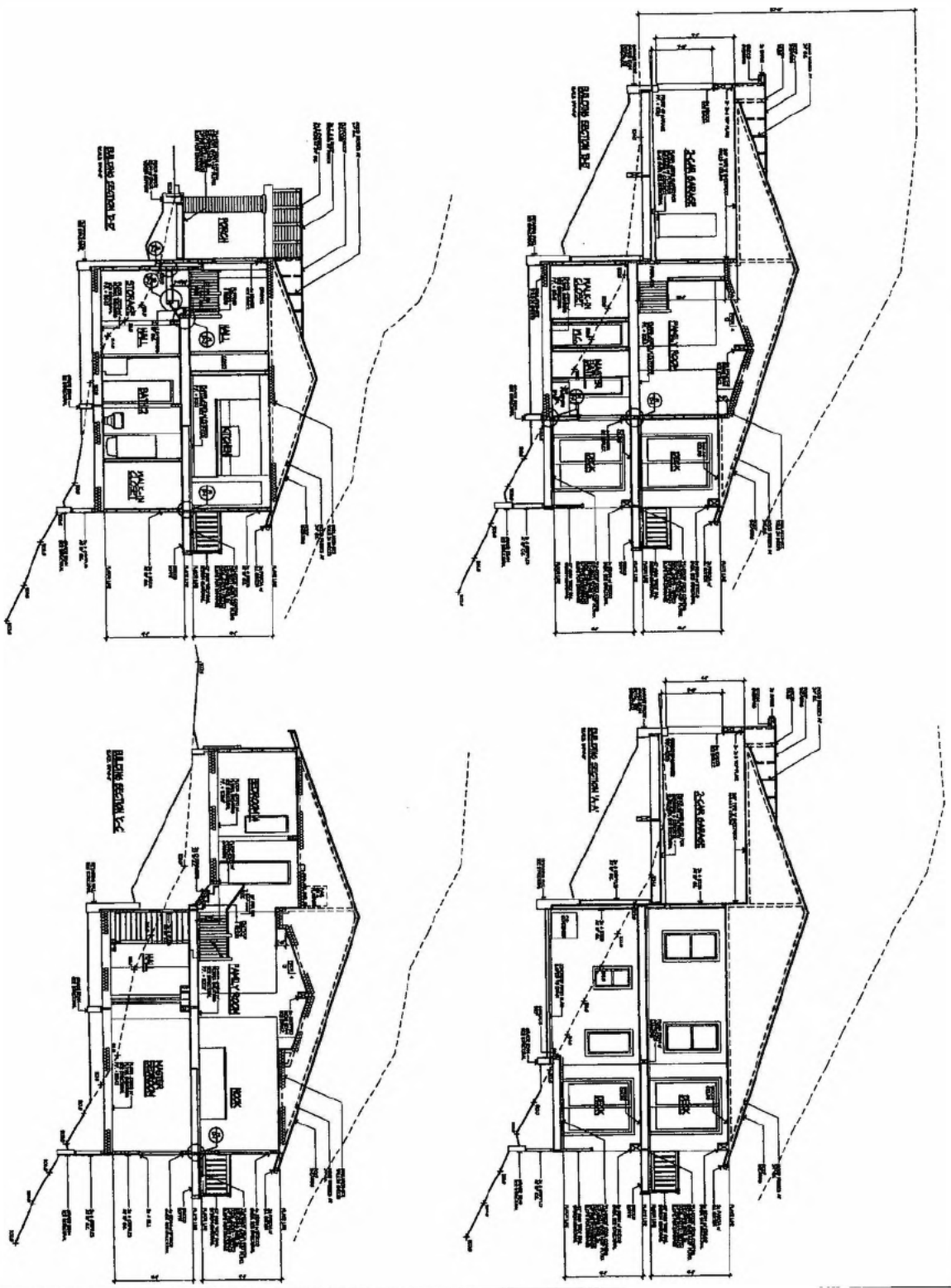
SHEET 2 OF 2

DRAWING NAME: K:\Sur05\B50168\Mapping\Parcel Map\Parcel Map Sheet 2.dwg
PLOT DATE: 09-29-11 12:57pm MARK

9/29/2011 MAP CHECK SUBMITTAL


GEOTECHNICAL NO BUILD AREA
Option 1
remove
CONSTRUCTION/ST
AND GEOTECHNIC
GRAPHIC
40
150
425
PLAN 5
501.9
GARAGE
496.0
498.7
491.5
491.5
GARAGE
493.4
#40 BUCKEYE
SS
GAS
LACE


GEOTECHNICAL NO BUILD AREA
Optimal
Add → shared maintenance of outfall
→ logical parcel shape
GRAPHIC
CONSTRUCTION/ST
AND GEOTECHNIC
PLAN 5
501.5
GARAGE
496.0
499.7
491.5
GARAGE
500
505
SS
483.4
140 BUCKEYE
GAS
access easement



LOT No. 1

BUILDING SECTIONS

" HIGHLAND ESTATES "
SAN MATEO COUNTY, CA.
THE CHAMBERLAIN GROUP

Mark Groen & Associates, Inc.

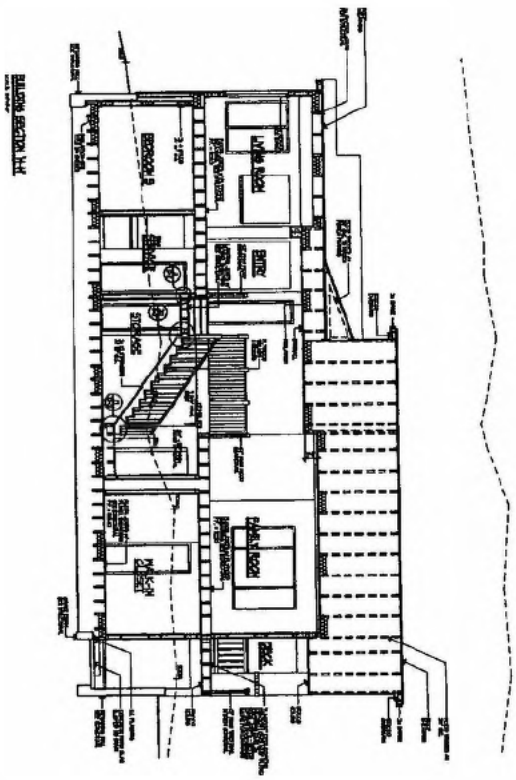
MG&A

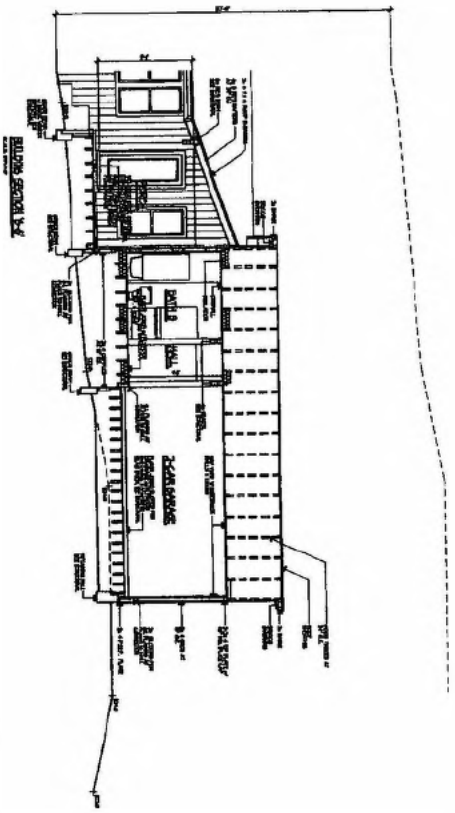
1-4

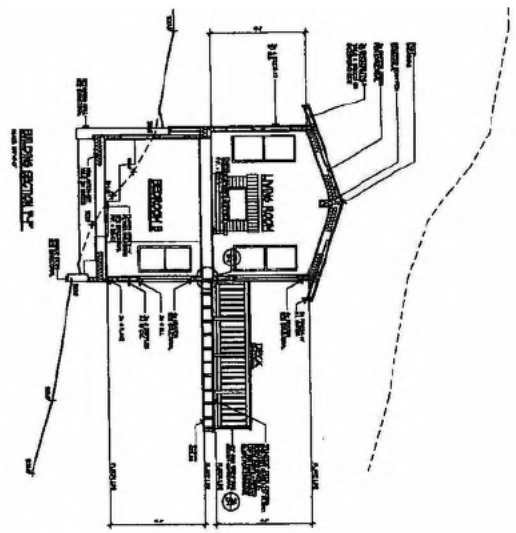
Building Sectors

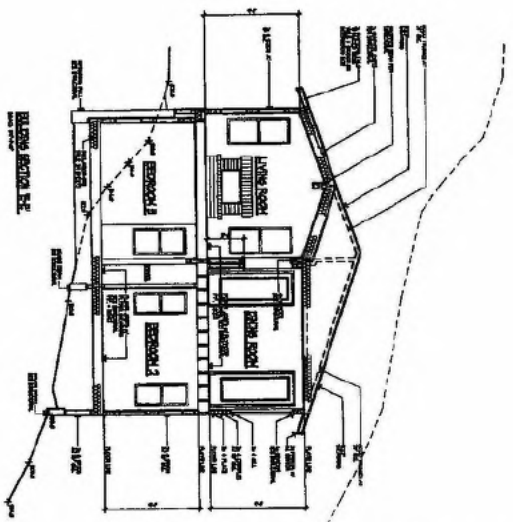
Lot

Jan. 200?









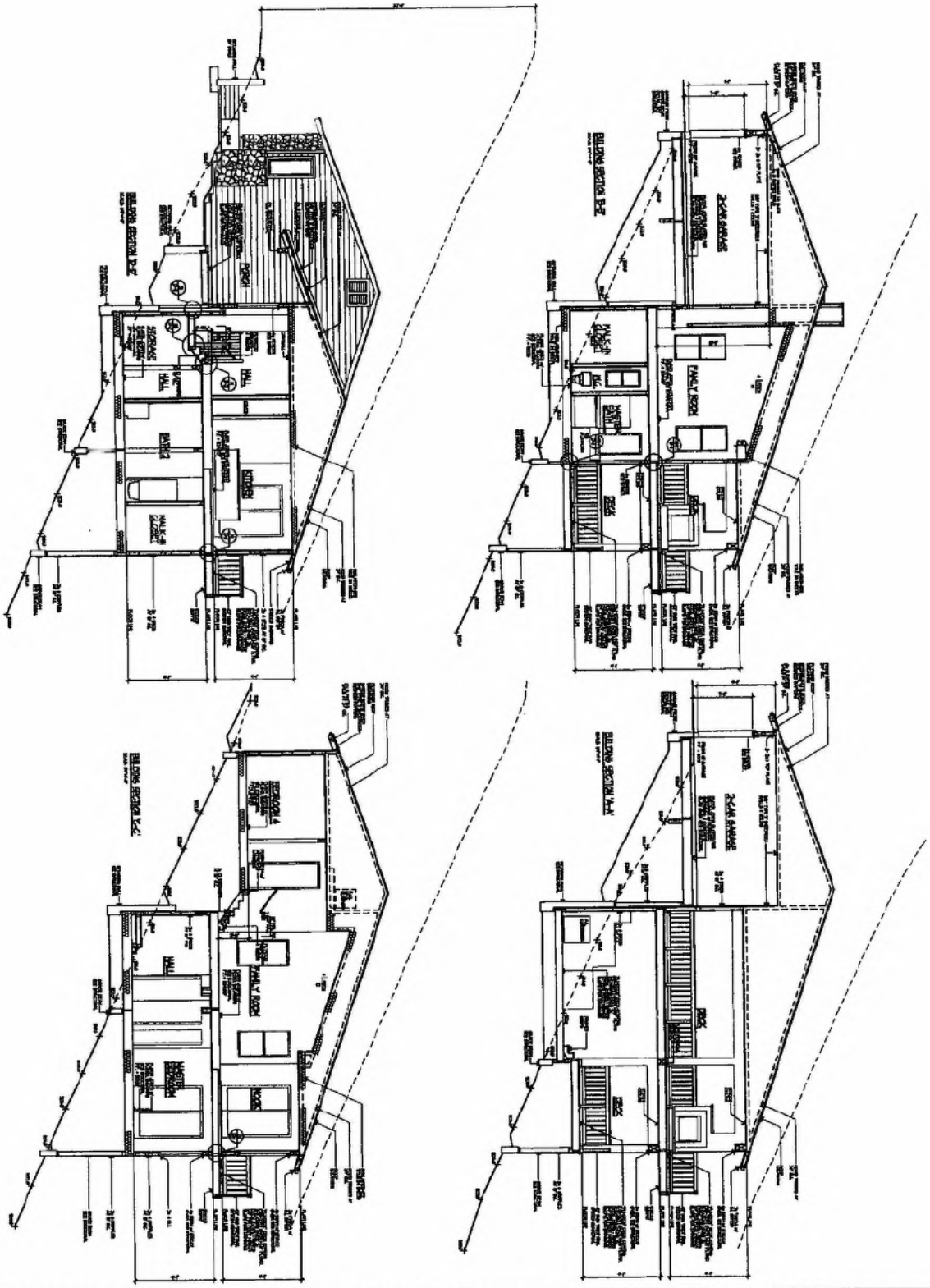
1-5

LOT No. 1

BUILDING SECTIONS

" HIGHLAND ESTATES "
SAN MATEO COUNTY, CA.
THE CHAMBERLAIN GROUP

Mark Gruss & Associates, Inc.



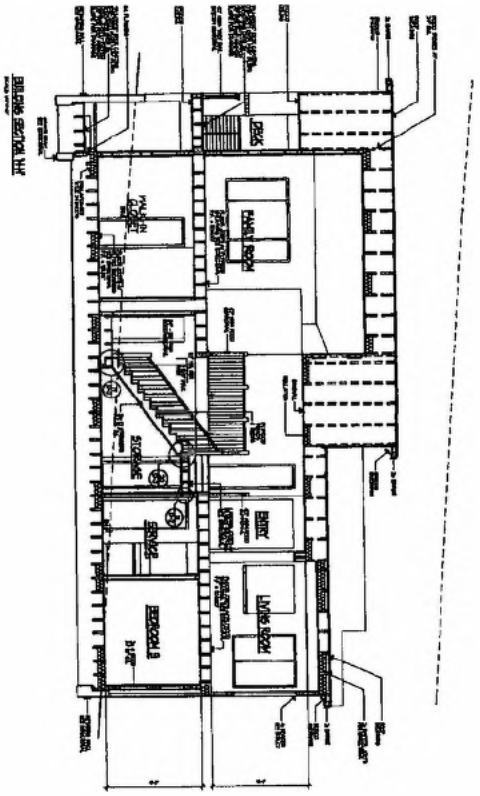
LOT No. 2

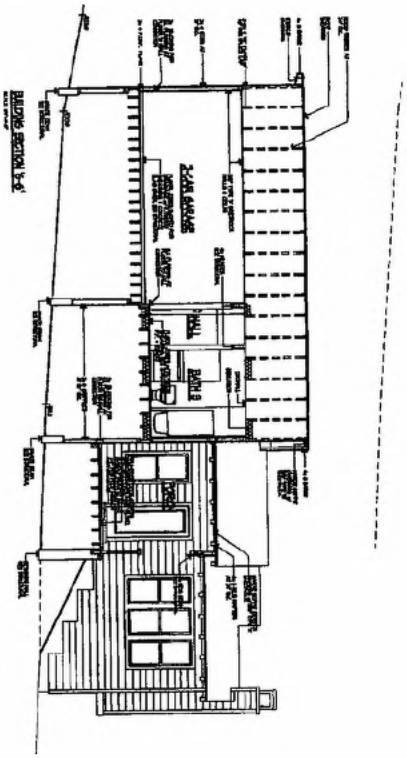
BUILDING SECTIONS

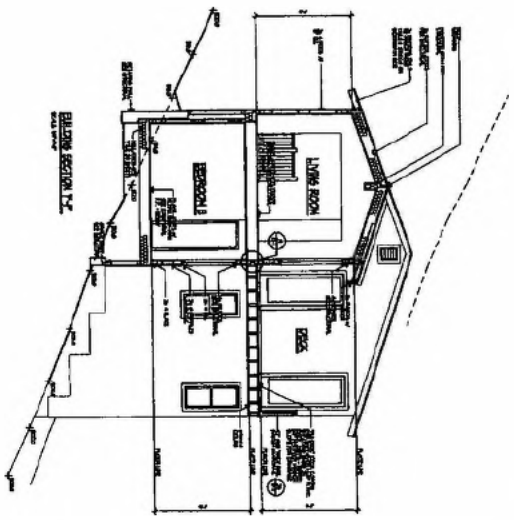
"HIGHLAND ESTATES"
SAN MATEO COUNTY, CA.
THE CHAMBERLAIN GROUP

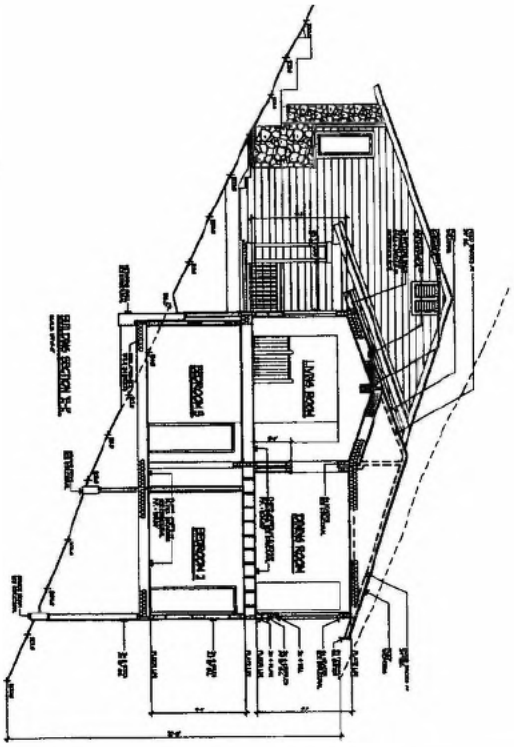
Mark Gross & Associates, Inc.

2-4









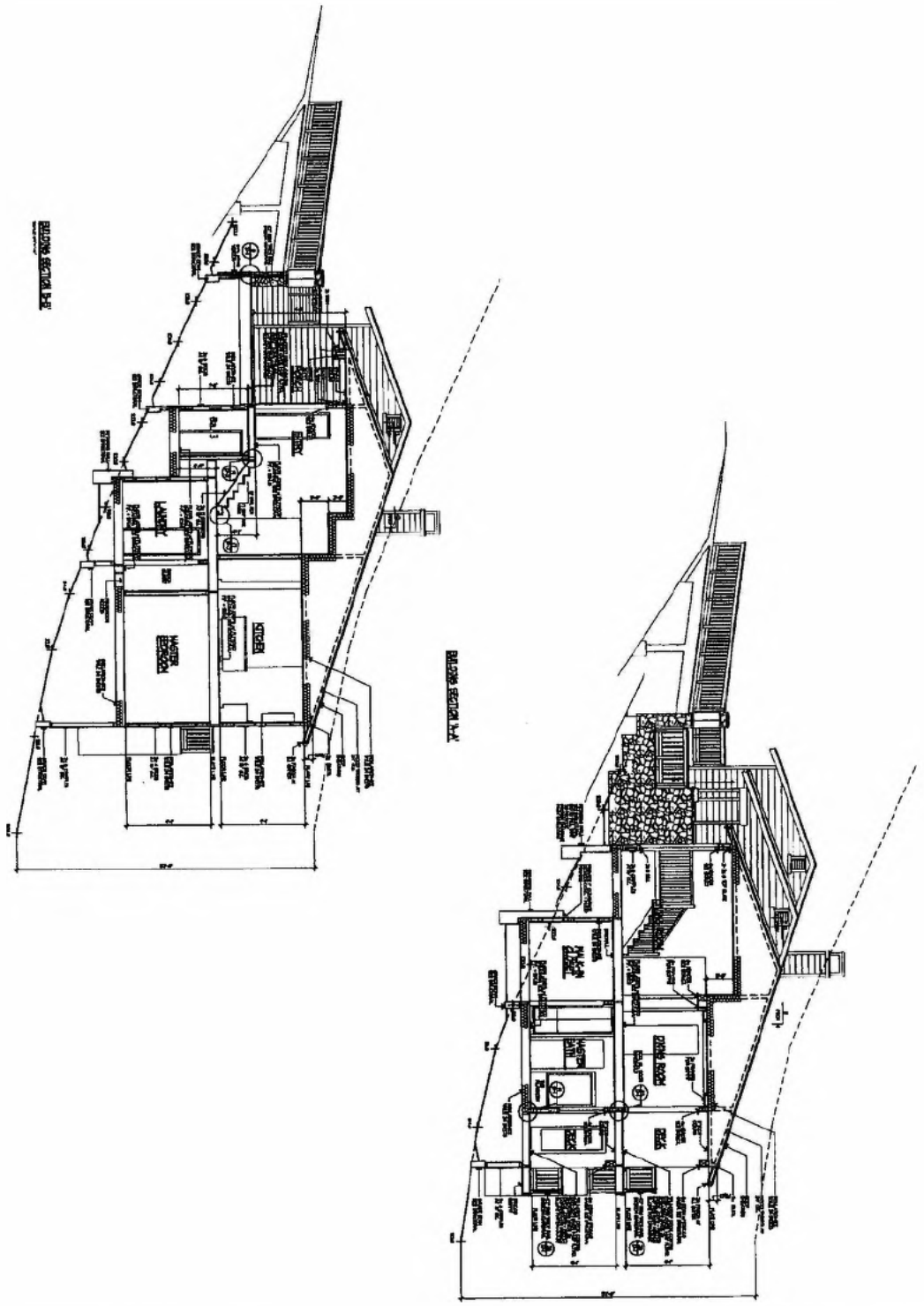
2-5

LOT No. 2

BUILDING SECTIONS

" HIGHLAND ESTATES "
SAN MATEO COUNTY, CA.
THE CHAMBERLAIN GROUP

Mark Gross & Association, Inc.



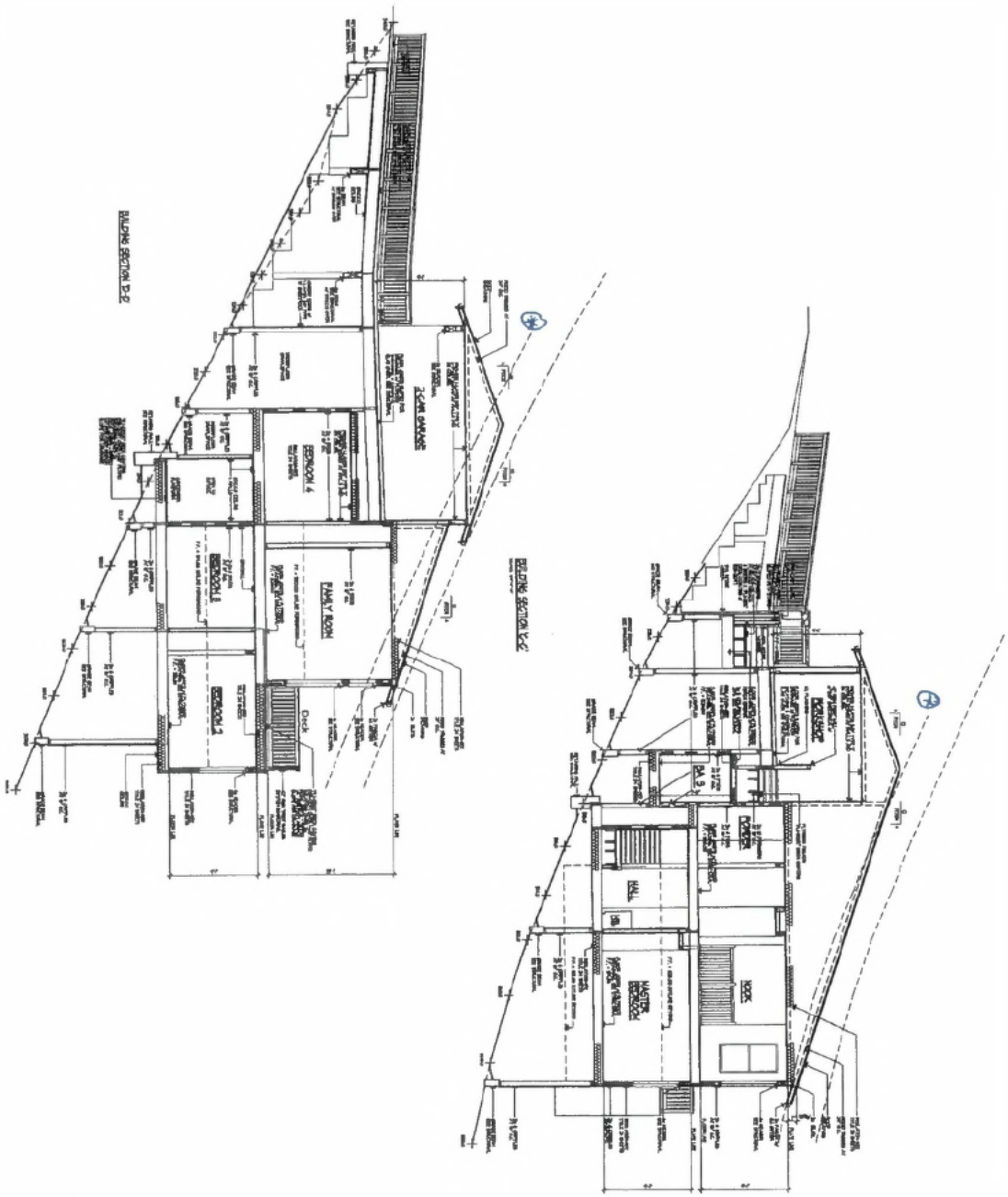
LOT No. 3

BUILDING SECTIONS

" HIGHLAND ESTATES "
SAN MATEO COUNTY, CA.
THE CHAMBERLAIN GROUP

Mark Green & Associates, Inc.

3-4



3-5

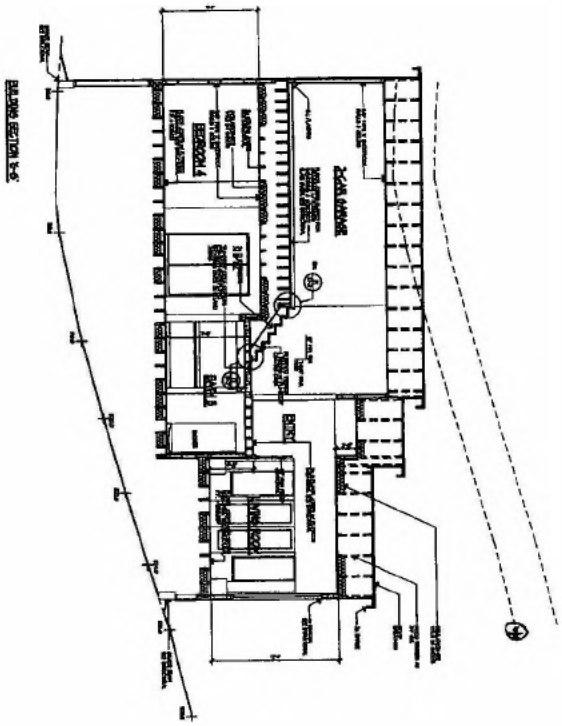
LOT No. 3

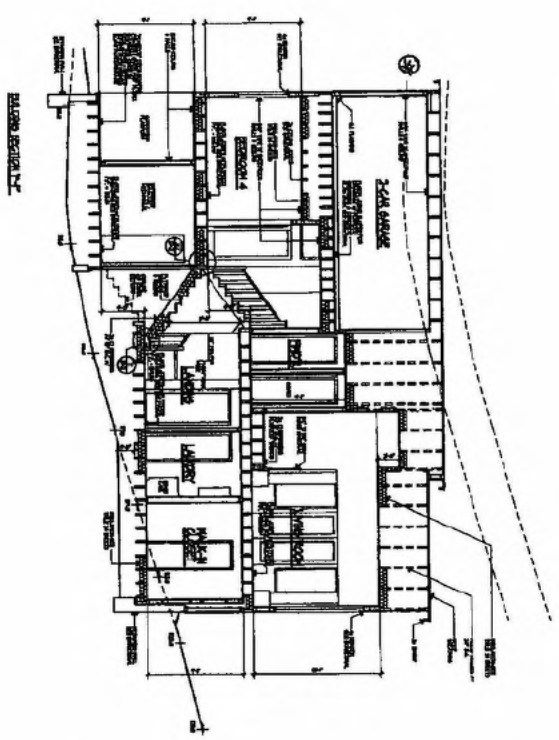
BUILDING SECTIONS

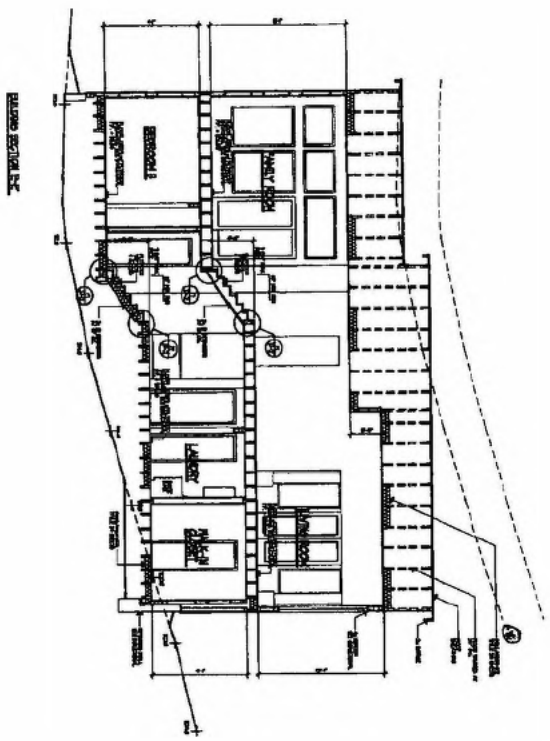
" HIGHLAND ESTATES "
SAN MATEO COUNTY, CA.
THE CHAMBERLAIN GROUP

Mark Gross & Associates, Inc.

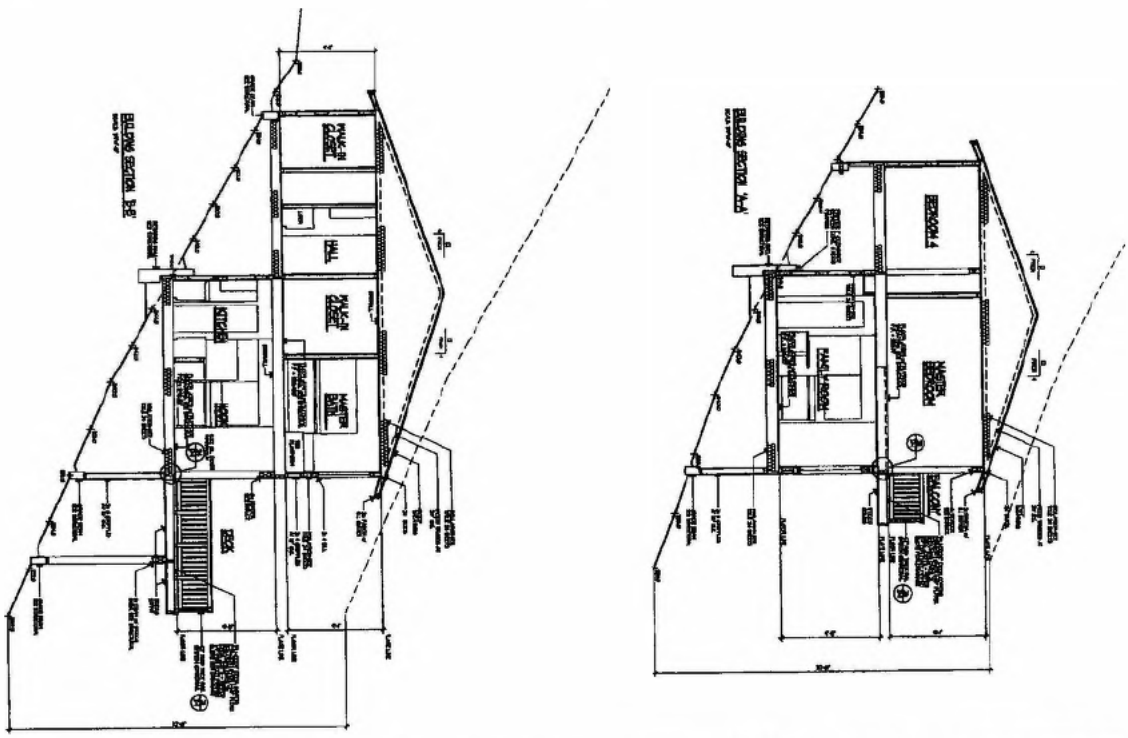
MG&A







3-8	LOT No. 3 BUILDING SECTIONS	" HIGHLAND ESTATES " SAN MATEO COUNTY, CA. THE CHAMBERLAIN GROUP	Mark Green & Associates, Inc.



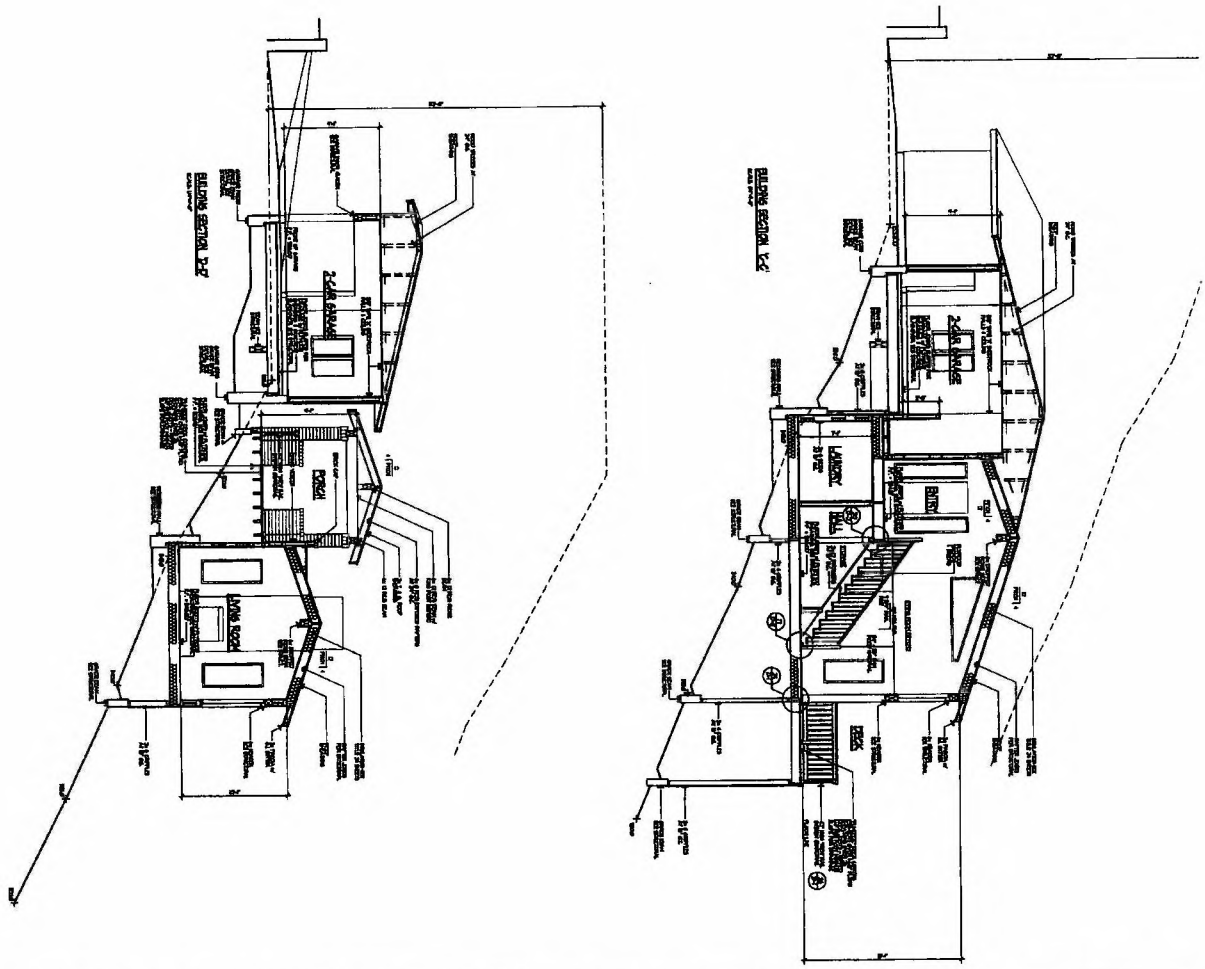
LOT No. 4

BUILDING SECTIONS

" HIGHLAND ESTATES "
SAN MATEO COUNTY, CA.
THE CHAMBERLAIN GROUP

Mark Gross & Associates, Inc.

4-5



LOT No. 4

BUILDING SECTIONS

HIGHLAND ESTATES
SAN MATEO COUNTY, CA.
THE CHAMBERLAIN GROUP

Mark Gross & Associates, Inc.

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