



Staff Report to the Planning Commission

Application Number: **101031**

Applicant: Dennis Anderson
Owner: Anderson
APN: 041-481-04

Agenda Date: April 13, 2011
Agenda Item #: 9
Time: After 9:00 a.m.

Project Description: Proposal to divide an approximately 6.08 acre parcel into three parcels of 1.43, 1.59, and 3.06 acres and to construct three single family dwellings.

Requires a Minor Land Division, Residential Development Permit, an exception for access from a right-of-way of less than 40 feet in width, a Roadway/Roadside exception, a Geologic Hazards Assessment, a Geologic Report Review, a Soils Report Review, and annexation into the Santa Cruz County Sanitation District.

Location: Property located at the end of Wallace Avenue (access between 3105 and 2280 Wallace Avenue), in Aptos.

Supervisory District: 2nd District (District Supervisor: Ellen Pirie)

Permits Required: Minor Land Division, Residential Development Permit,
Roadway/Roadside Exception

Technical Reviews: Geologic Hazards Assessment, Geologic Report Review,
Soils Report Review

Staff Recommendation:

- Certification of the Mitigated Negative Declaration per the requirements of the California Environmental Quality Act.
- Approval of Application 101031, based on the attached findings and conditions.

Exhibits

- | | | | |
|----|--|----|---------------------------|
| A. | Vicinity Map & Project plans | E. | Comments & Correspondence |
| B. | Findings | | |
| C. | Conditions | | |
| D. | Mitigated Negative Declaration
(CEQA Determination) with the
following attached documents:
(Attachment 1): Assessor's parcel map,
Zoning map, General Plan map | | |

Parcel Information

Parcel Size:	6.08 acres
Existing Land Use - Parcel:	Vacant
Existing Land Use - Surrounding:	Single family residential
Project Access:	Private right of way from Wallace Avenue
Planning Area:	Aptos
Land Use Designation:	R-UVL (Urban Very Low Density Residential)
Zone District:	R-1-1AC (Single family residential - 1 acre minimum)
Coastal Zone:	<input type="checkbox"/> Inside <input checked="" type="checkbox"/> Outside

Environmental Information

An Initial Study has been prepared (Exhibit C) that addresses the environmental concerns associated with this application.

Services Information

Urban/Rural Services Line:	<input checked="" type="checkbox"/> Inside <input type="checkbox"/> Outside
Water Supply:	Soquel Creek Water District
Sewage Disposal:	Santa Cruz County Sanitation District (annexation required)
Fire District:	Aptos/La Selva Fire Protection District
Drainage District:	None

History

This application replaces Minor Land Division application number 07-0112, which was heard and denied by your Commission on 4/14/10. The issue of primary concern at that time was the requirements related to the construction of a new dead end roadway and emergency access. Since that time, the applicant has revised the project design to eliminate the construction of a new dead end road (a road is defined as a driveway serving three or more residences) and the project now conforms to the secondary access requirements as specified in the General Plan.

Project Setting

The subject property is located immediately to the southeast side of the cul-de-sac at the end of Wallace Avenue in Aptos. The property is accessed via a private right of way which continues on through other private property to Huntington Drive. The subject property is hilly and wooded, with a mix of oak, pine, acacia, and eucalyptus trees. Historic grading appears to have occurred on the southern portion of the property which resulted in three distinct terraces. These terraces are the locations where the three new building sites are proposed. Although this area is located within the Urban Services Line, the surrounding neighborhood has a rural residential character with single family residences on large parcels.

Minor Land Division

This application is a proposal to divide an approximately 6 acre property into three parcels of 1.43, 1.59, and 3.06 acres and to construct three single family dwellings. The three single family dwellings would be located on the existing graded terraces on the subject property. Parking for the residences would be provided on each parcel.

The subject property is located in the R-1-1AC zone district (Single family residential - 1 acre minimum). The division of the parcel into three separate single family residential parcels requires a minimum of 1 acre of net developable land per parcel. Slopes in excess of 30% and the right of way for the proposed private roadway are deducted from the net developable land area. Each proposed parcel contains sufficient net developable land area to comply with the minimum parcel size of the R-1-1AC (Single family residential - 1 acre minimum) zone district.

The subject property is designated as Urban Very Low Density Residential (R-UVL) in the General Plan. The Urban Very Low Density Residential (R-UVL) General Plan designation requires new development to be within a density range of 10,000 square feet to 1 acre (43,560 square feet) of net developable land per residential unit. The proposed division (into three residential lots) complies with the required General Plan density range, in that there is not sufficient net developable land area to allow the creation of a fourth parcel.

Design Review

Three single family dwellings are proposed to be constructed on the new parcels. The new homes would be a combination of one and two stories in height (stepping down with the existing grade on each site) and would contain 4 bedrooms. The residences (including garages) would be approximately 3,500 square feet (Lot 1), 4,250 square feet (Lot 2), and 3,500 square feet (Lot 3) in area. Proposed building materials include stucco siding and shingled roofs. The buildings include varied roof planes, with porches and deck elements. These features, the spacing of the structures, and the vertical separation of the proposed building sites, would break up the visual bulk and mass of the proposed development.

The subject property is heavily wooded, including fast growing, non-native tree species. A total of 147 trees are proposed to be removed (including 12 native oaks) to accommodate the proposed development. The Design Review ordinance requires the retention of trees greater than 6 inches in diameter, where feasible. Many of the trees proposed to be removed are non-native invasive species (acacia & eucalyptus) or are in poor health and the remainder of the tree removals are located in areas that would constrain the development of the property. The most suitable location for the access road is along the southern property boundary, and the three building sites would be located in areas of prior historic grading and disturbance. Removal of native trees in this area would be unavoidable due to the footprint of the proposed roadway and residences. Arborist's reports have been provided and the reports have been reviewed by Environmental Planning staff. It has been determined that the removal of the non-native, invasive tree species would result in an improvement for the native woodland on the subject property. To compensate for the proposed tree removals, 83 replacement trees (including 42 replacement oak trees) are proposed in the landscape plan.

Project Access

The proposed building sites would be accessed from two separate driveways. Lot 1 would be accessed from the existing driveway that serves the parcel to the north. The existing driveway is located within a 20 foot wide easement, which (although it is less than the 40 foot width typically required for new rights of way) is adequate for access to Lot 1 and the two existing properties to the north. Lots 2 and 3 would be accessed via a shared driveway (within a 40 foot wide right of way) which would be constructed along the southern boundary of the subject property. The driveway would be 18 feet in width to Lot 2, and would continue to Lot 3 at 12 feet in width, with a hammerhead type fire turnaround provided at the end of each driveway. The short section of the shared driveway from Wallace Avenue to the subject property would be constructed to a minimum width of 18 feet, located within the existing 20 foot wide right of way adjacent to the subject property. This short section of the access road to Wallace Avenue (shared by the three proposed residences and the two existing residences to the north) that is within the existing 20 foot wide right of way will require a Roadway/Roadside Exception and a Residential Development Permit to allow access on a less than 40 foot wide right of way. Given the existing conditions and the short length (60 feet) from the cul-de-sac of Wallace Avenue, the 20 foot wide right of way is acceptable for access in that two way traffic will not be impeded and adequate width is present for access to existing and proposed residences. Parking will not be allowed along the shared driveway.

The prior concern regarding new dead end roadways has been resolved, in that the proposed project does not result in the construction of any new dead end roadways (defined as newly constructed roadways that serve three or more residences). The access for Lot 1 has been relocated to the existing driveway to the west of the subject property and the newly constructed driveway for Lots 2 & 3 will only serve two residences. The relocation of the access for Lot 1 and the access to Lots 2 and 3 (via a shared driveway) is consistent with the County General Plan policies related to the creation of new dead end roads, in that no new dead end roads will be created as a result of the proposed project.

Grading & Utilities

Site grading would be required for the access road and driveways to serve the proposed development. Grading volumes would be approximately 3,200 cubic yards (cut) and 1,750 cubic yards (fill), with the remaining 1,450 cubic yards to be exported off site. The grading has been minimized through reducing the roadway width, using retaining walls, and stepping the houses down the hillside where possible.

The property is located within the Urban Services Line and all utilities are available to serve the proposed development. The project would require annexation into the Santa Cruz County Sanitation District and all lots would be connected to the public sanitary sewer system. Annexation of properties within the Urban Services Line and within the sphere of influence of the Santa Cruz County Sanitation District is generally not considered as problematic and it is assumed that annexation would be approved by the Local Agency Formation Commission. Upon annexation, the Santa Cruz County Sanitation District has indicated that sanitary sewer service would be available to serve the project.

Environmental Review

Environmental review has been required for the proposed project per the requirements of the California Environmental Quality Act (CEQA). This project was reviewed by the County's Environmental Coordinator under the prior application (07-0112) on 9/14/09. A preliminary determination to issue a Negative Declaration with Mitigations (Exhibit D) was made on 9/21/09. The mandatory public comment period ended on 10/14/09. As the proposal has not changed substantially, or in a manner which would have an adverse effect on the environment, the Negative Declaration with Mitigations continues to be applicable to the current proposal.

Conclusion

As proposed and conditioned, the project is consistent with all applicable codes and policies of the Zoning Ordinance and General Plan/LCP. Please see Exhibit "B" ("Findings") for a complete listing of findings and evidence related to the above discussion.

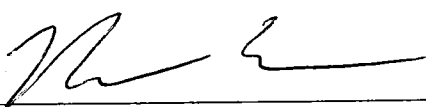
Staff Recommendation

- Certification of the Mitigated Negative Declaration per the requirements of the California Environmental Quality Act.
- **APPROVAL** of Application Number **101031**, based on the attached findings and conditions.

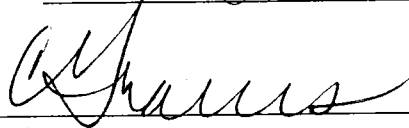
Supplementary reports and information referred to in this report are on file and available for viewing at the Santa Cruz County Planning Department, and are hereby made a part of the administrative record for the proposed project.

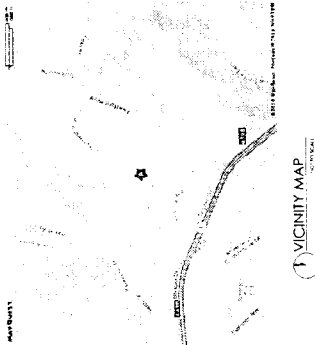
The County Code and General Plan, as well as hearing agendas and additional information are available online at: www.co.santa-cruz.ca.us

Report Prepared By: _____


Randall Adams
Santa Cruz County Planning Department
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Report Reviewed By: _____


Cathy Graves
Principal Planner
Santa Cruz County Planning Department



1 VICINITY MAP

GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN CONFORMANCE WITH ALL LOCAL, COUNTY, STATE AND FEDERAL CODES, LAWS, ORDINANCES AND REGULATIONS.
2. 2017 CALIFORNIA BUILDING CODE (CBC) IS C. AS ADOPTED & AMENDED BY CALIFORNIA.
3. 2017 CALIFORNIA MECHANICAL CODE (CMC) IS C. AS ADOPTED & AMENDED BY CALIFORNIA.
4. 2017 CALIFORNIA PLUMBING CODE (CPC) IS C. AS ADOPTED & AMENDED BY CALIFORNIA.
5. 2017 CALIFORNIA ELECTRICAL CODE (CEC) IS C. AS ADOPTED & AMENDED BY CALIFORNIA.
6. 2017 CALIFORNIA ENERGY CODE (CEC) IS C. AS ADOPTED & AMENDED BY CALIFORNIA.
7. WORKING IN THE CONTRACT DOCUMENTS IS TO BE CONFINED TO THE WORK NOT CONFORMING TO THESE CODES, LAWS, ORDINANCES AND REGULATIONS.
8. ALL WORK, INCLUDING, BUT NOT LIMITED TO, ANY CONSTRUCTION DOCUMENTS SHALL BE SUPPLIED AND INSTALLED BY THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR THE WORK IN CONFORMANCE WITH ALL APPLICABLE CODES, LAWS, ORDINANCES AND REGULATIONS.
9. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS SHALL BE CHECKED AND VERIFIED ON PROJECT SITE BY THE CONTRACTOR AND EACH TRADE BEFORE WORK BEGINS. DIMENSIONS AND ELEVATIONS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION BEFORE CONSTRUCTION BEGINS.
10. ALL DIMENSIONS ARE FROM FACE OF TRIM OR CENTERLINE OF CURB OR OTHER SCHEDULED OFFSET.
11. COMMUNICATION
12. THE CONTRACTOR SHALL COORDINATE LAYOUT DIMENSIONS INDICATED ON THE LANDSCAPE, STRUCTURAL AND MECHANICAL DRAWINGS WITH THE ARCHITECT'S INTENT. ALL DIMENSIONS SHALL BE REPORTED TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
13. SEE ARCHITECTURAL DRAWINGS FOR LAYOUT DIMENSIONS, ELEVATIONS, DEPRESSIONS IN WALLS AND DOOR ROOF LOWS, CIRCLES AND ROOF DRAINS.
14. IN THE EVENT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE CONSTRUCTION DOCUMENTS, THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE SAME ON THE SITE. DIMENSIONS AND ELEVATIONS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION BEFORE CONSTRUCTION BEGINS.
15. THE CONTRACTOR SHALL VERIFY ALL ELECTRICAL, MECHANICAL, TELEPHONE AND SECURITY REQUIREMENTS BEFORE CONSTRUCTION BEGINS.
16. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF LIGHTS, WALL OUTLETS AND INLET REQUIREMENTS, AND SMOKE DETECTORS BEFORE CONSTRUCTION BEGINS.
17. ON ALL CORNERS, SPACES WHERE CONSTRUCTION INVOLVES MORE THAN ONE MATERIAL, FINISH OR MATERIAL THICKNESS, A NOT-A-LET OF 1/8" IS TO BE USED.
18. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL CONTRACTS EXISTING AT DAMAGED, REMOVED OR OTHERWISE DISAPPEARED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIRS OF ANY DAMAGE TO THE EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS OR NOT.
19. VERIFY ALL DIMENSIONS, HEIGHTS OF BACKING PLATES AND SPECIAL STRUCTURAL SUPPORT REQUIREMENTS WITH EQUIPMENT MANUFACTURER BEFORE INSTALLING BACKING PLATES AND SUPPORT.
20. THE USE OF THE WORD "PROVIDED" IN CONNECTION WITH ANY ITEM SPECIFIED IS INTENDED TO MEAN THAT SUCH ITEM SHALL BE PROVIDED, INSTALLED AND CONNECTED WHERE REQUIRED, UNLESS OTHERWISE NOTED.
21. THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DOCUMENTS ON THE PROJECT SITE. THE CONTRACTOR SHALL MAINTAIN ALL DIMENSIONS AND ELEVATIONS AND SHALL PROVIDE ALL NECESSARY DATA WITH CURRENT CONSTRUCTION DOCUMENTS AS REQUIRED.

PROJECT DATA

PROJECT ADDRESS: 1000 WALLACE AVE, SUITE 100, WALLACE, CA 95986
 PROJECT OWNER: WALLACE AVE DEVELOPMENT, LLC
 PROJECT ARCHITECT: ANDERSON ANDERSON ARCHITECTS, INC.
 PROJECT ENGINEER: ANDERSON ANDERSON ARCHITECTS, INC.
 PROJECT DATE: 10/15/2017

PROJECT TEAM

ARCHITECT: ANDERSON ANDERSON ARCHITECTS, INC.
 1000 WALLACE AVE, SUITE 100, WALLACE, CA 95986
 (916) 434-1100
 www.andersonanderson.com
 CIVIL ENGINEER: ANDERSON ANDERSON ARCHITECTS, INC.
 1000 WALLACE AVE, SUITE 100, WALLACE, CA 95986
 (916) 434-1100
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APPLICABLE CODES

2017 CALIFORNIA BUILDING CODE (CBC)
 2017 CALIFORNIA MECHANICAL CODE (CMC)
 2017 CALIFORNIA PLUMBING CODE (CPC)
 2017 CALIFORNIA ELECTRICAL CODE (CEC)
 2017 CALIFORNIA ENERGY CODE (CEC)

PROJECT SCOPE

RENOVATION OF 1000 WALLACE AVE, SUITE 100, WALLACE, CA 95986

NET LOT AREAS

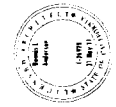
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SHEET INDEX

1.0 PROJECT DATA, GENERAL NOTES
 1.1 GENERAL MAP
 1.2 LOT COVERAGE
 1.3 LOT COVERAGE
 1.4 LOT COVERAGE
 1.5 LOT COVERAGE
 1.6 LOT COVERAGE
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WALLACE AVE
 WALLACE AVE DEVELOPMENT, LLC
 1000 WALLACE AVE, SUITE 100, WALLACE, CA 95986
 (916) 434-1100
 www.andersonanderson.com

ALD NUMBER: 01031

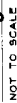
SITE PLAN, VICINITY
 MAP, GENERAL
 NOTES & PROJECT
 DATA

DATE: 12/14/15
 SCALE: AS SHOWN
 DRAWN: JLD

A-0

1 SITE PLAN

EXHIBIT A



THE BOUNDARY AND/OR TOPOGRAPHIC DATA SHOWN HEREON WAS PROVIDED TO INLAND ENGINEERS INC. BY GARY INLAND AND ASSOCIATES AND IS BASED UPON A 1970 SURVEY DATUM.

WHILE IFLAND ENGINEERS HAS MADE A SITE VISIT TO FIELD CHECK THE DATA PROVIDED, WE ASSUME NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS AND SUFFICIENCY OF THE BOUNDARY AND/OR TOPOGRAPHIC DATA.

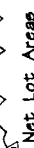
Basis of Bearings

THE EAST OF SEASHORE FOR THIS SURVEY IS BETWEEN AN OPEN VY BOAT MOOR • POINT
• VY AS SHOWN AND NOTED HORIZON AND A VY TYPE TAPPED ICE BOAT • POINT UP AS
SHOWN AND NOTED HORIZON

SEE ARCHITECT'S SITE PLAN AND
PRELIMINARY HOUSE DESIGNS FOR
ADDITIONAL INFORMATION.

NOTE: THE 40' WIDE PRIVATE DRIVEWAY IS ALSO A PUBLIC UTILITIES EASEMENT & STORM DRAINAGE EASEMENT. IT AFFECTS LOTS 1 AND 2 ONLY. IT IS NOT NEEDED ON LOT 3 SINCE NO ACCESS TO ADDITIONAL LAND IS REQUIRED. DRIVEWAY EASEMENT FOR LOTS 2 AND 3.

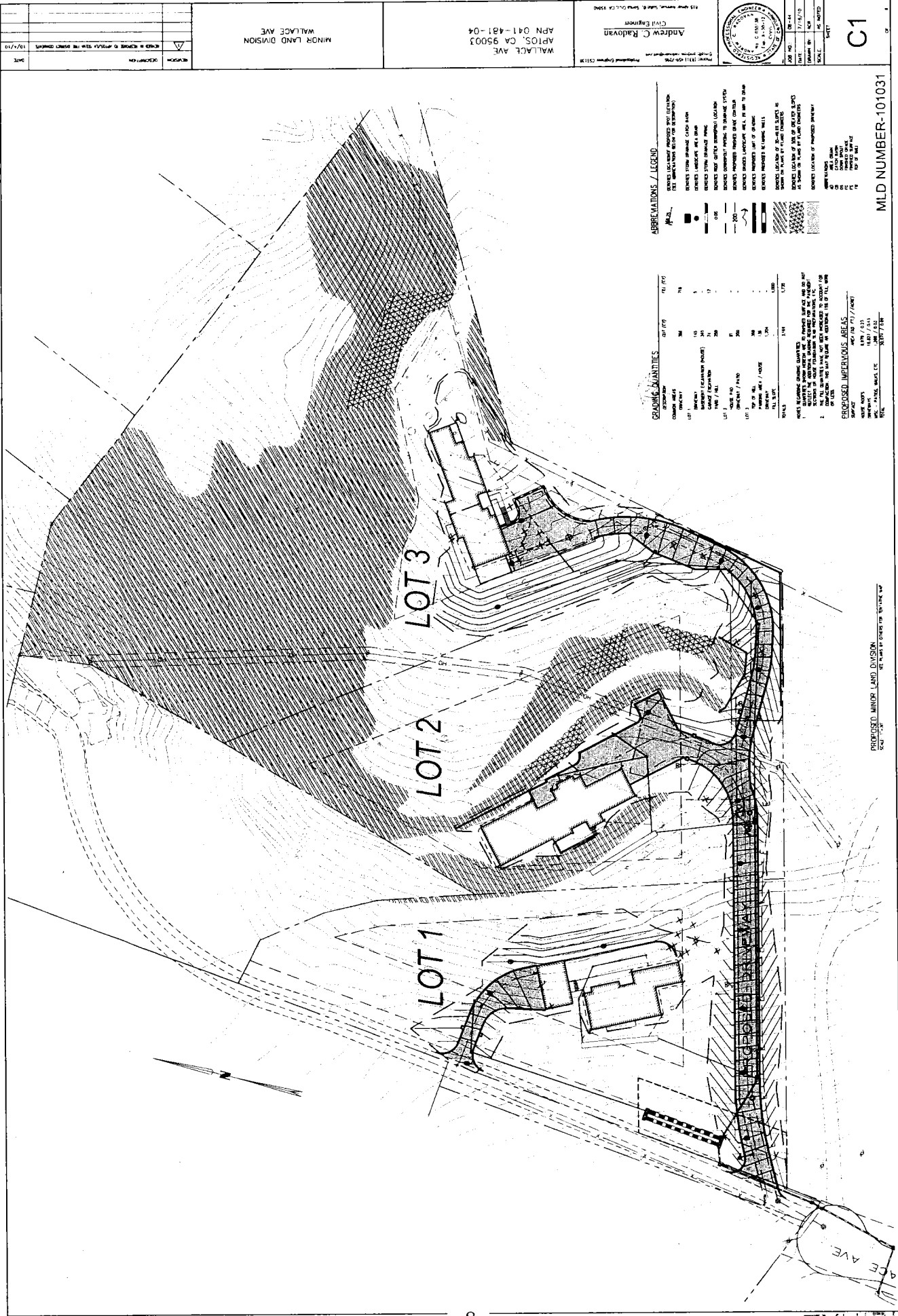
GROUND CONTOUR LINES REMOVED PER
INSTRUCTIONS ON COUNTY REVIEW
COMMENT LIST DATED 11/08/70



Zoning Data for R-1, 1 ac.

SET BACKS- FRONT - 40 FEET
SIDE - 10 FEET
REAR - 20 FEET
PARCELS COVERAGE - 100
MAXIMUM HEIGHT - 35 FEET
STORIES - 2
MINIMUM PARCELS WIDTH - 150 FEET
MINIMUM SITE FOOTPRINT - 100 FT

2



GRADING QUANTITIES

DESCRIPTION	CU (CY)	CU (CY)	CU (CY)
LOT 1 EXISTING GRADING QUANTITIES	360	716	
LOT 1 PROPOSED GRADING QUANTITIES	115	8	
LOT 2 EXISTING GRADING QUANTITIES	345	8	
LOT 2 PROPOSED GRADING QUANTITIES	300	7	
LOT 3 EXISTING GRADING QUANTITIES	300	7	
LOT 3 PROPOSED GRADING QUANTITIES	300	7	
TOTALS	1,310	1,700	

PROPOSED IMPERVIOUS AREAS

DESCRIPTION	AREA (SQ FT)	AREA (SQ FT)
LOT 1 EXISTING IMPERVIOUS AREAS	1,000	1,000
LOT 1 PROPOSED IMPERVIOUS AREAS	1,000	1,000
LOT 2 EXISTING IMPERVIOUS AREAS	1,000	1,000
LOT 2 PROPOSED IMPERVIOUS AREAS	1,000	1,000
LOT 3 EXISTING IMPERVIOUS AREAS	1,000	1,000
LOT 3 PROPOSED IMPERVIOUS AREAS	1,000	1,000
TOTALS	5,000	5,000

NOTES:

- EXISTING GRADING QUANTITIES ARE BASED ON THE EXISTING SURFACE. PROPOSED GRADING QUANTITIES ARE BASED ON THE PROPOSED SURFACE.
- THE TOTAL GRADING QUANTITIES ARE NOT NECESSARILY EQUAL TO THE TOTAL EXISTING GRADING QUANTITIES DUE TO ROUNDING.
- THE TOTAL IMPERVIOUS AREAS ARE NOT NECESSARILY EQUAL TO THE TOTAL EXISTING IMPERVIOUS AREAS DUE TO ROUNDING.

ABBREVIATIONS / LEGEND

SYMBOL	DESCRIPTION
—	EXISTING LOT BOUNDARY
- - -	PROPOSED LOT BOUNDARY
—	EXISTING DRIVEWAY
- - -	PROPOSED DRIVEWAY
—	EXISTING SIDEWALK
- - -	PROPOSED SIDEWALK
—	EXISTING CURB
- - -	PROPOSED CURB
—	EXISTING STREET
- - -	PROPOSED STREET
—	EXISTING ROAD
- - -	PROPOSED ROAD
—	EXISTING RAILROAD
- - -	PROPOSED RAILROAD
—	EXISTING CANAL
- - -	PROPOSED CANAL
—	EXISTING DITCH
- - -	PROPOSED DITCH
—	EXISTING FENCE
- - -	PROPOSED FENCE
—	EXISTING UTILITY
- - -	PROPOSED UTILITY
—	EXISTING EASEMENT
- - -	PROPOSED EASEMENT
—	EXISTING RIGHT-OF-WAY
- - -	PROPOSED RIGHT-OF-WAY
—	EXISTING ZONING
- - -	PROPOSED ZONING
—	EXISTING DISTRICT
- - -	PROPOSED DISTRICT
—	EXISTING CITY
- - -	PROPOSED CITY
—	EXISTING COUNTY
- - -	PROPOSED COUNTY
—	EXISTING STATE
- - -	PROPOSED STATE
—	EXISTING FEDERAL
- - -	PROPOSED FEDERAL

PROPOSED MINOR LAND DIVISION
SEE PLAN BY ENGINEER FOR SCALE AND
NOTES

MLD NUMBER-101031

C1

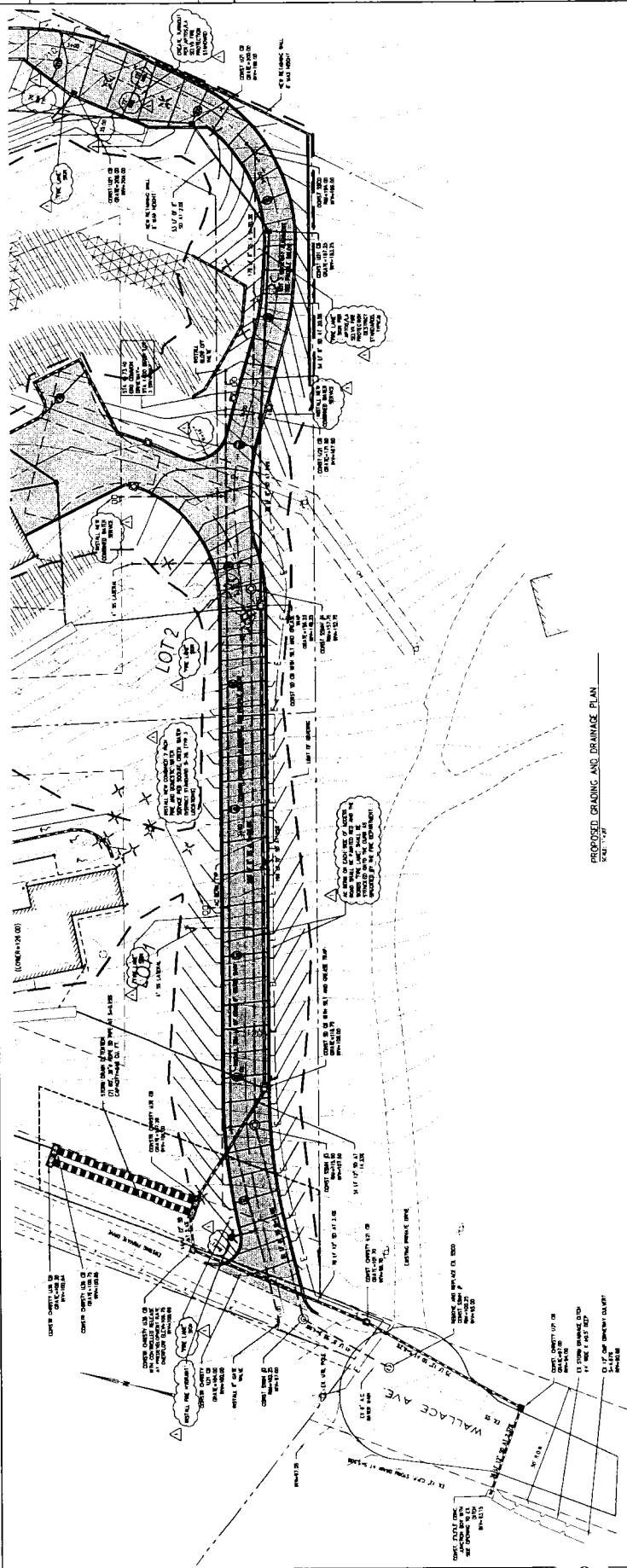
DATE	10/1/10
SCALE	AS SHOWN
BY	AND
CHECKED BY	AND
DATE	10/1/10
BY	AND
CHECKED BY	AND
DATE	10/1/10

Andrew C. Radovan
Civil Engineer
Professional Engineer 025128
715 West Street, Suite 8, Santa Clara, CA 95050

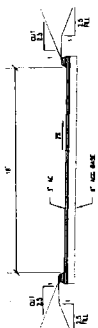
WALLACE AVE
APN 041-481-04
APN 041-481-04

MINOR LAND DIVISION
WALLACE AVE

DATE	10/1/10
BY	AND
CHECKED BY	AND
DATE	10/1/10



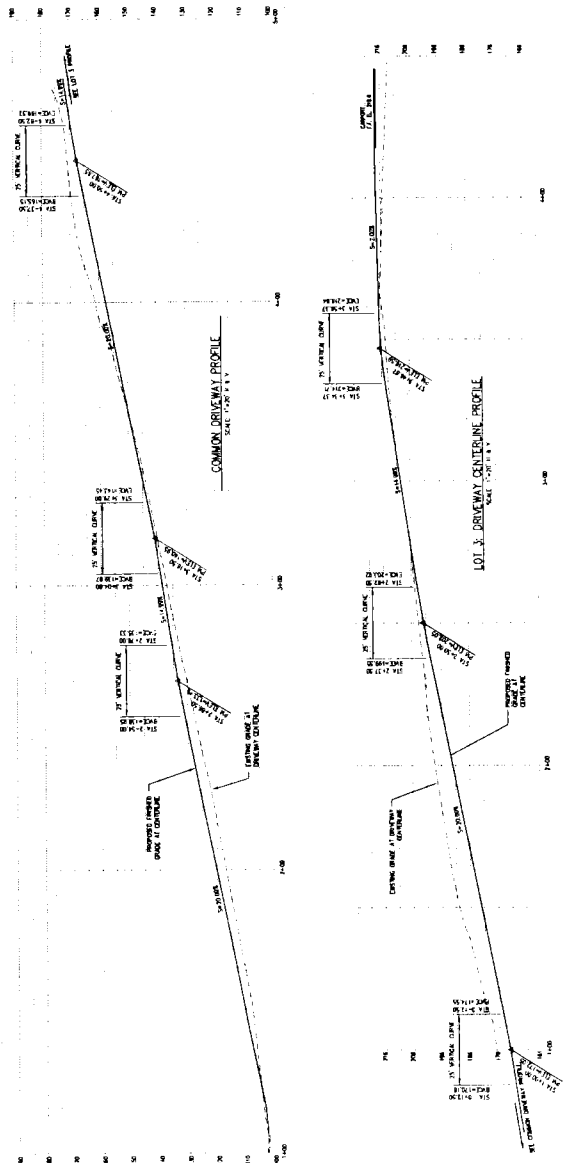
PROPOSED GRADING AND DRAINAGE PLAN



TYPICAL COMMON DRIVEWAY SECTION

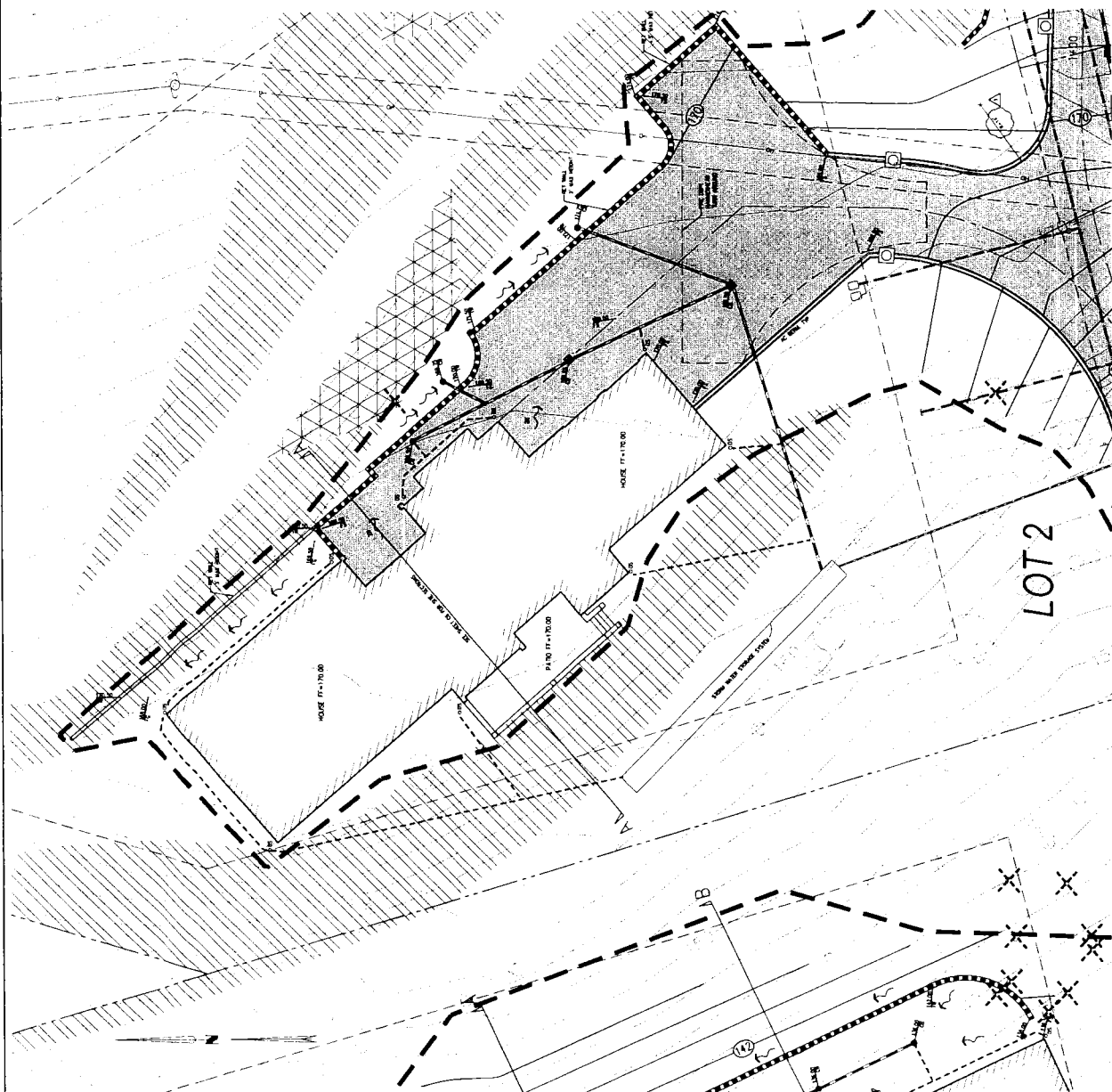
ABBREVIATIONS / LEGEND

- The first step in creating a business plan is to determine what you want to do. This involves identifying your goals and objectives, and then developing a strategy to achieve them.
- Once you have determined your goals and objectives, the next step is to conduct a market analysis. This involves researching your target market, identifying your competitors, and determining the size and growth potential of the market.
- The third step is to develop a financial plan. This involves estimating the costs of your business, determining your revenue sources, and projecting your financial performance over time.
- The fourth step is to write a business plan. This involves putting all of the information you have gathered together into a coherent and concise document.
- Finally, the fifth step is to implement your business plan. This involves putting your strategy into action and monitoring your progress.
- By following these five steps, you can create a business plan that will help you to achieve your goals and objectives.



LOT 3: DRIVEWAY CENTERLINE PROFILE

COMMON DRIVEWAY PROFILE

[illegible]

ABBREVIATIONS / LEGEND

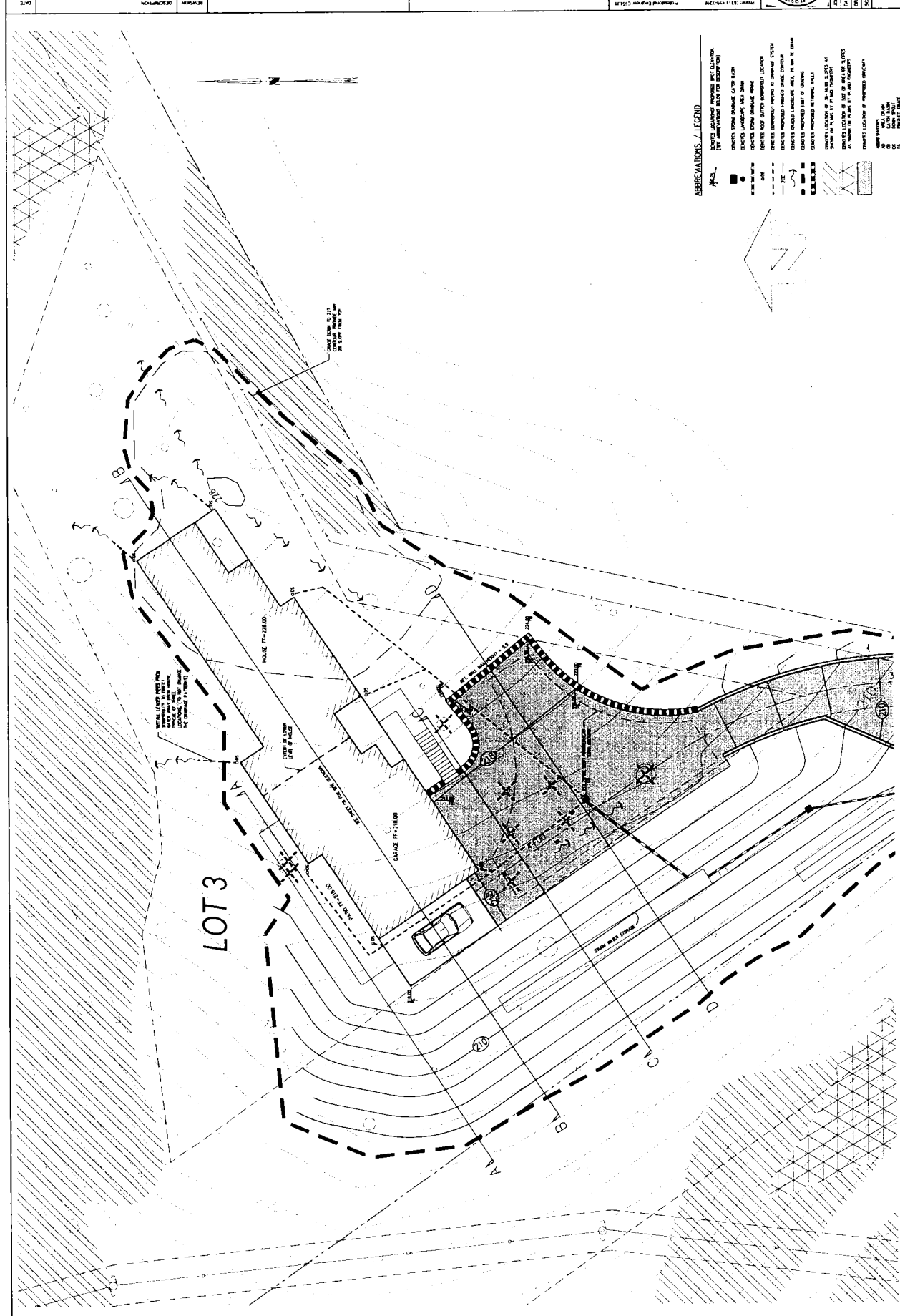

[illegible]

WALLACE AVE
APTOS, CA 95003
APN 041-481-04

MINOR LAND DIVISION
WALLACE AVE
LOT 2 GRADING PLAN

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	5
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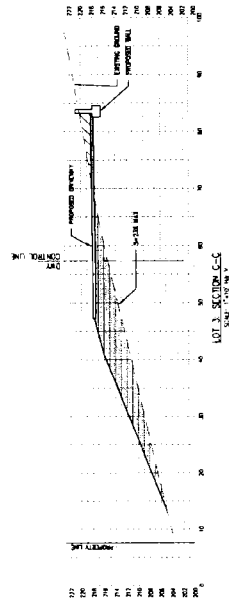
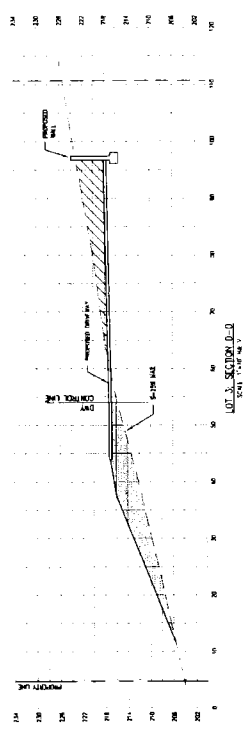
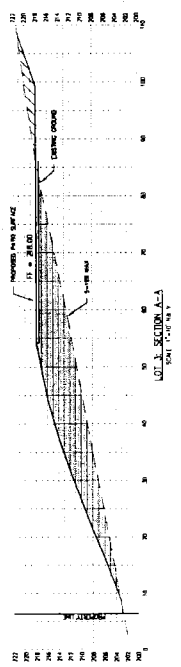
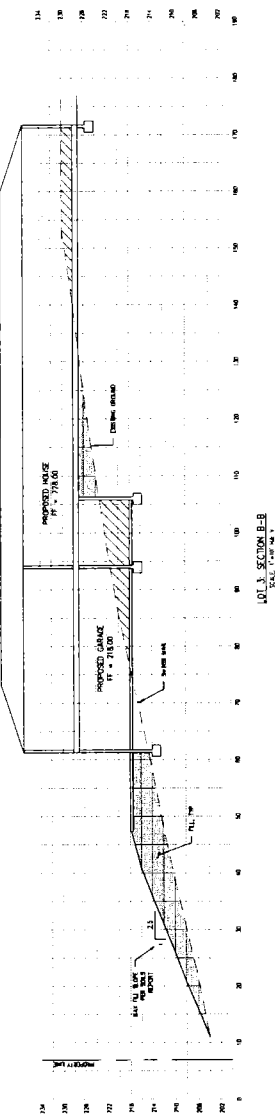
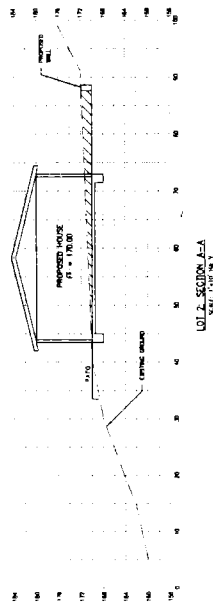
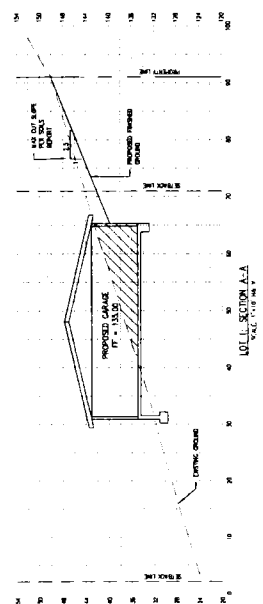
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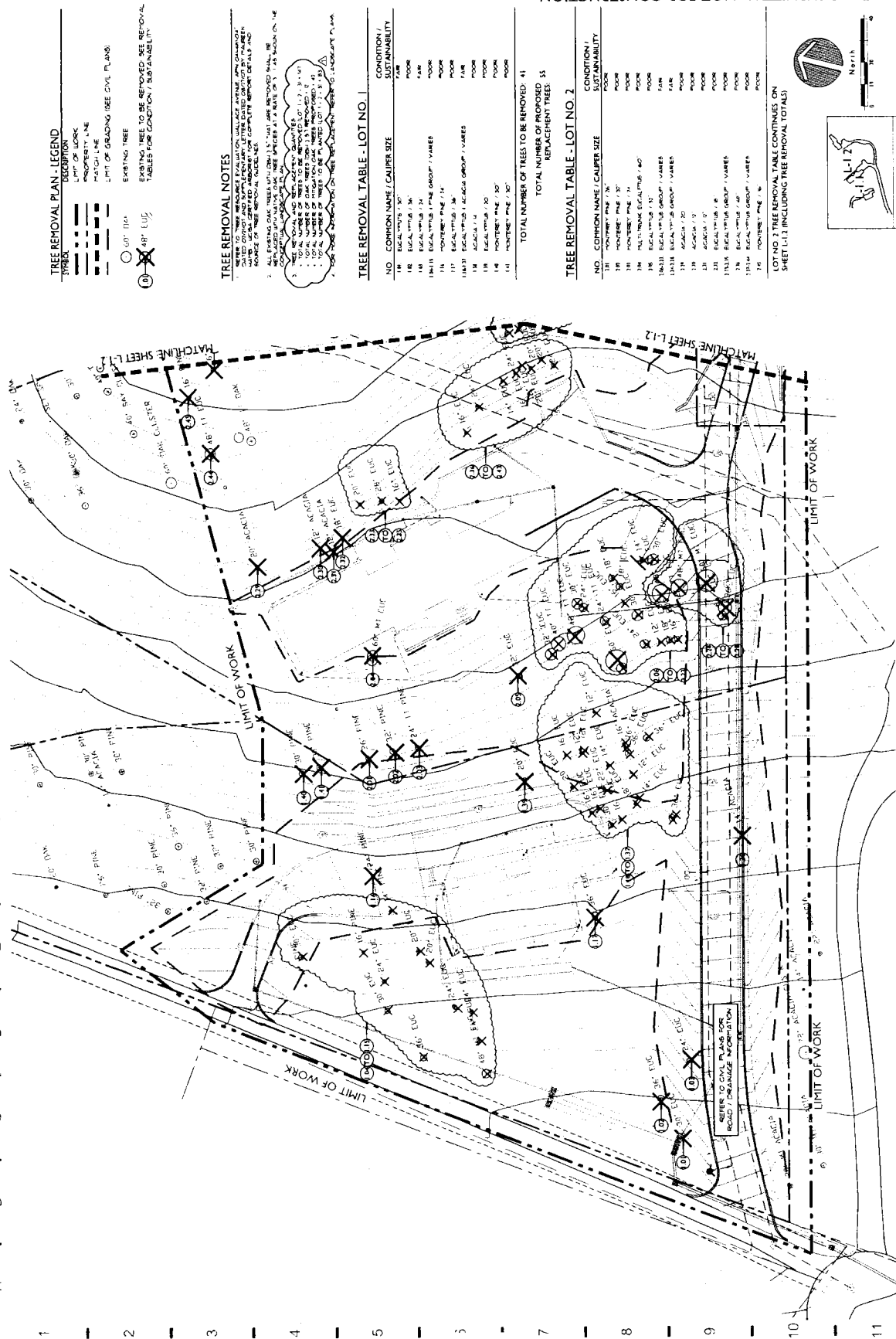
Andrew C. Radovan
Civil Engineer
10000 Wilshire Blvd., Suite 800, Los Angeles, CA 90024
Tel: 310-206-1234
Fax: 310-206-1235
Email: aradovan@earthlink.net

MINOR LAND DIVISION
WALLACE AVE
SECTIONS AND NOTES







01/1/01	LIQUIDAZIONE DEL VOTO CIVILE E SOSTA IN CANTIERE	V
31/01		



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TREE REMOVAL PLAN - LEGEND

	LIMIT OF LOGS
	PROPERTY LINE
	MATCH LINE
	LIMIT OF GRADING (SEE CIVIL PLANS)
	EXISTING TREE
	EXISTING TREE TO BE REMOVED (SEE REMOVAL TABLES FOR CONDITION / SLAB ANALYSIS)

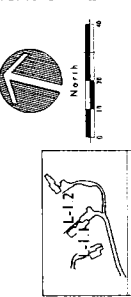
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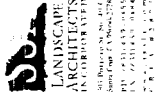
TOTAL NUMBER OF TREES TO BE REMOVED: 41

TOTAL NUMBER OF PROPOSED REPLACEMENT TREES: 55

NO.	COMMON NAME / CALPER SIZE	CONDITION / SUSTAINABILITY
136	"POLYMER" PINE / 36"	POOR
138	"POLYMER" PINE / 35"	POOR
140	"POLYMER" PINE / 34"	POOR
146	"MULTI-TONE EUCALYPTUS" / 40"	POOR
147	"MULTI-TONE EUCALYPTUS" / 40"	POOR
150-151	"EUCALYPTUS" GROUP / 36"	Fair
152-153	"EUCALYPTUS" GROUP / 36"	Fair
154-155	"EUCALYPTUS" GROUP / 36"	POOR
156	"ACACIA" / 30"	POOR
159	"ACACIA" / 32"	POOR
160	"ACACIA" / 32"	POOR
161	"EUCALYPTUS" GROUP / 36"	POOR
162	"EUCALYPTUS" GROUP / 36"	POOR
163-164	"MULTI-TONE" GROUP / 36"	POOR
165	"POLYMER" PINE / 36"	POOR

LOT NO. 2 TREE REMOVAL TABLE CONTINUES ON
SHEET L-1.2 (INCLUDING TREE REMOVAL TOTALS)





MATERIALS & FINISHES PLAN

RICHARD ANDERSON LANDSCAPE ARCHITECTS INC.

10000 WILSHIRE BLVD
SUITE 200
LOS ANGELES, CA 90024
TEL: (310) 276-1234
FAX: (310) 276-1235
WWW.RA-LA.COM

DATE: 08/15/2024

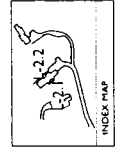
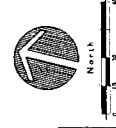
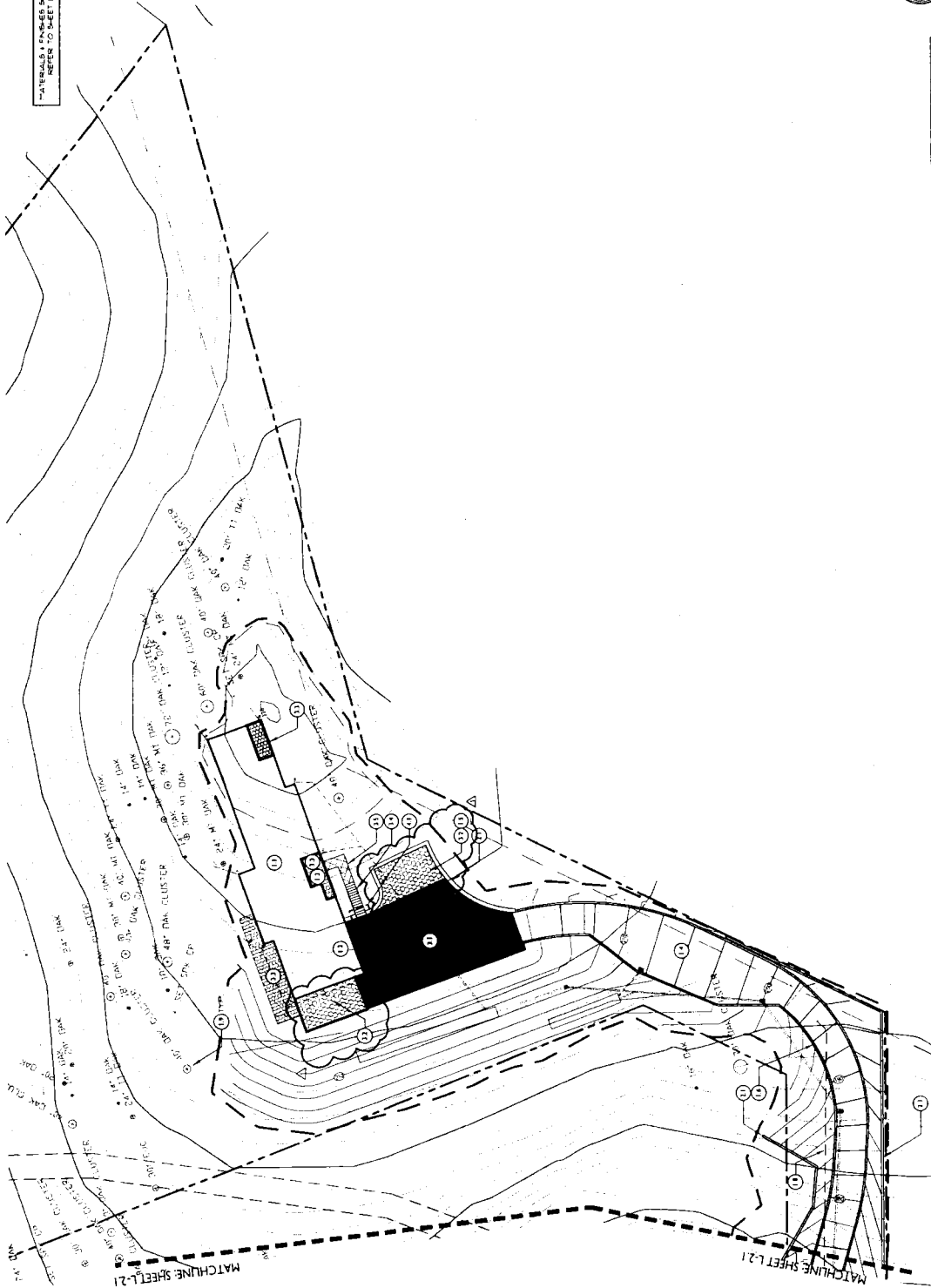
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97	GRASS	1000	SQ. FT.
98	GRASS	1000	SQ. FT.
99	GRASS	1000	SQ. FT.
100	GRASS	1000	SQ. FT.

MATERIALS & FINISHES PLAN

L-2.2

A B C D E F G H I J K L M N O P

MATERIALS & FINISHES SCHEDULE
REFER TO SHEET L-2.1



COUNTY RE-SUBMITTAL: NOT FOR CONSTRUCTION



LANDSCAPE PLAN

LANDSCAPE
RICHARD ANDERSON
WATLACE AVENUE
SANTA CRUZ COUNTY, CA
APR 2 04 11:50 AM

COUNTRY RE-SUBMITTAL: NOT FOR CONSTRUCTION

LANDSCAPE
PLAN

L-3.1

a — ○ — Z — M — Y — I — U — U — C — D —

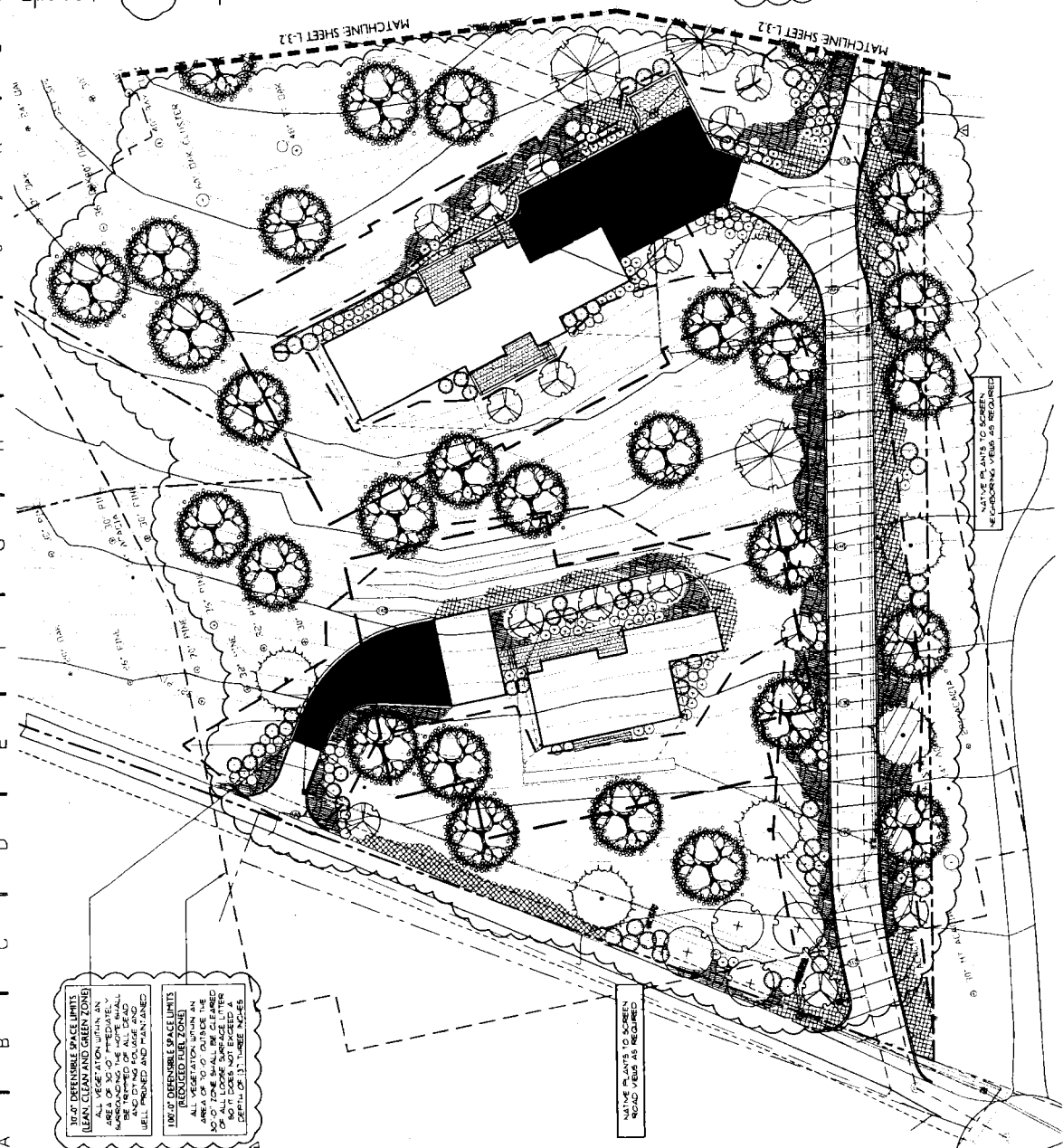
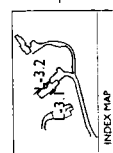
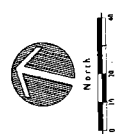
LANDSCAPE PLAN - LEGEND

SYMBOL	DESCRIPTION
	LIMIT OF WORK
	PROPERTY LINE
	MATCH LINE
	LIMIT OF GRADING (SEE CIVIL PLANS)

() 60' DIA
 EXISTING TREE TO REMAIN
 30'-0" DEFENSIBLE SPACE LIMITS (CLEAN, GREEN AND GREEN ZONE)
 100'-0" DEFENSIBLE SPACE LIMITS (REDUCED FUEL ZONE)

LANDSCAPE PLAN - PLANT PALETTE

- [illegible]

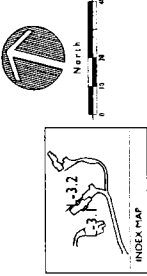
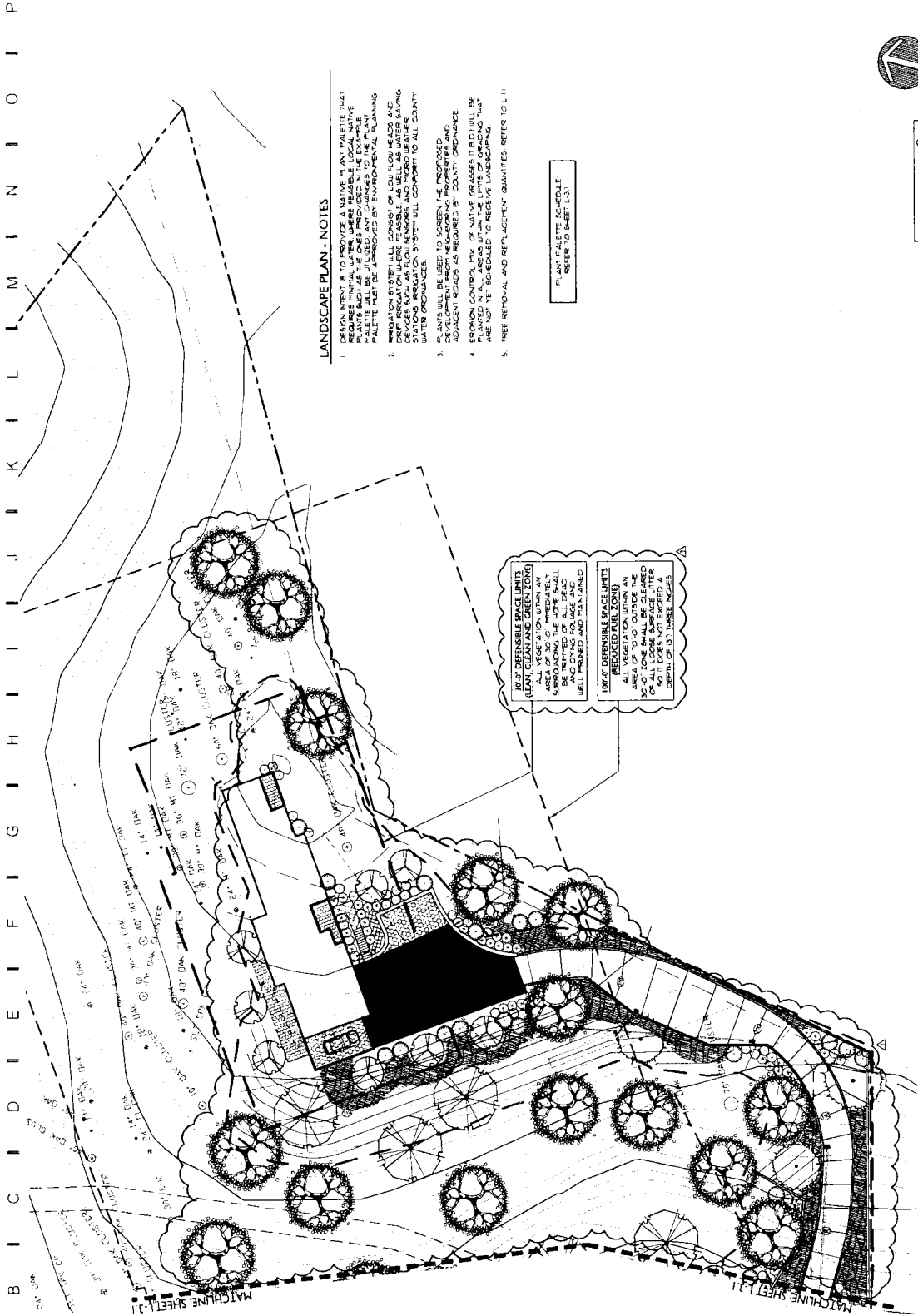


<p>10'-0" DEFENSIBLE SPACE LIMITS (LEAN, CLEAN AND GREEN ZONE)</p> <p>ALL VEGETATION WITHIN AN AREA OF 30'-0" FREEDOMLY SURROUNDING THE HOME SHALL BE TRIMMED OF ALL DEAD, WELL PRUNED AND MAINTAINED.</p>	<p>100'-0" DEFENSIBLE SPACE LIMITS (REDUCED FUEL ZONE)</p> <p>ALL VEGETATION WITHIN AN AREA OF 30'-0" OUTSIDE THE 30'-0" ZONE SHALL BE CLEARED OF ALL LOOSE SURFACE LITTER SO IT DOES NOT EXCEED A DEPTH OF 1" THREE MO-65</p>
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NATIVE PLANTS TO SCREEN
ROAD VIEWS AS REQUIRED

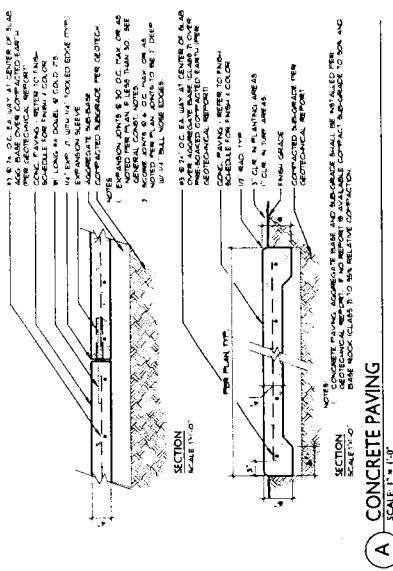
A B C D E F G H I J K L M N O P

1 2 3 4 5 6 7 8 9 10 11

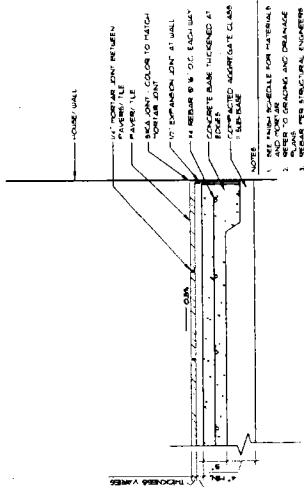


COUNTY RESUBMITTAL, NOT FOR CONSTRUCTION

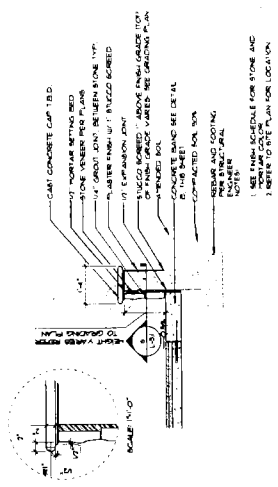
COUNTRY RE-SUBMITTAL: NOT FOR CONSTRUCTION



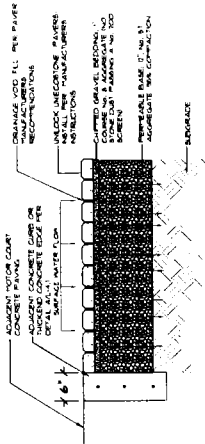
A **CONCRETE PAVING**
SCALE: 1" = 1'-0"



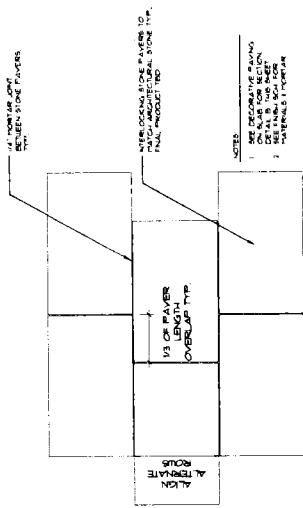
B DECORATIVE STONE PAVING - SECTION VIEW
SCALE: 1/2" = 1'-0"



C CONCRETE SEAT WALL
SCALE: 1/2" = 1'-0"



D PERMEABLE PAVERS
SCALE: 1" = 1'-0"

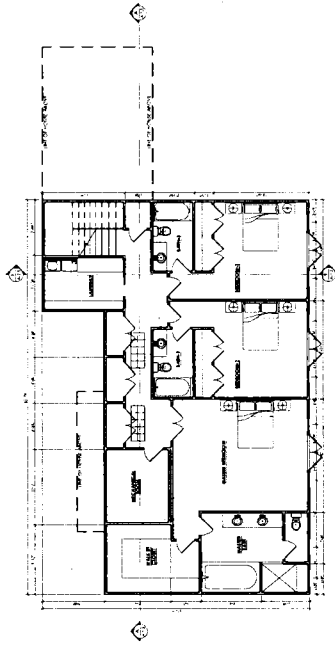


E DECORATIVE STONE PAVING - PLAN VIEW
SCALE: 1" = 1'-0"

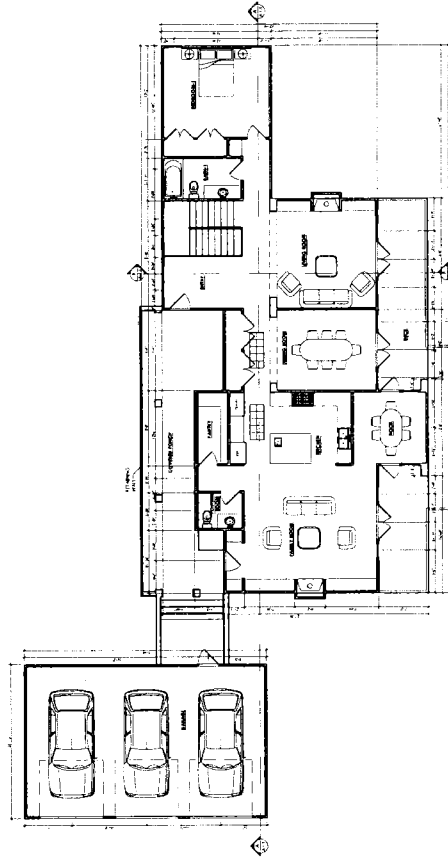
LOT-1 FLOOR
PLANS

DRAWN	JFO
SIGNATURE	AS PROMISED
DATE	7-1-80

A-1.1



FIRST FLOOR PLAN
HOUSE 1745 SF
1" = 1'-0"



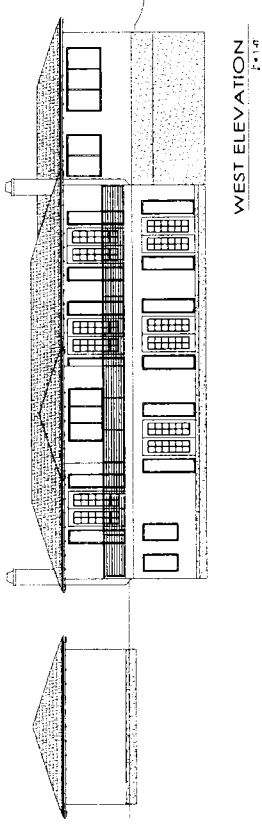
SECOND FLOOR PLAN



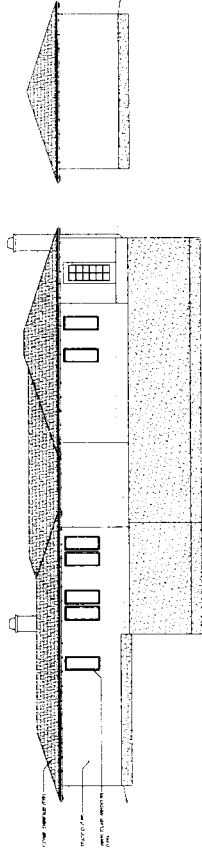
ANDERSON
MCNEILL
ARCHITECTS
10000 W. 10th Ave.
Suite 100
Denver, CO 80202
Tel: 303.440.1100
Fax: 303.440.1101



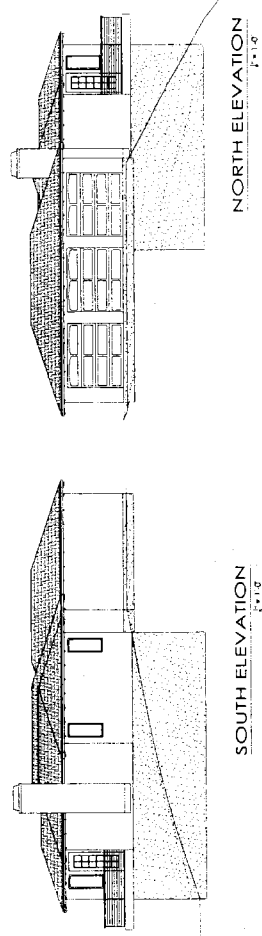
WALLACE AVE
ARCHITECTURAL DIVISION
WALLACE
ARCHITECTS
10000 W. 10th Ave.
Suite 100
Denver, CO 80202
Tel: 303.440.1100
Fax: 303.440.1101



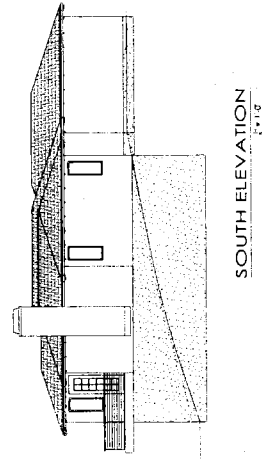
WEST ELEVATION
1" = 10'



EAST ELEVATION
1" = 10'



NORTH ELEVATION
1" = 10'



SOUTH ELEVATION
1" = 10'

LOFT
ELEVATIONS

DRAWN	JDO
SCALE	AS SHOWN
DATE	7.8.10

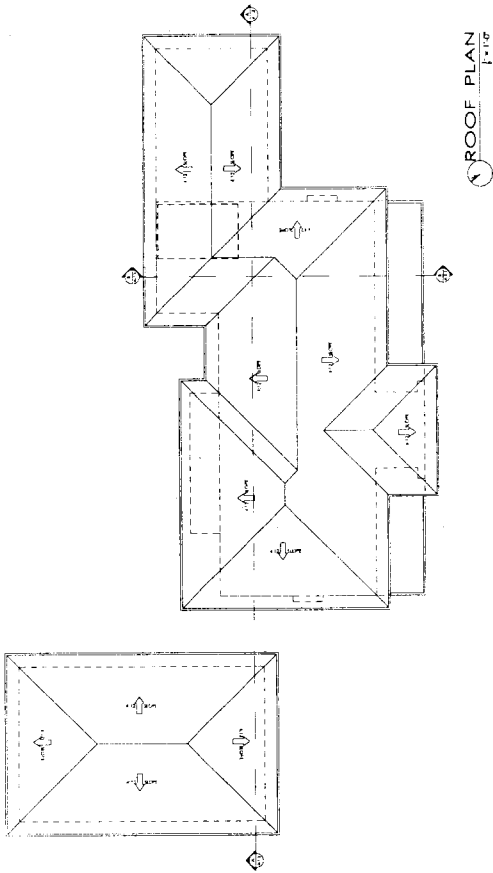
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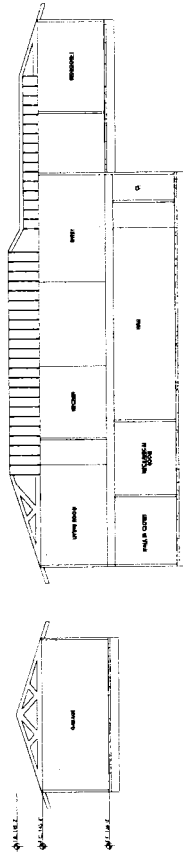
ANDERSON
ASSOCIATES, INC.
ARCHITECTS
10000 WILSON AVENUE
SUITE 100
LOS ANGELES, CA 90024
TEL: 310 207 1100



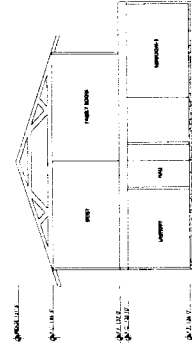
WALLACE AVE
WALLACE
APN 05-01-0104
WIDE LAND DIVISION



ROOF PLAN
1/4" = 1'-0"



EAST WEST SECTION
1/4" = 1'-0"



NORTH SOUTH SECTION
1/4" = 1'-0"

LOT 1
ROOF PLAN &
SECTIONS

DRAWN BY
SCALE
DATE

REV
ANNO
DATE

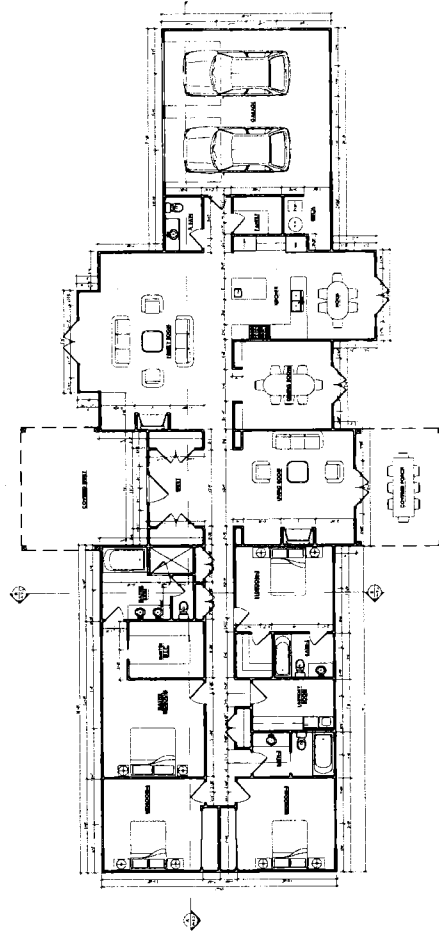
A-1.3



ANDERSON
VALLEY
ARCHITECTS
304 BROAD AVENUE
SEASIDE, CA 95576
TEL: 415.433.7540
FAX: 415.433.7541



WALLACE AVE
MOORE LAND DIVISION
WALLACE AVE
SEASIDE, CA 95576
KIP CHILDS



FIRST FLOOR PLAN
DATE: 11/10
DRAWN BY: J. J. JONES
CHECKED BY: J. J. JONES
DESIGNED BY: J. J. JONES

LOT 2
FLOOR PLAN

DRAWN	JO
SCALE	AS SHOWN
DATE	7/14/10

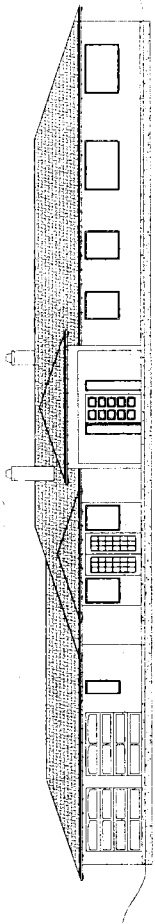
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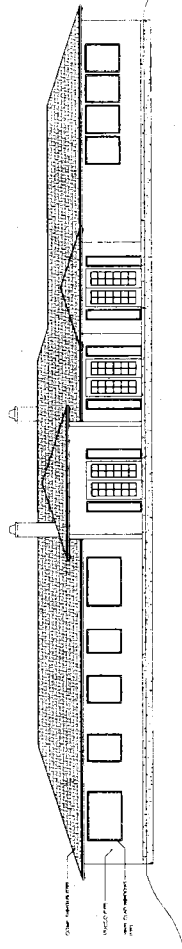
ANDERSON
VERDE
ARCHITECTS
10000 N. 10TH AVENUE
SUITE 100
DENVER, CO 80231
TEL: 303.733.1000
WWW.ANDERSONVERDE.COM



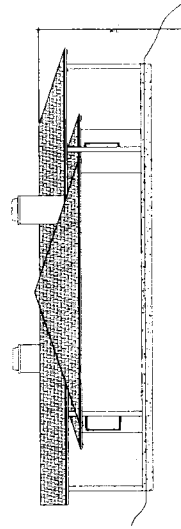
WALLACE AVE
HARBOR LAND DIVISION
APR 1015 CA 95003
WALLACE
APR 1015 1015-02



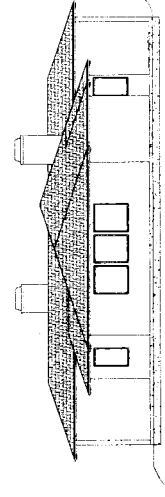
EAST ELEVATION
1" = 1'-0"



WEST ELEVATION
1" = 1'-0"



NORTH ELEVATION
1" = 1'-0"



SOUTH ELEVATION
1" = 1'-0"

LOT 12
ELEVATIONS

DRAWN
SCALE
DATE

PRO
ARCHITECT
12/10/10

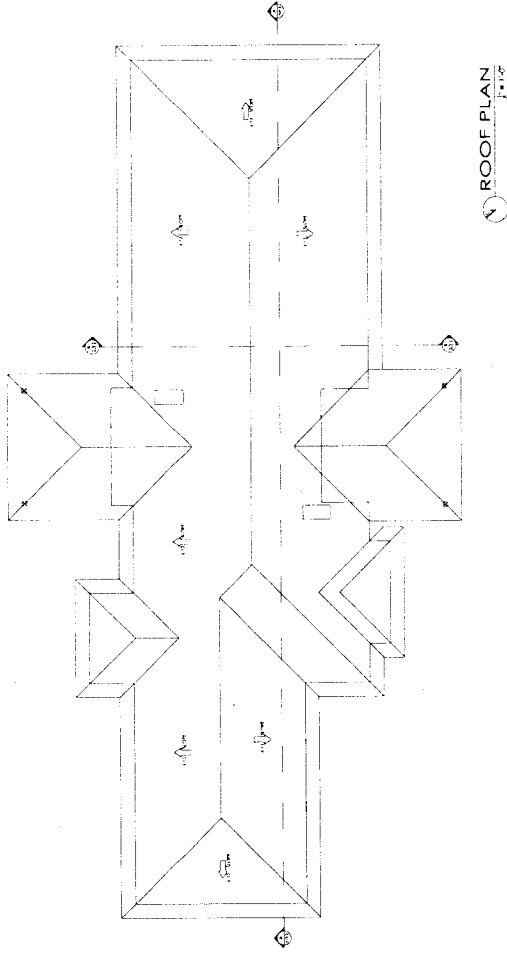
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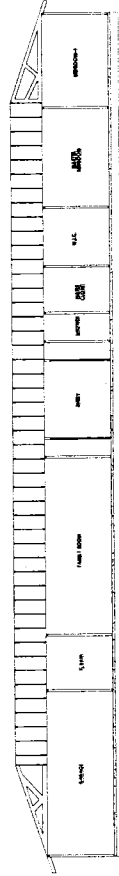
APPROVED
CITY OF LOS ANGELES
PLANNING DIVISION
DATE: 01/10/10
BY: [Signature]



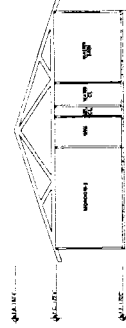
WALLACE AVE
WALLACE AVE
APPROX. CA 90003
WALLACE AVE
WALLACE AVE
WALLACE AVE



ROOF PLAN
1" = 1'-0"



NORTH SOUTH SECTION
1" = 1'-0"



EAST WEST SECTION
1" = 1'-0"

LOT 12
ROOF PLAN &
SECTIONS

DRAWN: [Signature]
SCALE: AS NOTED
DATE: 7/18/10

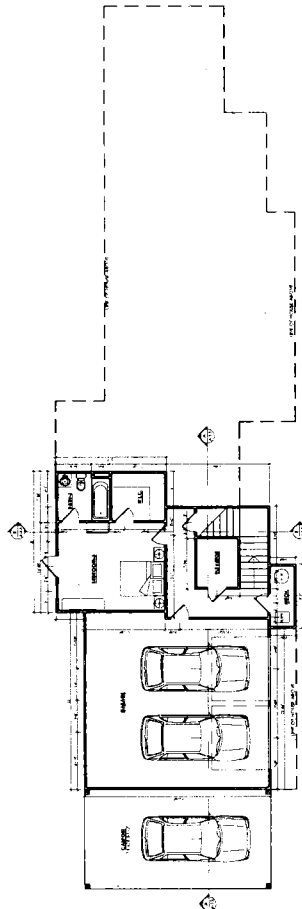
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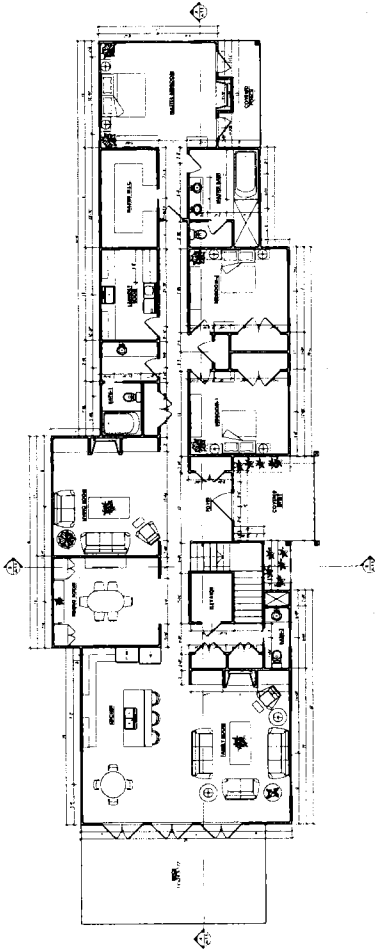
ANDERSON
HARKNESS
3114 BOWLING GREEN
SAN FRANCISCO, CA 94109
TEL: 415.774.2222



WALLACE AVE
ARCHITECT AND DESIGN
ARCHITECT
WALLACE
ARCHITECT
ARCHITECT
ARCHITECT



FIRST FLOOR PLAN
10,000 sq. ft.
1/8" = 1'-0"



SECOND FLOOR PLAN
10,000 sq. ft.
1/8" = 1'-0"

FLOOR PLANS

DRAWN	JPO
SCALE	AS NOTED
DATE	7-14-10

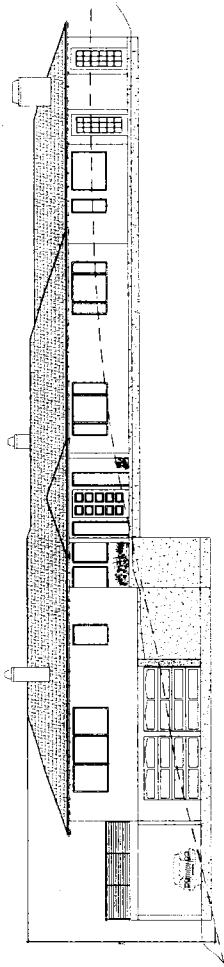
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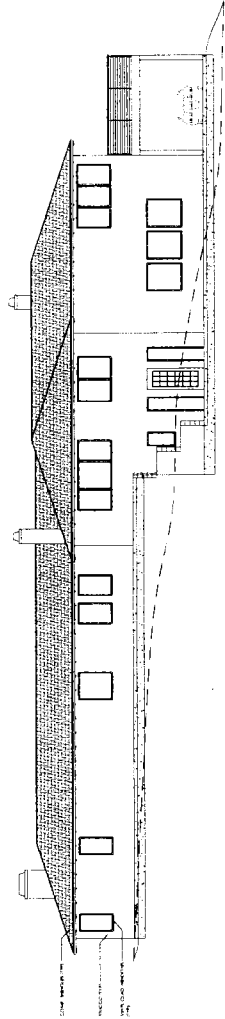
ANDERSON
VINEYLEX
ARCHITECTS
10000 W. 10TH AVE.
DENVER, CO 80202
TEL: 303.440.2000
FAX: 303.440.2001



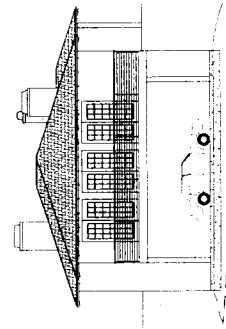
WALLACE AVE
MANOR LAND DESIGN
WALLACE
ARCHITECTS
10000 W. 10TH AVE.
DENVER, CO 80202
TEL: 303.440.2000
FAX: 303.440.2001



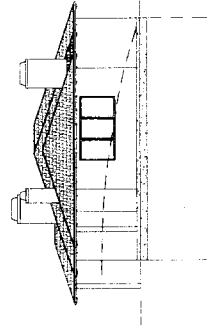
SOUTH ELEVATION
1" = 1'-0"



NORTH ELEVATION
1" = 1'-0"



WEST ELEVATION
1" = 1'-0"



EAST ELEVATION
1" = 1'-0"

LOT 3
ELEVATIONS

DRAWN	JD
SCALE	AS SHOWN
DATE	01-10-10

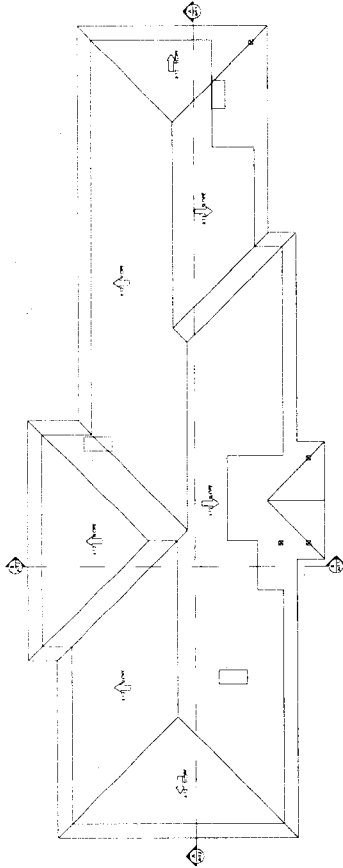
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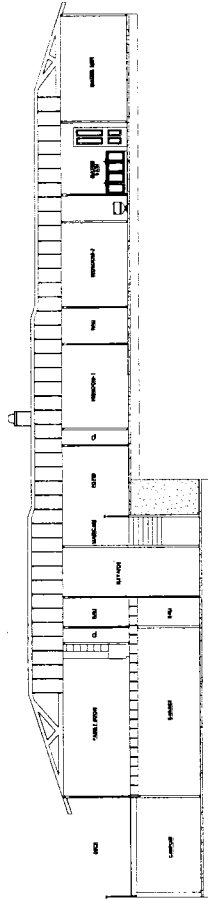
ANDERSON
ASSOCIATES
ARCHITECTS
1000 S. GARDEN AVENUE
SUITE 200
GARDEN CITY, CA 92325
TEL: 951-646-1100
FAX: 951-646-1101



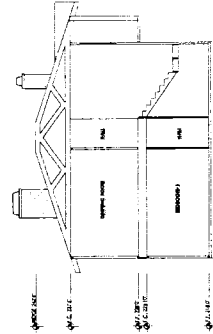
WALLACE AVE
APPROVED FOR
WALLACE
APPROVED FOR
APPROVED FOR



SOUTH ELEVATION
1/4" = 1'-0"



EAST WEST SECTION
1/4" = 1'-0"



NORTH SOUTH SECTION
1/4" = 1'-0"

LOT-3
ROOF PLAN &
SECTIONS

DRAWN	JD
SCALE	AS NOTED
DATE	7/14/10

A-3.3

Subdivision Findings

1. That the proposed subdivision meets all requirements or conditions of the Subdivision Ordinance and the State Subdivision Map Act.

This finding can be made, in that the project meets all of the technical requirements of the Subdivision Ordinance and is consistent with the County General Plan and the Zoning Ordinance as set forth in the findings below.

2. That the proposed subdivision, its design, and its improvements, are consistent with the General Plan, and the area General Plan or specific plan, if any.

This finding can be made, in that the proposed division of land, its design, and its improvements, will be consistent with the General Plan. The project creates three single family residential parcels and is located in the Urban Very Low Density Residential (R-UVL) General Plan designation which allows a density of one parcel for each 10,000 square feet to 1 acre of net developable parcel area. The proposed project is consistent with the General Plan, in that each residential parcel will contain a minimum of 1 acre of net developable area.

The project is consistent with the General Plan in that the full range of urban services is available, including public water and sewer service. Parcels will be accessed by an existing shared driveway and a new private driveway to Wallace Avenue.

The subdivision, as conditioned, will be consistent with the General Plan regarding infill development, in that the proposed residential development will be consistent with the pattern of surrounding development, and the design of the proposed structures are consistent with the character of similar developments in the surrounding area.

3. That the proposed subdivision complies with Zoning Ordinance provisions as to uses of land, lot sizes and dimensions and any other applicable regulations.

This finding can be made, in that the use of the property will be residential in nature, unit densities meet the minimum standards for the R-1-1AC (Single family residential - 1 acre minimum) zone district where the project is located, and the project will be consistent with the required site standards of the R-1-1AC zone district.

4. That the site of the proposed subdivision is physically suitable for the type and density of development.

This finding can be made, in that technical reports prepared for the property conclude that the site is suitable for residential development, and the proposed residences are properly configured to allow development in compliance with the required site standards. As conditioned, the proposed development would not adversely impact environmental resources.

5. That the design of the proposed subdivision or type of improvements will not cause substantial environmental damage nor substantially and avoidably injure fish or wildlife or their habitat.

This finding can be made, in that no mapped or observed sensitive habitats or threatened species will be adversely impacted through the development of the site.

6. That the proposed subdivision or type of improvements will not cause serious public health problems.

This finding can be made, in that municipal water and sewer services are available to serve all proposed parcels.

7. That the design of the proposed subdivision or type of improvements will not conflict with easements, acquired by the public at large, for access through, or use of property within the proposed subdivision.

This finding can be made, in that the existing power line easement will be removed from the project site.

8. The design of the proposed subdivision provides, to the extent feasible, for future passive or natural heating or cooling opportunities.

This finding can be made, in that the resulting parcels are oriented to the extent possible in a manner to take advantage of solar opportunities.

9. The proposed development project is consistent with the Design Standards and Guidelines (sections 13.11.070 through 13.11.076) and any other applicable requirements of this chapter.

This finding can be made, in that the structures are sited and designed to be visually compatible, in scale with, and integrated with the character of the surrounding neighborhood. The surrounding neighborhood contains single family residential development. The proposed residential development is compatible with the architecture in the neighborhood and the surrounding pattern of development.

Development Permit Findings

1. That the proposed location of the project and the conditions under which it would be operated or maintained will not be detrimental to the health, safety, or welfare of persons residing or working in the neighborhood or the general public, and will not result in inefficient or wasteful use of energy, and will not be materially injurious to properties or improvements in the vicinity.

This finding can be made, in that the project is located in an area designated for residential uses. Construction will comply with prevailing building technology, the California Building Code, and the County building ordinance to insure the optimum in safety and the conservation of energy and resources.

2. That the proposed location of the project and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the zone district in which the site is located.

This finding can be made, in that the use of the property will be residential in nature, unit densities meet the minimum standards for the R-1-1AC (Single family residential - 1 acre minimum) zone district where the project is located, and the project will be consistent with the required site standards of the R-1-1AC zone district.

3. That the proposed use is consistent with all elements of the County General Plan and with any specific plan which has been adopted for the area.

This finding can be made, in that the proposed division of land, its design, and its improvements, will be consistent with the General Plan. The project creates three single family residential parcels and is located in the Urban Very Low Density Residential (R-UVL) General Plan designation which allows a density of one parcel for each 10,000 square feet to 1 acre of net developable parcel area. The proposed project is consistent with the General Plan, in that each residential parcel will contain a minimum of 1 acre of net developable area.

The project is consistent with the General Plan in that the full range of urban services is available, including public water and sewer service. Parcels will be accessed by an existing shared driveway and a new private driveway to Wallace Avenue.

The subdivision, as conditioned, will be consistent with the General Plan regarding infill development, in that the proposed residential development will be consistent with the pattern of surrounding development, and the design of the proposed structures are consistent with the character of similar developments in the surrounding area.

A specific plan has not been adopted for this portion of the County.

4. That the proposed use will not overload utilities and will not generate more than the acceptable level of traffic on the streets in the vicinity.

This finding can be made, in that the expected level of additional traffic generated by the

proposed project is anticipated to be 3 additional peak vehicle trips per day (1 per single family dwelling), the proposed increase will not adversely impact existing roads and intersections in the surrounding area.

5. That the proposed project will complement and harmonize with the existing and proposed land uses in the vicinity and will be compatible with the physical design aspects, land use intensities, and dwelling unit densities of the neighborhood.

This finding can be made, in that the project site is located in a mixed neighborhood containing a variety of architectural styles, and the proposed residential development is consistent with the land use intensity and density of the neighborhood.

6. The proposed development project is consistent with the Design Standards and Guidelines (sections 13.11.070 through 13.11.076), and any other applicable requirements of this chapter.

This finding can be made, in that the structures are sited and designed to be visually compatible, in scale with, and integrated with the character of the surrounding neighborhood. The surrounding neighborhood contains single family residential development. The proposed residential development is compatible with the architecture in the neighborhood and the surrounding pattern of development.

Roadway/Roadside Exception Findings

1. The improvements are not appropriate due to the character of development in the area and the lack of such improvements on surrounding developed property.

This finding can be made, in that full local street improvements would not be consistent with the pattern of development in the neighborhood or the improvements on the existing roadways that access the project site. The short section of existing shared driveway (to the west of the subject property) varies from the County Design Criteria in terms of width and improvements with a 20 foot wide right of way and a 20 foot wide pavement section, with no sidewalks, parking or landscaping. The County Design Criteria standard for a local street is a 56 feet wide right of way with parking, sidewalks, and landscaping on both sides of the roadway. A Roadway/Roadside Exception is required for the proposed roadway and to recognize the existing substandard intersection of the driveway with Wallace Avenue. The intersection at Wallace Avenue is not conforming to County Design Criteria in terms of width and curb return radius. As a result of the project, the existing driveway will be widened to 20 feet in width which will be adequate for the low level of traffic that will utilize this shared access. A Roadway/Roadside Exception is considered as appropriate due to the number of residences served and the existing conditions within the surrounding neighborhood.

County Code Section 15.10.050(f)(1) allows for exceptions to roadside improvements when those improvements would not be appropriate due to the character of existing or proposed development.

Conditions of Approval

Land Division 101031

Applicant: Dennis Anderson

Property Owner: Richard & Loretta Anderson, trustees

Assessor's Parcel Number(s): 041-481-04

Property Address and Location: Property located at the end of Wallace Avenue (access between 3105 and 2280 Wallace Avenue), in Aptos. No situs address.

Planning Area: Aptos

Exhibit(s):

- A. Tentative Map - prepared by Ifland Engineers, revised 12/20/10; Improvement Plans - prepared by Andrew C. Radovan, Civil Engineer; Landscape plans - prepared by SSA Landscape Architects, revised 10/19/10; Architectural and floor plans - prepared by Anderson McKelvey Architects, revised 12/14/10.

All correspondence and maps relating to this land division shall carry the land division number noted above.

- I. Prior to exercising any rights granted by this Approval, the owner shall:
- A. Sign, date and return one copy of the Approval to indicate acceptance and agreement with the conditions thereof.
- II. Prior to recordation of the Parcel Map for this land division the property owner shall apply for and obtain approval from the Local Agency Formation Commission for annexation of the subject property into the Santa Cruz County Sanitation District.
- III. A Parcel Map for this land division must be recorded prior to the expiration date of the tentative map and prior to sale, lease or financing of any new lots. The Parcel Map shall be submitted to the County Surveyor (Department of Public Works) for review and approval prior to recordation. No improvements, including, without limitation, grading and vegetation removal, shall be done prior to recording the Parcel Map unless such improvements are allowable on the parcel as a whole (prior to approval of the land division). The Parcel Map shall meet the following requirements:
- A. The Parcel Map shall be in general conformance with the approved Tentative Map and shall conform to the conditions contained herein. All other State and County laws relating to improvement of the property, or affecting public health and safety shall remain fully applicable.
- B. This land division shall result in no more than three (3) single family residential units, and a private right of way for access, utilities, and landscaping.
- C. The minimum aggregate parcel area shall be 1 acre of net developable land per parcel.

D. The following items shall be shown on the Parcel Map:

1. Building envelopes, common area and/or building setback lines located according to the approved Tentative Map. The building envelopes for the perimeter of the project shall meet the minimum setbacks for the R-1-1AC zone district of 40 for front yards, 20 feet for side yards, and 20 feet for rear yards.
2. Show the net area of each lot to nearest square foot.
3. All easements and dedications to be recorded prior to recordation of the Parcel Map.

E. The following requirements shall be noted on the Parcel Map as items to be completed prior to obtaining a building permit on lots created by this land division:

1. New parcel numbers for all of the parcels must be assigned by the Assessors Office prior to application for a Building Permit on any parcel created by this land division.
2. Lots shall be connected for water service to Soquel Creek Water District. All regulations and conditions of the water district shall be met.
3. Lots shall be connected for sewer service to Santa Cruz County Sanitation District. All regulations and conditions of the sanitation district shall be met.
4. All future construction on the lots shall be in general compliance with to the Architectural Floor Plans and Elevations as stated or depicted in the approved Exhibit "A" and shall also meet the following additional conditions:
 - a. Notwithstanding the approved preliminary architectural plans, all future development shall comply with the development standards for the R-1-1AC zone district. Development on each parcel shall not exceed a 10% lot coverage, or other standards as may be established for the zone district.
5. All future development on the lots shall comply with the requirements of the approved geotechnical report(s) for this project.
6. All future development on the lots shall comply with the requirements of the approved geologic report(s) for this project.
7. Submit a written statement signed by an authorized representative of the

school district in which the project is located confirming payment in full of all applicable developer fees and other requirements lawfully imposed by the school district in which the project is located.

8. Prior to any building permit issuance or ground disturbance, a detailed erosion control plan shall be reviewed and approved by the Department of Public Works and the Planning Department. Earthwork between October 15 and April 15 requires a separate winter grading approval from Environmental Planning that may or may not be granted. The erosion control plans shall identify the type of erosion control practices to be used and shall include the following:
 - a. Silt and grease traps shall be installed according to the approved improvement plans.
 - b. An effective sediment barrier placed along the perimeter of the disturbance area and maintenance of the barrier.
 - c. Spoils management that prevents loose material from clearing, excavation, and other activities from entering any drainage channel.
9. Any changes from the approved Exhibit "A", including but not limited to the Tentative Map, Preliminary Improvement Plans, or the attached exhibits for architectural and landscaping plans, must be submitted for review and approval by the Planning Department. Changes may be forwarded to the decision making body to consider if they are sufficiently material to warrant consideration at a public hearing noticed in accordance with Section 18.10.223 of the County Code. Any changes that are on the final plans which do not conform to the project conditions of approval shall be specifically illustrated on a separate sheet and highlighted in yellow on any set of plans submitted to the County for review.

IV. Prior to recordation of the Parcel Map, the following requirements shall be met:

- A. Submit a letter of certification from the Tax Collector's Office that there are no outstanding tax liabilities affecting the subject parcels.
- B. Meet all requirements of the Santa Cruz County Sanitation District including, without limitation, the following standard conditions:
 1. Apply for and obtain approval from the Local Agency Formation Commission for annexation of the subject property into the Santa Cruz County Sanitation District.
 2. Submit and secure approval of an engineered sewer improvement plan providing sanitary sewer service to each parcel.

3. Pay all necessary bonding, deposits, and connections fees, and furnish a copy of the CC&R's to the district.
- C. A Homeowners Association (HOA), or a shared maintenance agreement, shall be formed for maintenance of all areas under common ownership including, sidewalks, roadways, all landscaping, drainage structures, water lines, sewer laterals, fences, silt and grease traps and buildings. CC&R's, or a copy of the maintenance agreement, shall be furnished to the Planning Department and shall include the following, which are permit conditions:
1. All landscaping within the private right of way (40 wide right of way) shall be permanently maintained by the Homeowners Association.
 2. All drainage structures, including silt and grease traps and detention facilities, shall be permanently maintained by the Homeowners Association.
 3. Annual inspection of the silt and grease traps shall be performed and reports sent to the Drainage section of the Department of Public Works on an annual basis. Inspections shall be performed prior to October 15 each year. The expense for inspections and report preparation shall be the responsibility of the Homeowners Association.
 - a. A brief annual report shall be prepared by the trap inspector at the conclusion of each October inspection and submitted to the Drainage section of the Department of Public Works within 5 days of the inspection. This monitoring report shall specify any repairs that have been done or that are needed to allow the trap to function adequately.
- D. Engineered improvement plans for all water line extensions required by Soquel Creek Water District shall be submitted for the review and approval of the water agency.
- E. All new utilities shall be underground. All facility relocation, upgrades or installations required for utilities service to the project shall be noted on the construction plans. All preliminary engineering for such utility improvements is the responsibility of the owner/applicant. Pad-mounted transformers shall not be located in the front setback or in any area visible from public view unless they are completely screened by walls and/or landscaping (underground vaults may be located in the front setback). Utility equipment such as gas meters and electrical panels shall not be visible from public streets or building entries. Backflow prevention devices must be located in the least visually obtrusive location.
- F. All requirements of the Aptos/La Selva Fire Protection District shall be met.

- G. Park dedication in-lieu fees shall be paid for three (3) dwelling units. These fees are currently \$1,000 per bedroom, but are subject to change.
- H. Child Care Development fees shall be paid for three (3) dwelling units. These fees are currently \$109 per bedroom, but are subject to change.
- I. Transportation improvement fees shall be paid for three (3) dwelling units. These fees are currently \$2,955 per unit, but are subject to change.
- J. Roadside improvement fees shall be paid for three (3) dwelling units. These fees are currently \$2,955 per unit, but are subject to change.
- K. Pay the small projects fee for the third unit to meet the Affordable Housing Requirements specified by Chapter 17.10 of the County Code. This fee is currently \$15,000 per applicable unit, but is subject to change.
- L. Submit and secure approval of engineered improvement plans from the Department of Public Works and the Planning Department for all roads, curbs and gutters, storm drains, erosion control, and other improvements required by the Subdivision Ordinance, noted on the attached tentative map and/or specified in these conditions of approval. A subdivision agreement backed by financial securities (equal to 150% of engineer's estimate of the cost of improvements), per Sections 14.01.510 and 511 of the Subdivision Ordinance, shall be executed to guarantee completion of this work. Improvement plans shall meet the following requirements:
 - 1. All improvements shall be prepared by a registered civil engineer and shall meet the requirements of the County of Santa Cruz Design Criteria except as modified in these conditions of approval.
 - a. The construction of the proposed shared access driveway shall include an 18 foot wide road section for the first 60 feet from Wallace Avenue. A Roadside/Roadway Exception is approved to vary from County standards with respect to the width of the right of way, sidewalks, landscaping, and on-street parking.
 - b. The existing intersection and proposed widening at the intersection of the existing shared driveway with Wallace Avenue shall be constructed per the approved improvement plans for this permit. A Roadside/Roadway Exception is approved to vary from County standards with respect to the intersection design.
 - 2. Complete drainage details including existing and proposed contours, plan views and centerline profiles of all driveway improvements, complete drainage calculations and all volumes of excavated and fill soils.
 - 3. Details for the installation of required silt and grease traps to filter runoff

from the parking area. Submit a silt and grease trap maintenance agreement to the Department of Public Works.

4. A detailed erosion control plan shall be submitted which includes the following: a clearing and grading schedule that limits grading to the period of April 15 - October 15, clearly marked disturbance envelope, revegetation specifications, silt barrier locations, temporary road surfacing and construction entry stabilization, sediment barriers around drain inlets, etc. This plan shall be integrated with the improvement plans that are approved by the Department of Public Works, and shall be submitted to Environmental Planning staff for review and approval prior to recording of the final map.
5. In order to ensure that the one hour air quality threshold for the pollutant acrolein is not exceeded during demolition and paving, prior to the issuance of the grading permit, the applicant shall modify the grading plans to include notes incorporating the construction conditions given by the Monterey Bay Unified Air Pollution Control District (MBUAPCD) as follows:
 - i. All pre-1994 diesel equipment shall be retrofitted with EPA certified diesel oxidation catalysts *or* all such equipment shall be fueled with B99 diesel fuel;
 - ii. Applicant shall retain receipts for purchases of catalysts or b99 diesel fuel until completion of the project;
 - iii. Applicant shall allow MBUAPCD to inspect receipts and equipment throughout the project.

Alternatively, the applicant may submit a health risk assessment to the MBUAPCD for review and approval. Any recommendations and requirements of the MBUAPCD will become conditions of constructing the project.

- M. Submit a final Landscape Plan for the entire site for review and approval by the Planning Department. The landscape plan shall specify plant species, size and location, and shall include irrigation plans, which meet the following criteria and must conform to all water conservation requirements of the local water district and the following conservation regulations:
 1. Turf Limitation. Turf area shall not exceed 25 percent of the total landscaped area. Turf area shall be of low to moderate water-using varieties, such as tall or dwarf fescue.
 2. Plant Selection. At least 80 percent of the plant materials selected for non-turf areas (equivalent to 60 percent of the total landscaped area) shall be

well-suited to the climate of the region and require minimal water once established (drought tolerant). Native plants are encouraged. Up to 20 percent of the plant materials in non-turf areas (equivalent to 15 percent of the total landscaped area), need not be drought tolerant, provided they are grouped together and can be irrigated separately.

3. Soil Conditioning. In new planting areas, soil shall be tilled to a depth of 6 inches and amended with six cubic yards of organic material per 1,000 square feet to promote infiltration and water retention. After planting, a minimum of 2 inches of mulch shall be applied to all non-turf areas to retain moisture, reduce evaporation and inhibit weed growth.
4. Irrigation Management. All required landscaping shall be provided with an adequate, permanent and nearby source of water which shall be applied by an installed irrigation, or where feasible, a drip irrigation system. Irrigation systems shall be designed to avoid runoff, over-spray, low head drainage, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways or structures.
 - a. The irrigation plan and an irrigation schedule for the established landscape shall be submitted with the building permit applications. The irrigation plan shall show the location, size and type of components of the irrigation system, the point of connection to the public water supply and designation of hydrozones. The irrigation schedule shall designate the timing and frequency of irrigation for each station and list the amount of water, in gallons or hundred cubic feet, recommended on a monthly and annual basis.
 - b. Appropriate irrigation equipment, including the use of a separate landscape water meter, pressure regulators, automated controllers, low volume sprinkler heads, drip or bubbler irrigation systems, rain shutoff devices, and other equipment shall be used to maximize the efficiency of water applied to the landscape.
 - c. Plants having similar water requirements shall be grouped together in distinct hydrozones and shall be irrigated separately.
 - d. Landscape irrigation should be scheduled between 6:00 p.m. and 11:00 a.m. to reduce evaporative water loss.
5. All planting shall conform to the landscape plan shown as part of the approved Exhibit "A".

V. Prior to any site disturbance or physical construction on the subject property the following condition(s) shall be met:

- A. Pre-Construction Meeting: In order to ensure that the mitigation measures are

communicated to the various parties responsible for constructing the project, prior to any disturbance on the property the applicant shall convene a pre-construction meeting on the site. The following parties shall attend: the applicant, the grading contractor supervisor, the project biologist, the project arborist, and Santa Cruz County Environmental Planning staff. The temporary construction fencing demarcating the disturbance envelope, tree protection fencing, and silt fencing will be inspected at that time. Results of pre-construction surveys will also be collected at that time.

VI. All future construction within the property shall meet the following conditions:

- A. All work adjacent to or within a County road shall be subject to the provisions of Chapter 9.70 of the County Code, including obtaining an encroachment permit where required. Where feasible, all improvements adjacent to or affecting a County road shall be coordinated with any planned County-sponsored construction on that road. Obtain an Encroachment Permit from the Department of Public Works for any work performed in the public right of way. All work shall be consistent with the Department of Public Works Design Criteria unless otherwise specifically excepted by these conditions of approval.
- B. No land clearing, grading or excavating shall take place between October 15 and April 15 unless the Planning Director approves a separate winter erosion-control plan that may or may not be granted.
- C. No land disturbance shall take place prior to issuance of building permits (except the minimum required to install required improvements, provide access for County required tests or to carry out work required by another of these conditions).
- D. Pursuant to Sections 16.40.040 and 16.42.100 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.100, shall be observed.
- E. To minimize noise, dust and nuisance impacts of surrounding properties to insignificant levels during construction, the owner/applicant shall or shall have the project contractor, comply with the following measures during all construction work:
 - 1. Limit all construction to the time between 8:00 am and 5:00 pm weekdays unless a temporary exception to this time restriction is approved in advance by County Planning to address an emergency situation; and

2. Each day it does not rain, wet all exposed soil frequently enough to prevent significant amounts of dust from leaving the site.
 3. The applicant shall designate a disturbance coordinator and a 24-hour contact number shall be conspicuously posted on the job site. The disturbance coordinator shall record the name, phone number, and nature of all complaints received regarding the construction site. The disturbance coordinator shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry.
- F. Construction of improvements shall comply with the requirements of the approved geotechnical report(s) for this project. The project geotechnical engineer shall inspect the completed project and certify in writing that the improvements have been constructed in conformance with the geotechnical report(s).
- G. All required land division improvements shall be installed and inspected prior to final inspection clearance for any new structure on the new lots.
- VII. In the event that future County inspections of the subject property disclose non-compliance with any Conditions of this Approval or any violation of the County Code, the owner shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including Approval revocation.
- VIII. As a condition of this development approval, the holder of this development approval ("Development Approval Holder"), is required to defend, indemnify, and hold harmless the COUNTY, its officers, employees, and agents, from and against any claim (including attorneys' fees), against the COUNTY, its officers, employees, and agents to attack, set aside, void, or annul this development approval of the COUNTY or any subsequent amendment of this development approval which is requested by the Development Approval Holder.
- A. COUNTY shall promptly notify the Development Approval Holder of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. COUNTY shall cooperate fully in such defense. If COUNTY fails to notify the Development Approval Holder within sixty (60) days of any such claim, action, or proceeding, or fails to cooperate fully in the defense thereof, the Development Approval Holder shall not thereafter be responsible to defend, indemnify, or hold harmless the COUNTY if such failure to notify or cooperate was significantly prejudicial to the Development Approval Holder.
- B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:
1. COUNTY bears its own attorney's fees and costs; and

2. COUNTY defends the action in good faith.

- C. Settlement. The Development Approval Holder shall not be required to pay or perform any settlement unless such Development Approval Holder has approved the settlement. When representing the County, the Development Approval Holder shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the County.
- D. Successors Bound. "Development Approval Holder" shall include the applicant and the successor'(s) in interest, transferee(s), and assign(s) of the applicant.
- E. Within 30 days of the issuance of this development approval, the Development Approval Holder shall record in the office of the Santa Cruz County Recorder an agreement, which incorporates the provisions of this condition, or this development approval shall become null and void.

IX. Mitigation Monitoring Program: The mitigation measures listed under this heading have been incorporated into the conditions of approval for this project in order to mitigate or avoid significant effects on the environment. As required by Section 21081.6 of the California Public Resources Code, a monitoring and reporting program for these mitigations is hereby adopted as conditions of approval for this project. This program is specifically described following each mitigation measure listed below. The purpose of this monitoring is to ensure compliance with the environmental mitigations during project implementation and operation. Failure to comply with the conditions of approval, including the terms of the adopted monitoring program, may result in permit revocation pursuant to section 18.10.462 of the Santa Cruz County Code.

A. Mitigation Measure: Biotic Resources - Bats

Monitoring Program: In order to avoid impacts to special status bats, tree removal activities shall be limited to the months between November 1 and March 1, if feasible.

- 1. If trees must be removed outside of the timeframe above, a qualified biologist shall conduct surveys for special status bats 3-4 weeks prior to site disturbance. If active roosts are present in trees to be retained, roosting bats shall be excluded from trees to be removed prior to any disturbance. In trees to be retained, no disturbance zones, set by the biologist based on the particular species present, shall be fenced off around the subject tree to ensure other construction activities do not harm sensitive species. Surveys shall be provided to Environmental Planning staff for review prior to commencing any tree removals on the subject property.
- 2. The maternity roosting season for bats is March 1 – July 3. Tree removal should be scheduled outside of the maternal roosting period if special status bats are present. Before any trees are removed during the maternal

roosting season, a qualified biologist shall perform surveys. If maternal roosts are present, disturbance shall be avoided until roosts are unoccupied. The biologist shall be responsible for ensuring bat roosts are vacated. Surveys shall be provided to Environmental Planning staff for review prior to commencing any tree removals on the subject property.

B. Mitigation Measure: Biotic Resources - Birds

Monitoring Program: In order to avoid impacts to raptors and migratory songbirds, tree removal activities shall be limited to the months between September 1 and February 1, if feasible.

1. If trees must be removed outside of the timeframe above, a qualified biologist shall conduct surveys for raptor or migratory songbird nests 3-4 weeks prior to site disturbance. Surveys shall be provided to Environmental Planning staff for review prior to commencing any tree removals on the subject property.
2. If active raptor or migratory bird nests are found in trees to be retained, the biologist shall be required to be on site during any initial vegetation or ground disturbance activities (e.g. vegetation clearing, grading, excavation, tree pruning/removal) that could potentially impact listed species. The biologist shall be responsible for setting and maintaining the disturbance buffers from active nests during construction activities, and buffers and exclusionary measures shall be implemented only after consultation with CDFG.
3. If no active nests are present on the subject parcel, tree removal can proceed provided the mitigations in 1. above have been implemented.

C. Mitigation Measure: Biotic Resources - Oak Woodland

Monitoring Program: In order to adequately mitigate impacts from the proposed development on oak woodland, the applicant shall:

1. Submit a revised tree removal plan and landscape/re-vegetation plan depicting the removal of all non-native tree species, for Environmental Planning staff review prior to approval of the improvement plans;
2. Provide an updated arborist's letter, for review by Environmental Planning staff prior to map recordation, which addresses removal of all non-native trees and reviews the landscape/re-vegetation plan for consistency with the goal of oak woodland restoration;
3. Remove all invasive acacia and eucalyptus trees during the construction phase of the project.

D. Mitigation Measure: Sanitary Waste Disposal

Monitoring Program: In order to mitigate potential impacts from sanitary waste, prior to map recordation the applicant shall provide proof that the property has been annexed into the Santa Cruz County Sanitation District. Prior to final inspection the applicant shall provide proof that all lots have been connected to the sanitary sewer system.

**AMENDMENTS TO THIS LAND DIVISION APPROVAL SHALL BE
PROCESSED IN ACCORDANCE WITH CHAPTER 18.10 OF THE COUNTY CODE.**

This Tentative Map is approved subject to the above conditions and the attached map, and expires 24 months after the 14-day appeal period. The Final Map for this division, including improvement plans if required, should be submitted to the County Surveyor for checking at least 90 days prior to the expiration date and in no event later than 3 weeks prior to the expiration date.

cc: County Surveyor

Approval Date: _____

Effective Date: _____

Expiration Date: _____

Cathy Graves
Principal Planner

Randall Adams
Project Planner

Appeals: Any property owner, or other person aggrieved, or any other person whose interests are adversely affected by any act or determination of the Planning Commission, may appeal the act or determination to the Board of Supervisors in accordance with chapter 18.10 of the Santa Cruz County Code.

**Negative Declaration
(CEQA Determination)**

**Application Number 101031
(from prior application 07-0112)
Planning Commission Hearing
4/13/11**



COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT

701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123

TOM BURNS, PLANNING DIRECTOR

NEGATIVE DECLARATION AND NOTICE OF DETERMINATION

07-0112 Between 3105 and 2280 Wallace Ave, Aptos APN(S): 041-481-04

Proposal to divide an approximately 6.08 acre parcel into three parcels of 1.44, 1.34, and 3.30 acres and to construct three single family dwellings. Requires a Minor Land Division, Residential Development Permit, an exception for access from a right-of-way of less than 40 feet in width, a Roadway/Roadside exception, a Geologic Hazards Assessment, a Geologic Report Review, and a Soils Report Review. Property located at the end of Wallace Avenue (access between 3105 and 2280 Wallace Avenue), in Aptos.

ZONE DISTRICT: R-1-1AC (Residential, one acre)

OWNER/APPLICANT: Owen Lawlor / Richard & Loretta Anderson

STAFF PLANNER: Randall Adams, phone 454-3218, Email: pln515@co.santa-cruz.ca.us

ACTION: Negative Declaration with Mitigations

REVIEW PERIOD ENDS: October 14, 2009

This project will be considered at a public hearing by the Planning Commission. The time, date and location have not been set. When scheduling does occur, these items will be included in all public hearing notices for the project.

Findings:

This project, if conditioned to comply with required mitigation measures or conditions shown below, will not have significant effect on the environment. The expected environmental impacts of the project are documented in the Initial Study on this project, attached to the original of this notice on file with the Planning Department, County of Santa Cruz, 701 Ocean Street, Santa Cruz, California.

Required Mitigation Measures or Conditions:

 None
XX Are Attached

Review Period Ends: October 14, 2009

Date Approved By Environmental Coordinator: Oct 16, 2009

Claudia Slater
CLAUDIA SLATER
Environmental Coordinator
(831) 454-5175

If this project is approved, complete and file this notice with the Clerk of the Board:

NOTICE OF DETERMINATION

The Final Approval of This Project was Granted by _____

on _____ No EIR was prepared under CEQA.
(Date)

THE PROJECT WAS DETERMINED TO NOT HAVE SIGNIFICANT EFFECT ON THE ENVIRONMENT.

Date completed notice filed with Clerk of the Board: _____

NAME: Wallace Ave
APPLICATION: 07-0112
A.P.N: 041-481-04

NEGATIVE DECLARATION MITIGATIONS

1. In order to avoid impacts to special status bats, tree removal activities shall be limited to the months between November 1 and March 1, if feasible.
 - a. If trees must be removed outside of the timeframe above, a qualified biologist shall conduct surveys for special status bats 3-4 weeks prior to site disturbance. If active roosts are present in trees to be retained, roosting bats shall be excluded from trees to be removed prior to any disturbance. In trees to be retained, no disturbance zones, set by the biologist based on the particular species present, shall be fenced off around the subject tree to ensure other construction activities do not harm sensitive species.
 - b. The maternity roosting season for bats is March 1 – July 3. Tree removal should be scheduled outside of the maternal roosting period if special status bats are present. Before any trees are removed during the maternal roosting season, a qualified biologist shall perform surveys. If maternal roosts are present, disturbance shall be avoided until roosts are unoccupied. The biologist shall be responsible for ensuring bat roosts are vacated.
2. In order to avoid impacts to raptors and migratory songbirds, tree removal activities shall be limited to the months between September 1 and February 1, if feasible.
 - a. If trees must be removed outside of the timeframe above, a qualified biologist shall conduct surveys for raptor or migratory songbird nests 3-4 weeks prior to site disturbance.
 - i. If active raptor or migratory bird nests are found in trees to be retained, the biologist shall be required to be on site during any initial vegetation or ground disturbance activities (e.g. vegetation clearing, grading, excavation, tree pruning/removal) that could potentially impact listed species. The biologist shall be responsible for setting and maintaining the disturbance buffers from active nests during construction activities, and buffers and exclusionary measures shall be implemented only after consultation with CDFG.
 - ii. If no active nests are present on the subject parcel, tree removal can proceed provided the mitigations in 1. above have been implemented.
3. In order to adequately mitigate impacts from the proposed development on oak woodland, the applicant shall:
 - a. Remove all invasive acacia and eucalyptus trees;
 - b. Submit a revised tree removal plan and landscape/re-vegetation plan depicting the removal of all non-native tree species;
 - c. Provide an updated arborist's letter which addresses removal of all non-native trees and reviews the landscape/re-vegetation plan for consistency with the goal of oak woodland restoration.
4. In order to mitigate potential impacts from sanitary waste, prior to map recordation the applicant shall provide proof that the property has been annexed into the Santa Cruz County Sanitation District. Prior to final inspection the applicant shall provide proof that all lots have been connected to the sanitary sewer system.



Environmental Review Initial Study

Application Number: **07-0112**

Date: 9/14/09

Staff Planner: Randall Adams

I. OVERVIEW AND ENVIRONMENTAL DETERMINATION

APPLICANT: Owen Lawlor

APN: 041-481-04

OWNER: Richard & Loretta Anderson

SUPERVISORAL DISTRICT: 2

LOCATION: Property located at the end of Wallace Avenue (access between 3105 and 2280 Wallace Avenue), in Aptos.

SUMMARY PROJECT DESCRIPTION: Proposal to divide an approximately 6.08 acre parcel into three parcels of 1.44, 1.34, and 3.30 acres and to construct three single family dwellings.

Requires a Minor Land Division, Residential Development Permit, an exception for access from a right-of-way of less than 40 feet in width, a Roadway/Roadside exception, a Geologic Hazards Assessment, a Geologic Report Review, a Soils Report Review, and annexation into the Santa Cruz County Sanitation District.

ALL OF THE FOLLOWING POTENTIAL ENVIRONMENTAL IMPACTS ARE EVALUATED IN THIS INITIAL STUDY. CATEGORIES THAT ARE MARKED HAVE BEEN ANALYZED IN GREATER DETAIL BASED ON PROJECT SPECIFIC INFORMATION.

<input checked="" type="checkbox"/> Geology/Soils	<input type="checkbox"/> Noise
<input type="checkbox"/> Hydrology/Water Supply/Water Quality	<input type="checkbox"/> Air Quality
<input type="checkbox"/> Biological Resources	<input type="checkbox"/> Public Services & Utilities
<input type="checkbox"/> Energy & Natural Resources	<input type="checkbox"/> Land Use, Population & Housing
<input type="checkbox"/> Visual Resources & Aesthetics	<input type="checkbox"/> Cumulative Impacts
<input type="checkbox"/> Cultural Resources	<input type="checkbox"/> Growth Inducement
<input type="checkbox"/> Hazards & Hazardous Materials	<input type="checkbox"/> Mandatory Findings of Significance
<input type="checkbox"/> Transportation/Traffic	

County of Santa Cruz Planning Department
701 Ocean Street, 4th Floor, Santa Cruz CA 95060

DISCRETIONARY APPROVAL(S) BEING CONSIDERED

<input type="checkbox"/> General Plan Amendment	<input checked="" type="checkbox"/> Grading Permit
<input checked="" type="checkbox"/> Land Division	<input type="checkbox"/> Riparian Exception
<input type="checkbox"/> Rezoning	<input type="checkbox"/> Other:
<input checked="" type="checkbox"/> Development Permit	<input type="checkbox"/>
<input type="checkbox"/> Coastal Development Permit	<input type="checkbox"/>

NON-LOCAL APPROVALS

Other agencies that must issue permits or authorizations:

ENVIRONMENTAL REVIEW ACTION

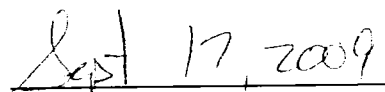
On the basis of this Initial Study and supporting documents:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the attached mitigation measures have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.


Matt Johnston


Date

For: Claudia Slater
Environmental Coordinator

II. BACKGROUND INFORMATION

EXISTING SITE CONDITIONS

Parcel Size: 6.08 acres

Existing Land Use: Vacant

Vegetation: Oak woodland with acacia, pine, and eucalyptus trees

Slope in area affected by project: X 0 - 30% X 31 - 100% (small sections)

Nearby Watercourse: Valencia Creek

Distance To: 1,500 feet

ENVIRONMENTAL RESOURCES AND CONSTRAINTS

Groundwater Supply: Not mapped

Water Supply Watershed: Not mapped

Groundwater Recharge: Not mapped

Timber or Mineral: Not mapped

Agricultural Resource: Not mapped

Biologically Sensitive Habitat: Not mapped

Fire Hazard: Not mapped

Floodplain: Not mapped

Erosion: Not mapped

Landslide: Not mapped

Liquefaction: Low potential

Fault Zone: Not mapped

Scenic Corridor: Not mapped

Historic: Not mapped

Archaeology: Not mapped

Noise Constraint: Not mapped

Electric Power Lines: N/A

Solar Access: Adequate

Solar Orientation: West & south

Hazardous Materials: N/A

SERVICES

Fire Protection: Aptos/La Selva Fire
Protection District

School District: Pajaro Valley Unified

Sewage Disposal: Santa Cruz County
Sanitation District

Drainage District: None

Project Access: Unnamed right of way at
the end of Wallace Avenue

Water Supply: Soquel Creek Water
District

PLANNING POLICIES

Zone District: R-1-1AC

General Plan: R-UVL

Urban Services Line: X Inside

Coastal Zone: Inside

Special Designation: None

 Outside

 X Outside

PROJECT SETTING AND BACKGROUND:

The subject property is approximately 6 acres located on the southeast side of the end of Wallace Avenue in Aptos. The property is accessed via a private right of way which continues on through private property to Huntington Drive. The property is hilly and wooded, with a mix of oak, pine, acacia, and eucalyptus trees. Historic grading appears to have occurred on the southern portion of the property which resulted in three distinct terraces. These terraces are the locations where the three new building sites are proposed. Although this area is located within the Urban Services Line, the surrounding neighborhood has a rural residential character with single family residences on large parcels.

DETAILED PROJECT DESCRIPTION:

This application is a proposal to divide an approximately 6 acre property (into three parcels of 1.44, 1.34, and 3.30 acres) and to construct three single family dwellings (Attachment 2). The three single family dwellings would be located on the existing graded terraces on the subject property. Parking for the residences would be provided on each parcel. A 24 feet wide access road (within a 40 feet wide right of way) would be constructed along the southern property boundary to access the new lots. The access road would terminate in a cul-de-sac on Lot 2. Lot 3 would be accessed by a driveway 12 feet wide, with a hammerhead fire turnaround provided at the end of the driveway. A small section of the roadway from Wallace Drive to the subject property would be constructed to a maximum width of 20 feet, within the existing 20 foot wide right of way adjacent to the subject property. The project requires an exception to the County Design Criteria Urban Local Street Standard, with a reduced roadway width, no sidewalks, or landscaping strips. The small portion of the access road to Wallace Drive within the existing 20 feet wide right of way would require a Residential Development Permit for access on a less than 40 feet wide right of way.

Grading would be required for the access road and driveways to serve the proposed development. Grading volumes would be approximately 1,404 cubic yards (cut) and 208 cubic yards (fill), with the remaining 946 cubic yards to be exported off site. The grading has been minimized through reducing the roadway width and in stepping the houses down the hillside where possible. 144 trees are proposed to be removed to accommodate the proposed development. Many of the trees proposed to be removed are non-native invasive species (acacia & eucalyptus) or are in poor health. 146 replacement trees are indicated on the landscape plan.

This project would require annexation into the Santa Cruz County Sanitation District and all lots would be connected to the public sanitary sewer system.

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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III. ENVIRONMENTAL REVIEW CHECKLIST

A. Geology and Soils

Does the project have the potential to:

1. Expose people or structures to potential adverse effects, including the risk of material loss, injury, or death involving:

A. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or as identified by other substantial evidence?

_____	_____	<u> X </u>	_____
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B. Seismic ground shaking?

_____	_____	<u> X </u>	_____
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C. Seismic-related ground failure, including liquefaction?

_____	_____	<u> X </u>	_____
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D. Landslides?

_____	_____	<u> X </u>	_____
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All of Santa Cruz County is subject to some hazard from earthquakes. However, the project site is not located within or adjacent to a county or state mapped fault zone. A geotechnical investigation for the proposed project was performed by AMSO Consulting Engineers, revised 8/10/07 (Attachment 3). The report concluded that seismic shaking can be managed through proper foundation design, that landslides are not a potential hazard, and that the potential for liquefaction is low. A Geologic Hazards Assessment was performed to assess the stability of the slopes on the subject property (Attachment 4). Following the Geologic Hazards Assessment, a geologic report was prepared by Nielsen & Associates, dated 5/08 (Attachment 5) to allow a reduced slope setback (from 50 feet to 25 feet) for development on the proposed Lot 3. The project geologist determined that a slope setback of 25 feet (from slopes in excess of 30 percent) would provide adequate stability for the building site on proposed Lot 3. The reports have been reviewed and accepted by Environmental Planning staff (Attachment 6).

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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2. Subject people or improvements to damage from soil instability as a result of on- or off-site landslide, lateral spreading, to subsidence, liquefaction, or structural collapse?

_____	_____	X	_____
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The geotechnical and geologic reports cited above did not identify a significant potential for damage caused by any of these hazards.

3. Develop land with a slope exceeding 30%?

_____	_____	X	_____
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There are slopes that exceed 30% on the property and in the area of the proposed development. However, these steeply sloped areas are the result of historic grading to create the three terraces on the property. The project design works with the existing topography to avoid the steeply sloped areas wherever possible and no roadways, driveways, or building sites are proposed on slopes in excess of 30%.

4. Result in soil erosion or the substantial loss of topsoil?

_____	_____	X	_____
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Some potential for erosion exists during the construction phase of the project, however, this potential is minimal because standard erosion controls are a required condition of the project. Prior to approval of a grading or building permit, the project must have an approved Erosion Control Plan, which will specify detailed erosion and sedimentation control measures. The plan will include provisions for disturbed areas to be planted with ground cover and to be maintained to minimize surface erosion.

5. Be located on expansive soil, as defined in section 1802.3.2 of the California Building Code, creating substantial risks to property?

_____	_____	X	_____
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The geotechnical report for the project did not identify any elevated risk associated with expansive soils.

6. Place sewage disposal systems in areas dependent upon soils incapable of adequately supporting the use of septic tanks, leach fields, or alternative waste water disposal systems?

_____	X	_____	_____
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No septic systems are proposed. Annexation to the Santa Cruz County Sanitation District will be required prior to recordation of the parcel map. After annexation, the development will be connected to the Santa Cruz County Sanitation District

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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(Attachment 7). The applicant will be required to pay standard sewer connection and service fees that fund sanitation improvements within the district as a Condition of Approval for the project.

7. Result in coastal cliff erosion? _____ X _____

B. Hydrology, Water Supply and Water Quality

Does the project have the potential to:

1. Place development within a 100-year flood hazard area? _____ X _____

According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated March 2, 2006, no portion of the project site lies within a 100-year flood hazard area.

2. Place development within the floodway resulting in impedance or redirection of flood flows? _____ X _____

According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated March 2, 2006, no portion of the project site lies within a 100-year flood hazard area.

3. Be inundated by a seiche or tsunami? _____ X _____

4. Deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit, or a significant contribution to an existing net deficit in available supply, or a significant lowering of the local groundwater table? _____ X _____

The project would obtain water from Soquel Creek Water District and would not rely on private well water. Although the project would incrementally increase water demand, Soquel Creek Water District has indicated that adequate supplies are available to serve the project as the project is required to participate in the District's offset program (Attachment 8). The project is not located in a mapped groundwater recharge area.

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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5. Degrade a public or private water supply? (Including the contribution of urban contaminants, nutrient enrichments, or other agricultural chemicals or seawater intrusion).

X

Runoff from this project may contain small amounts of chemicals and other household contaminants. No commercial or industrial activities are proposed that would contribute a significant amount of contaminants to a public or private water supply. Potential siltation from the proposed project will be mitigated through implementation of erosion control measures.

6. Degrade septic system functioning?

X

There is no indication that existing septic systems in the vicinity would be affected by the project.

7. Alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner which could result in flooding, erosion, or siltation on or off-site?

X

The proposed project is not located near any watercourses, and would not alter the existing overall drainage pattern of the site. Department of Public Works Drainage Section staff has reviewed and approved the proposed drainage plan.

8. Create or contribute runoff which would exceed the capacity of existing or planned storm water drainage systems, or create additional source(s) of polluted runoff?

X

Drainage Calculations prepared by Ifland Engineers (Attachment 9) have been reviewed for potential drainage impacts and accepted by the Department of Public Works (DPW) Drainage Section staff. The calculations show that the net increase in runoff would be 0.98 cubic feet per second for a ten year storm event before considering the detention systems. The runoff rate from the property will be controlled by recharge chambers on each lot and below ground detention pipes for the access road and driveways as shown on the proposed improvement plans (Attachment 2). Existing downstream storm water facilities are adequate to handle the increase in runoff associated with the project. Refer to response B-5 for discussion of urban contaminants and/or other polluting runoff.

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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9. Contribute to flood levels or erosion in natural water courses by discharges of newly collected runoff?

_____ X _____

See response B-8 above.

10. Otherwise substantially degrade water supply or quality?

_____ X _____

Best Management Practices and treatment of road and driveway runoff are proposed to minimize the effects of urban pollutants.

C. Biological Resources

Does the project have the potential to:

1. Have an adverse effect on any species identified as a candidate, sensitive, or special status species, in local or regional plans, policies, or regulations, or by the California Department of Fish and Game, or U.S. Fish and Wildlife Service?

_____ X _____

According to the California Natural Diversity Data Base (CNDDDB), maintained by the California Department of Fish and Game, there are no known special status plant or animal species in the site vicinity, and there were no special status species observed in the project area.

2. Have an adverse effect on a sensitive biotic community (riparian corridor), wetland, native grassland, special forests, intertidal zone, etc.)?

_____ X _____

There are no mapped sensitive biotic communities on or adjacent to the project site. Oak woodlands (protected under California Public Resources Code 21083.4) are present on the project site. The oak woodland would be affected by the proposed project, through tree removals and site disturbance. An arborist's report, prepared by Maureen Hamb, dated 2/21/07 & 8/27/07 (Attachment 10), discusses the health of the trees and the proposed tree removals. The 144 trees to be removed include oaks, pines, and non-native species (eucalyptus and acacia) and 46 replacement oak trees are proposed to compensate the 12 oak trees to be removed. County Code (Section 16.32 - Sensitive Habitat Ordinance and the General Plan (Policies 5.1.5 - Land Division and Density Requirements in Sensitive Habitats & 5.1.6 Development within Sensitive Habitats) limits development of sensitive habitat areas and requires that any proposed development maintain or enhance the functional capacity of the habitat area.

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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The project has been designed to minimize impacts to the oak woodland by locating building sites within existing disturbed areas, through the removal of invasive tree species, and the planting of replacement oak trees and other native species. In order to adequately mitigate impacts from the proposed development, it will be necessary to: remove all invasive acacia and eucalyptus trees; to submit a revised tree removal plan and landscape/re-vegetation plan depicting the removal of all non-native tree species; and to provide an updated arborist's letter which discusses removal of all non-native trees and reviews the landscape/re-vegetation plan for consistency with the goal of oak woodland restoration. With these mitigations, the removal of the invasive tree species and the 3:1 oak tree replacement ratio will prevent any adverse effect on the oak woodland on the subject property associated with the proposed project.

Removal of a large stand of trees has the potential to impact bats and birds that are protected under state and federal laws. In order to avoid impacts to bats, raptors or migratory songbirds, tree removal activities shall be limited to the months between September 1 and December 15, if feasible.

If trees must be removed outside of that timeframe, surveys for protected species shall be conducted prior to site disturbance. If active nests are present in trees to be retained, no disturbance zones, set by a qualified biologist based on the particular species present, will be fenced off around the subject tree to ensure other construction activities do not harm sensitive species. In order to prevent impacts to special status bat species, before any trees are removed outside of the maternity roost season (March 1 – July 31), a qualified biologist shall perform surveys. Roosting bats shall be excluded from trees prior to disturbance. If maternal roosts are present, disturbance shall be avoided until roosts are unoccupied.

If active raptor, migratory bird, or bat nests or roosts are found in trees to be retained, a qualified biologist shall be required to be on site during any initial vegetation or ground disturbance activities (e.g. vegetation clearing, grading, excavation, tree pruning/removal) that could potentially impact listed species. Roosting bats shall be excluded from trees prior to any disturbance. The biologist shall be responsible for setting and maintaining the disturbance buffers from active nests during construction activities, and for ensuring bat roosts are vacated. Buffers and exclusionary measures shall be implemented only after consultation with CDFG.

3. Interfere with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native or migratory wildlife nursery sites?

X

The proposed project does not involve any activities that would interfere with the movements or migrations of fish or wildlife, or impede use of a known wildlife nursery site.

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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4. Produce nighttime lighting that will illuminate animal habitats?

_____	_____	X	_____
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The subject property is surrounded by existing residential development that currently generates nighttime lighting.

5. Make a significant contribution to the reduction of the number of species of plants or animals?

_____	_____	X	_____
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See responses C-1 and C-2 above.

6. Conflict with any local policies or ordinances protecting biological resources (such as the Significant Tree Protection Ordinance, Sensitive Habitat Ordinance, provisions of the Design Review ordinance protecting trees with trunk sizes of 6 inch diameters or greater)?

_____	X	_____	_____
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See response C-2. County Code (Section 16.32 - Sensitive Habitat Ordinance and the General Plan (Policies 5.1.5 - Land Division and Density Requirements in Sensitive Habitats & 5.1.6 Development within Sensitive Habitats) limit development of sensitive habitat areas and require that any proposed development maintain or enhance the functional capacity of the habitat area. In addition to the 46 proposed replacement oak trees, the project would result in the planting of an additional 100 replacement trees (for a total of 146 replacement trees) to compensate for the 144 tree removals (including the 12 oak trees to be removed) on the subject property. The site design for the proposed project takes the location of existing trees into consideration and the proposal is not in conflict with the County Design Review ordinance.

7. Conflict with the provisions of an adopted Habitat Conservation Plan, Biotic Conservation Easement, or other approved local, regional, or state habitat conservation plan?

_____	_____	_____	X
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Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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D. Energy and Natural Resources

Does the project have the potential to:

- | | | | | | |
|----|--|-------|-------|-------|-------------|
| 1. | Affect or be affected by land designated as "Timber Resources" by the General Plan? | _____ | _____ | _____ | _____X_____ |
| 2. | Affect or be affected by lands currently utilized for agriculture, or designated in the General Plan for agricultural use? | _____ | _____ | _____ | _____X_____ |

The project site is not currently being used for agriculture and no agricultural uses are proposed for the site or surrounding vicinity.

- | | | | | | |
|----|--|-------|-------|-------|-------------|
| 3. | Encourage activities that result in the use of large amounts of fuel, water, or energy, or use of these in a wasteful manner? | _____ | _____ | _____ | _____X_____ |
| 4. | Have a substantial effect on the potential use, extraction, or depletion of a natural resource (i.e., minerals or energy resources)? | _____ | _____ | _____ | _____X_____ |

E. Visual Resources and Aesthetics

Does the project have the potential to:

- | | | | | | |
|----|---|-------|-------|-------------|-------|
| 1. | Have an adverse effect on a scenic resource, including visual obstruction of that resource? | _____ | _____ | _____X_____ | _____ |
|----|---|-------|-------|-------------|-------|

The project would not directly impact any public scenic resources, as designated in the County's General Plan (1994), or obstruct any public views of these visual resources.

- | | | | | | |
|----|--|-------|-------|-------------|-------|
| 2. | Substantially damage scenic resources, within a designated scenic corridor or public view shed area including, but not limited to, trees, rock outcroppings, and historic buildings? | _____ | _____ | _____X_____ | _____ |
|----|--|-------|-------|-------------|-------|

The project site is not located along a County designated scenic road or within a designated scenic resource area.

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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3. Degrade the existing visual character or quality of the site and its surroundings, including substantial change in topography or ground surface relief features, and/or development on a ridge line?

_____ X _____

The existing visual setting is a vacant parcel within an existing developed residential area. The proposed project is designed and landscaped as an infill project to fit into this setting.

4. Create a new source of light or glare which would adversely affect day or nighttime views in the area?

_____ X _____

The project would create an incremental increase in night lighting. However, this increase would be small, and would be similar in character to the lighting associated with the surrounding existing uses.

5. Destroy, cover, or modify any unique geologic or physical feature?

_____ X _____

There are no unique geological or physical features on or adjacent to the site that would be destroyed, covered, or modified by the project.

F. Cultural Resources

Does the project have the potential to:

1. Cause an adverse change in the significance of a historical resource as defined in CEQA Guidelines 15064.5?

_____ X _____

There are no designated historic resources on the subject property.

2. Cause an adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines 15064.5?

_____ X _____

No archeological resources have been identified in the project area. Pursuant to County Code Section 16.40.040, if at any time in the preparation for or process of excavating or otherwise disturbing the ground, any human remains of any age, or any artifact or other evidence of a Native American cultural site which reasonably appears to exceed 100 years of age are discovered, the responsible persons shall immediately cease and desist from all further site excavation and comply with the notification

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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procedures given in County Code Chapter 16.40.040.

3. Disturb any human remains, including those interred outside of formal cemeteries?

_____ X _____

Pursuant to Section 16.40.040 of the Santa Cruz County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this project, human remains are discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the sheriff-coroner and the Planning Director. If the coroner determines that the remains are not of recent origin, a full archeological report shall be prepared and representatives of the local Native California Indian group shall be contacted. Disturbance shall not resume until the significance of the archeological resource is determined and appropriate mitigations to preserve the resource on the site are established.

4. Directly or indirectly destroy a unique paleontological resource or site?

_____ X _____

G. Hazards and Hazardous Materials

Does the project have the potential to:

1. Create a significant hazard to the public or the environment as a result of the routine transport, storage, use, or disposal of hazardous materials, not including gasoline or other motor fuels?

_____ X _____

2. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

_____ X _____

The project site is not included on the 7/31/09 list of hazardous sites in Santa Cruz County compiled pursuant to the specified code.

3. Create a safety hazard for people residing or working in the project area as a result of dangers from aircraft using a public or private airport located within two miles of the project site?

_____ X _____

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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4. Expose people to electro-magnetic fields associated with electrical transmission lines?	_____	_____	_____	X
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5. Create a potential fire hazard?	_____	_____	X	_____
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The project design incorporates all applicable fire safety code requirements and will include fire protection devices as required by the local fire agency.

6. Release bio-engineered organisms or chemicals into the air outside of project buildings?	_____	_____	_____	X
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H. Transportation/Traffic

Does the project have the potential to:

1. Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	_____	_____	X	_____
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The project would create a small incremental increase in traffic on nearby roads and intersections. However, given the small number of new trips created by the project (3 new peak trips - 1 new peak trip per dwelling unit), this increase is less than significant. Further, the increase would not cause the Level of Service at any nearby intersection to drop below Level of Service D.

2. Cause an increase in parking demand which cannot be accommodated by existing parking facilities?	_____	_____	X	_____
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The project meets the code requirements for the required number of parking spaces and therefore new parking demand will be accommodated on site.

3. Increase hazards to motorists, bicyclists, or pedestrians?	_____	_____	X	_____
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The proposed project would include an exception to the County Design criteria for the shared access driveway, which is considered as a new roadway because it serves 3 or more residences. The County standard for new roadways is a 56 foot wide right of way with parking, sidewalks, and landscape strips on both sides. The project design

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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includes an exception to reduce the driveway shared by Lots 1, 2 & 3 to a 24 foot wide paved surface with no parking along the driveway. Parking would be provided on each individual parcel. Due to the limited amount of traffic along the proposed driveway, adequate pavement width, and an open line of sight, pedestrians and bicycles would be able to share the driveway with motor vehicles without causing a potential hazard to motorists, bicyclists, and/or pedestrians.

4. Exceed, either individually (the project alone) or cumulatively (the project combined with other development), a level of service standard established by the county congestion management agency for designated intersections, roads or highways?

_____ X _____

See response H-1 above.

I. Noise

Does the project have the potential to:

1. Generate a permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

_____ X _____

The project would create an incremental increase in the existing noise environment. However, this increase would be small, and would be similar in character to noise generated by the surrounding existing uses.

2. Expose people to noise levels in excess of standards established in the General Plan, or applicable standards of other agencies?

_____ X _____

Per County policy, average hourly noise levels shall not exceed the General Plan threshold of 50 Leq during the day and 45 Leq during the nighttime. Impulsive noise levels shall not exceed 65 db during the day or 60 db at night. The project is not located near any known noise generation sources which would exceed the noise thresholds established in the County General Plan.

3. Generate a temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

_____ X _____

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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Noise generated during construction would increase the ambient noise levels for adjoining areas. Construction would be temporary, however, and given the limited duration of this impact it is considered to be less than significant.

J. Air Quality

Does the project have the potential to:
(Where available, the significance criteria established by the MBUAPCD may be relied upon to make the following determinations).

- | | |
|--|---|
| 1. Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | <div style="display: flex; justify-content: space-around; border-bottom: 1px solid black; margin-bottom: 5px;"> X </div> |
|--|---|

The North Central Coast Air Basin does not meet State standards for ozone and particulate matter (PM₁₀). Therefore, the regional pollutants of concern that would be emitted by the project are ozone precursors (Volatile Organic Compounds [VOCs] and nitrogen oxides [NO_x]), and dust.

Given the modest amount of new traffic that would be generated by the project there is no indication that new emissions of VOCs or NO_x would exceed Monterey Bay Unified Air Pollution Control District (MBUAPCD) thresholds for these pollutants and therefore there would not be a significant contribution to an existing air quality violation.

- | | |
|---|---|
| 2. Conflict with or obstruct implementation of an adopted air quality plan? | <div style="display: flex; justify-content: space-around; border-bottom: 1px solid black; margin-bottom: 5px;"> X </div> |
|---|---|

The project would not conflict with or obstruct implementation of the regional air quality plan. See J-1 above.

- | | |
|---|---|
| 3. Expose sensitive receptors to substantial pollutant concentrations? | <div style="display: flex; justify-content: space-around; border-bottom: 1px solid black; margin-bottom: 5px;"> X </div> |
| 4. Create objectionable odors affecting a substantial number of people? | <div style="display: flex; justify-content: space-around; border-bottom: 1px solid black; margin-bottom: 5px;"> X </div> |

K. Public Services and Utilities

Does the project have the potential to:

1. Result in the need for new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other

performance objectives for any of the public services:

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
a. Fire protection?	_____	_____	X	_____
b. Police protection?	_____	_____	X	_____
c. Schools?	_____	_____	X	_____
d. Parks or other recreational activities?	_____	_____	X	_____
e. Other public facilities; including the maintenance of roads?	_____	_____	X	_____

While the project represents an incremental contribution to the need for services, the increase would be minimal. Moreover, the project meets all of the standards and requirements identified by the local fire agency and school, park, and transportation fees paid by the applicant will be used to offset the incremental increase in demand for school and recreational facilities and public roads.

2. Result in the need for construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	_____	_____	X	_____
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Drainage analysis of the project Ifland Engineers (Attachment 9) concluded that existing downstream facilities are adequate to serve the proposed project. Department of Public Works Drainage staff have reviewed the drainage information and have determined that downstream storm facilities are adequate to handle the increase in drainage associated with the project (Attachment 7).

3. Result in the need for construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	_____	X	_____	_____
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The project would connect to an existing municipal water supply. Soquel Creek Water District has determined that adequate supplies are available to serve the project (Attachment 8).

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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The subject property is located within the Urban Services Line and is not connected to the public sewer system. Public sewer connections will be available to serve the project, after annexation into the Santa Cruz County Sanitation District as reflected in the comments from Santa Cruz County Sanitation District staff (Attachment 7). In order to mitigate potential impacts from sanitary waste, it will be necessary for the property to be annexed into the Santa Cruz County Sanitation District prior to map recordation, and all lots shall be connected to the sanitary sewer system prior to final inspection. Septic systems shall not be allowed to serve the proposed parcels.

4. Cause a violation of wastewater treatment standards of the Regional Water Quality Control Board?

X

The project's wastewater flows would not violate any wastewater treatment standards.

5. Create a situation in which water supplies are inadequate to serve the project or provide fire protection?

X

The water mains serving the project site provide adequate flows and pressure for fire suppression. Additionally, the fire agency has reviewed and approved the project plans, assuring conformity with fire protection standards that include minimum requirements for water supply for fire protection.

6. Result in inadequate access for fire protection?

X

The project's road access has been approved by the local fire agency.

7. Make a significant contribution to a cumulative reduction of landfill capacity or ability to properly dispose of refuse?

X

The project would make an incremental contribution to the reduced capacity of regional landfills. However, this contribution would be relatively small and would be of similar magnitude to that created by existing land uses around the project.

8. Result in a breach of federal, state, and local statutes and regulations related to solid waste management?

X

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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L. Land Use, Population, and Housing

Does the project have the potential to:

1. Conflict with any policy of the County adopted for the purpose of avoiding or mitigating an environmental effect?

_____ X _____

See responses C-2 & C-6 regarding sensitive habitat protection. The proposed project does not conflict with any other policies adopted for the purpose of avoiding or mitigating an environmental effect.

2. Conflict with any County Code regulation adopted for the purpose of avoiding or mitigating an environmental effect?

_____ X _____

See responses C-2 & C-6 regarding sensitive habitat protection. The proposed project does not conflict with any other regulations adopted for the purpose of avoiding or mitigating an environmental effect.

3. Physically divide an established community?

_____ X _____

The project does not include any element that would physically divide an established community.

4. Have a potentially significant growth inducing effect, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

_____ X _____

The proposed project is designed at the density and intensity of development allowed by the General Plan and zoning designations for the parcel. Additionally, the parcel is within the Urban Services Line and within the sphere of influence of the Santa Cruz County Sanitation District. Therefore, annexation of the project into the Santa Cruz County Sanitation District is not expected to have a significant growth-inducing effect.

5. Displace substantial numbers of people, or amount of existing housing, necessitating the construction of replacement housing elsewhere?

_____ X _____

The proposed project would entail a net gain in housing units.

M. Non-Local Approvals

Does the project require approval of federal, state, or regional agencies?

Yes _____ No X

N. Mandatory Findings of Significance

1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant, animal, or natural community, or eliminate important examples of the major periods of California history or prehistory?

Yes _____ No X

2. Does the project have the potential to achieve short term, to the disadvantage of long term environmental goals? (A short term impact on the environment is one which occurs in a relatively brief, definitive period of time while long term impacts endure well into the future)

Yes _____ No X

3. Does the project have impacts that are individually limited, but cumulatively considerable ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, and the effects of reasonably foreseeable future projects which have entered the Environmental Review stage)?

Yes _____ No X

4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Yes _____ No X

TECHNICAL REVIEW CHECKLIST

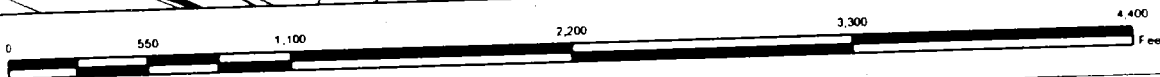
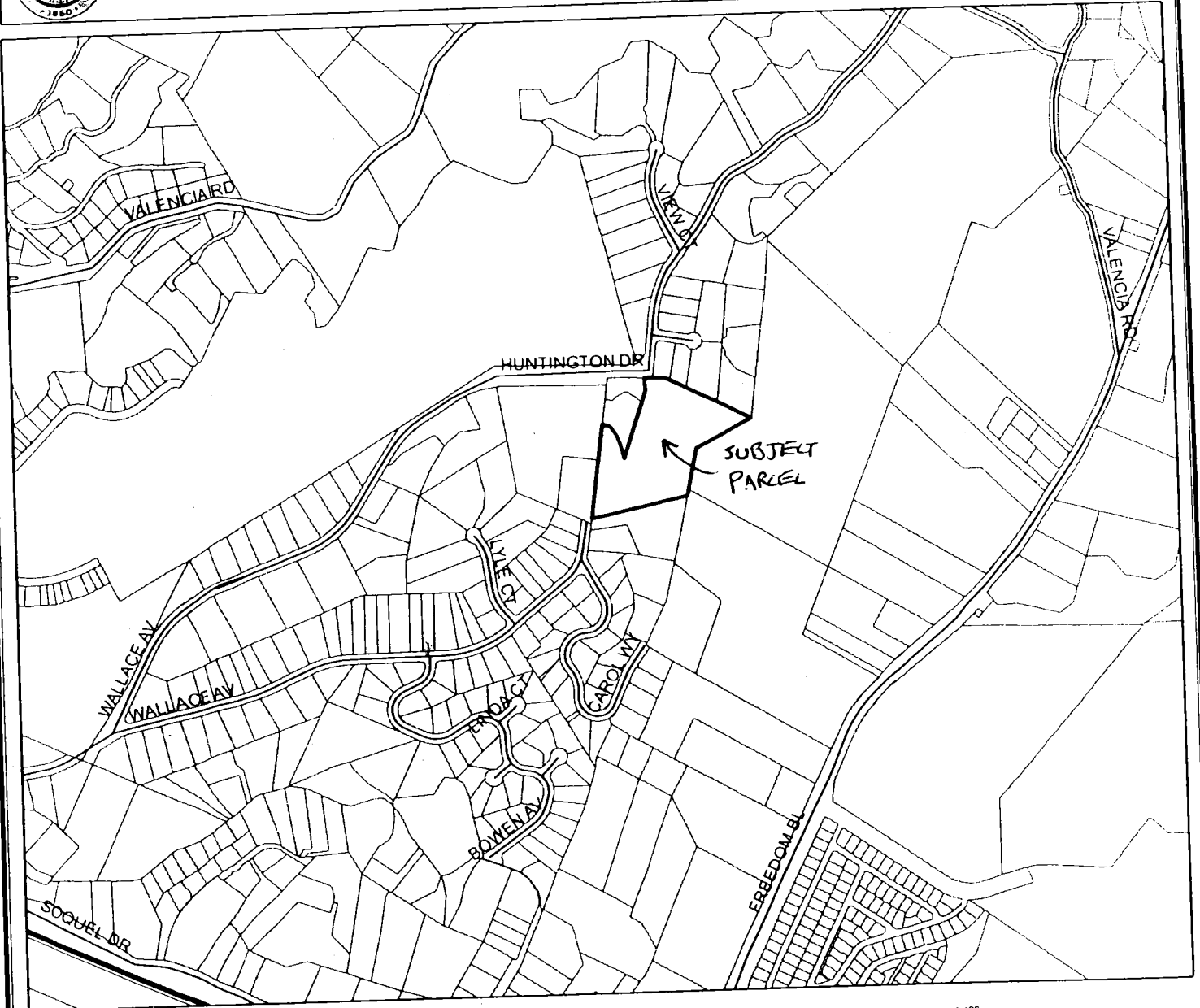
	<u>REQUIRED</u>	<u>COMPLETED</u>	<u>N/A</u>
Agricultural Policy Advisory Commission (APAC) Review	_____	_____	X
Archaeological Review	_____	_____	X
Biotic Report/Assessment	_____	_____	X
Geologic Hazards Assessment (GHA)	_____	XXX	_____
Geologic Report	_____	XXX	_____
Geotechnical (Soils) Report	_____	XXX	_____
Riparian Pre-Site	_____	_____	_____
Septic Lot Check	_____	_____	_____
Other:	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

Attachments:





1. Location Map, Map of Zoning Districts, Map of General Plan Designations, Assessors Parcel Map
2. Tentative Map prepared by Ifland Engineers, revised 7/14/09; Preliminary Improvement Plans prepared by Andrew C. Radovan Civil Engineer, revised 6/30/09; Landscape Plan prepared by SSA Landscape Architects, dated 3/4/09; Architectural Plans prepared by Anderson McKelvey Architecture & Planning, dated 7/21/08.
3. Geotechnical Investigation (Conclusions and Recommendations) prepared by AMSO Consulting Engineers, revised 8/10/07.
4. Geologic Hazards Assessment, prepared by Joe Hanna - County Geologist, dated 4/8/08.
5. Geologic Investigation (Conclusions and Recommendations) prepared by Nielsen & Associates, dated 5/08.
6. Geologic and Geotechnical Report Review Letter prepared by Joe Hanna - County Geologist, dated 8/12/08.
7. Discretionary Application Comments, dated 8/13/09.
8. Letter from Soquel Creek Water District, dated 9/2/09.
9. Drainage calculations (Summary) prepared by Ifland Engineers, undated, received 9/24/07.
10. Arborist's Report prepared by Maureen Hamb, dated 2/21/07 & 8/27/07.

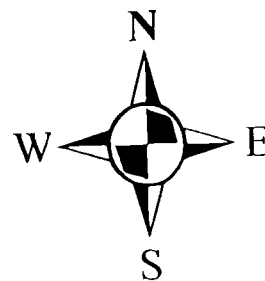


Location Map



Legend

-  APN 041-481-04
-  Assessors Parcels
-  County Maintained Streets
-  State Highways

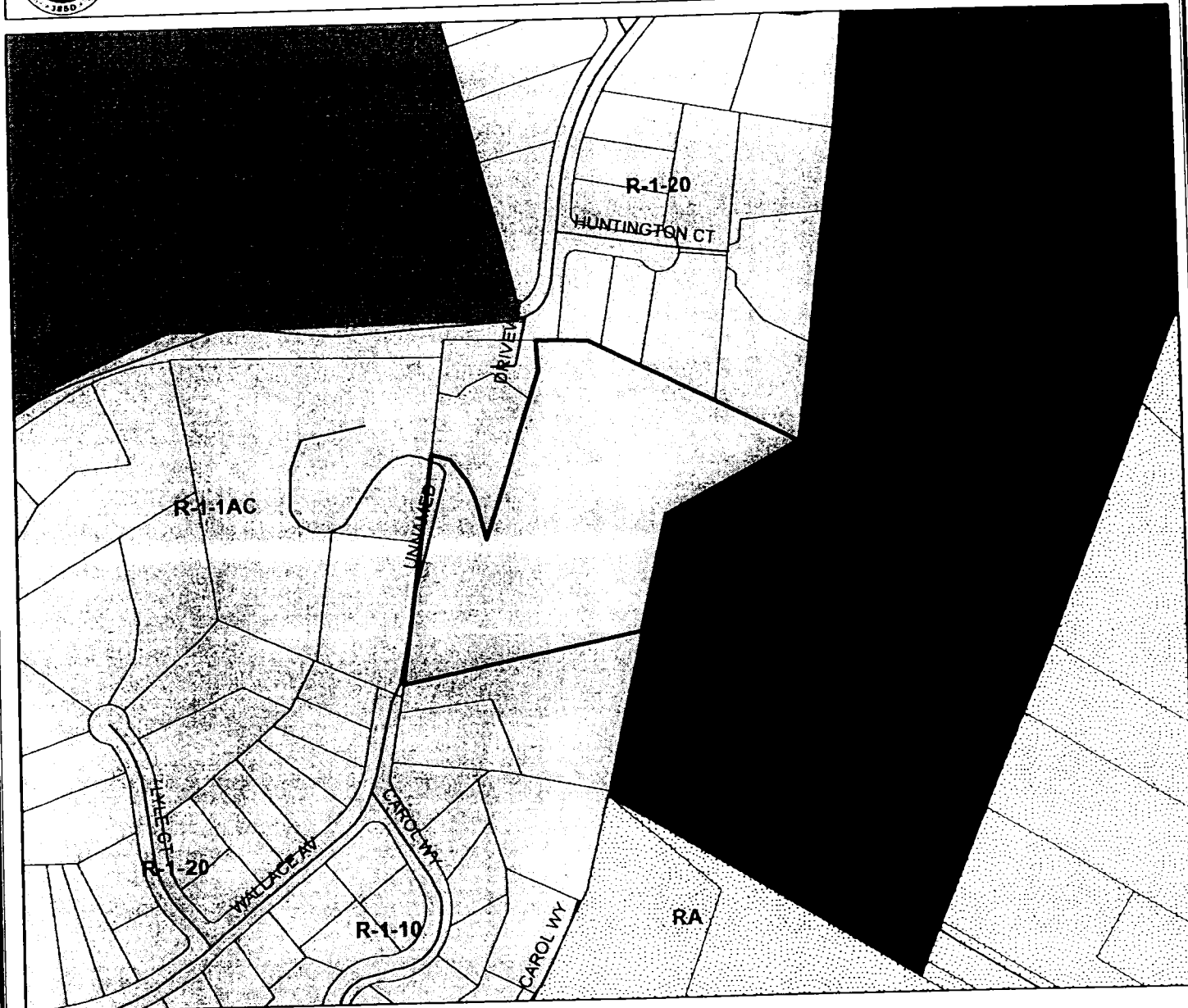


Map Created by
County of Santa Cruz
Planning Department
March 2007

Attachment 1

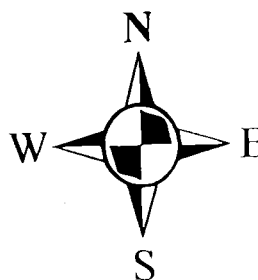


Zoning Map



Legend

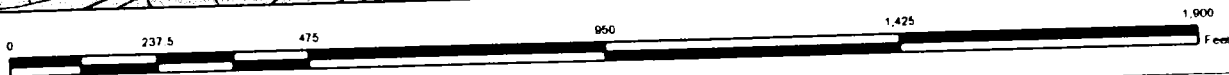
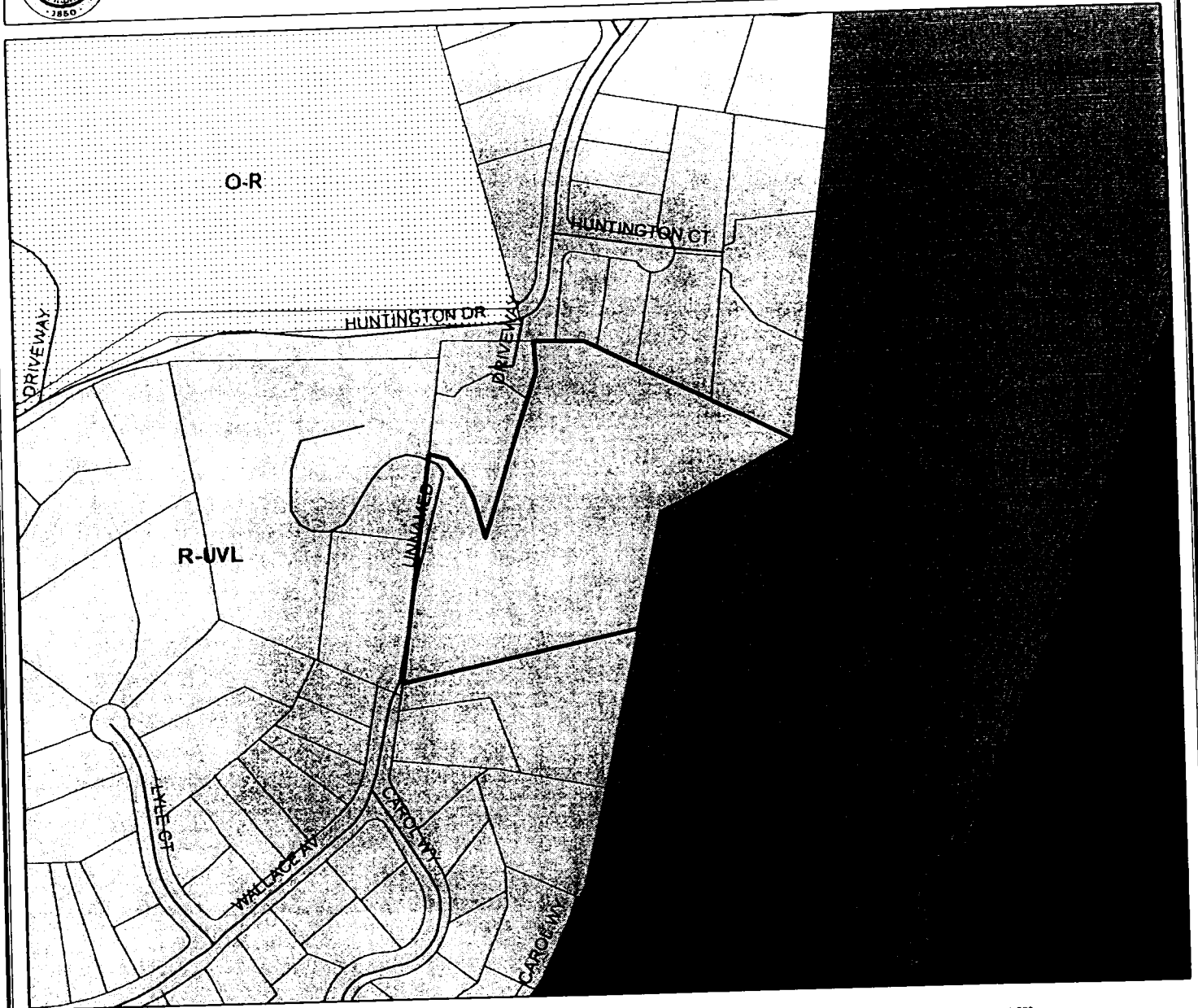
- APN 041-481-04
- Assessors Parcels
- Streets
- RESIDENTIAL-SINGLE FAMILY (R-1)
- PARK (PR)
- AGRICULTURE (A)
- AGRICULTURE RESIDENTIAL (RA)










Map Created by
County of Santa Cruz
Planning Department
March 2007

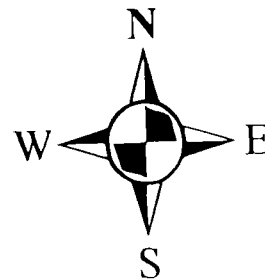


General Plan Designation Map



Legend

-  APN 041-481-04
-  Assessors Parcels
-  Streets
-  Residential - Urban Very Low Density (R-UVL)
-  Agriculture (AG)
-  Residential-Rural (R-R)
-  Parks and Recreation (O-R)



Map Created by
County of Santa Cruz
Planning Department
March 2007

FOR TAX PURPOSES ONLY
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 LIABILITY FOR OTHER USES. NOT TO BE REPRODUCED. ALL RIGHTS RESERVED.
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(20)

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SEC. 16 & 17, T.11S., R.1E., M.D.B. & M.

POR. APTOS RANCHO

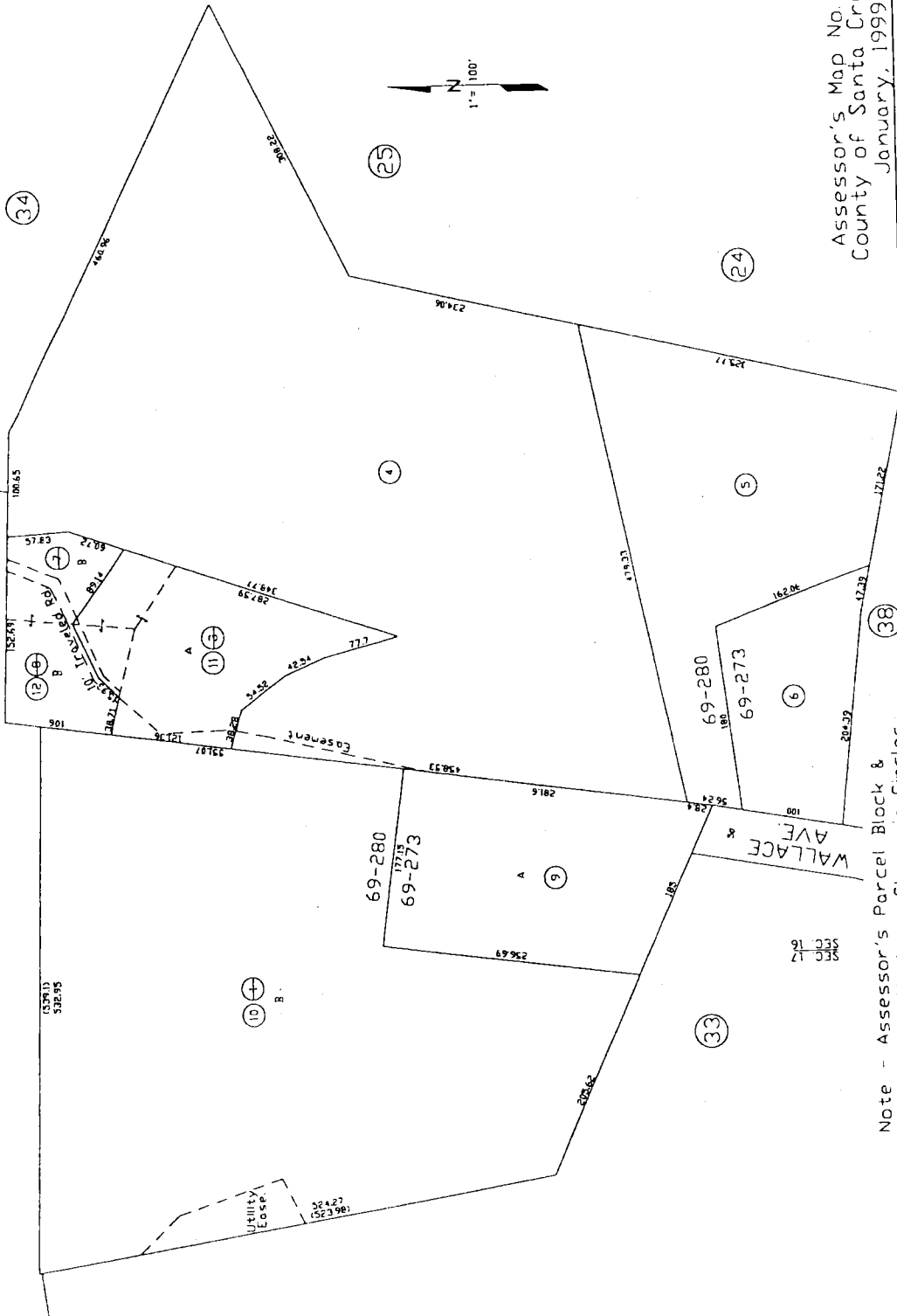
Tax Area Code
 69-273 69-280

41-48

36PM54
 9/30/80

DR.

HUNTINGTON



29PM60
 6/19/78

Assessor's Map No. 41-48
 County of Santa Cruz, Calif.
 January, 1999

Note - Assessor's Parcel Block &
 Lot Numbers Shown in Circles.

[illegible]

1. Name of the person or organization that is the subject of the report
 2. Date of the report
 3. Name of the person or organization that is the author of the report
 4. Title of the report
 5. Summary of the report
 6. Details of the report
 7. Conclusion of the report
 8. Recommendations of the report
 9. Other information

[illegible]

NOT A CASE REPORT • 4870 EMB • 4 FEBRUARY 2005

[illegible]

531 TOQUEL AVE
SANTA CRUZ, CA 95062
VOICE: 831 437 8348
FAX: 831 673 2776



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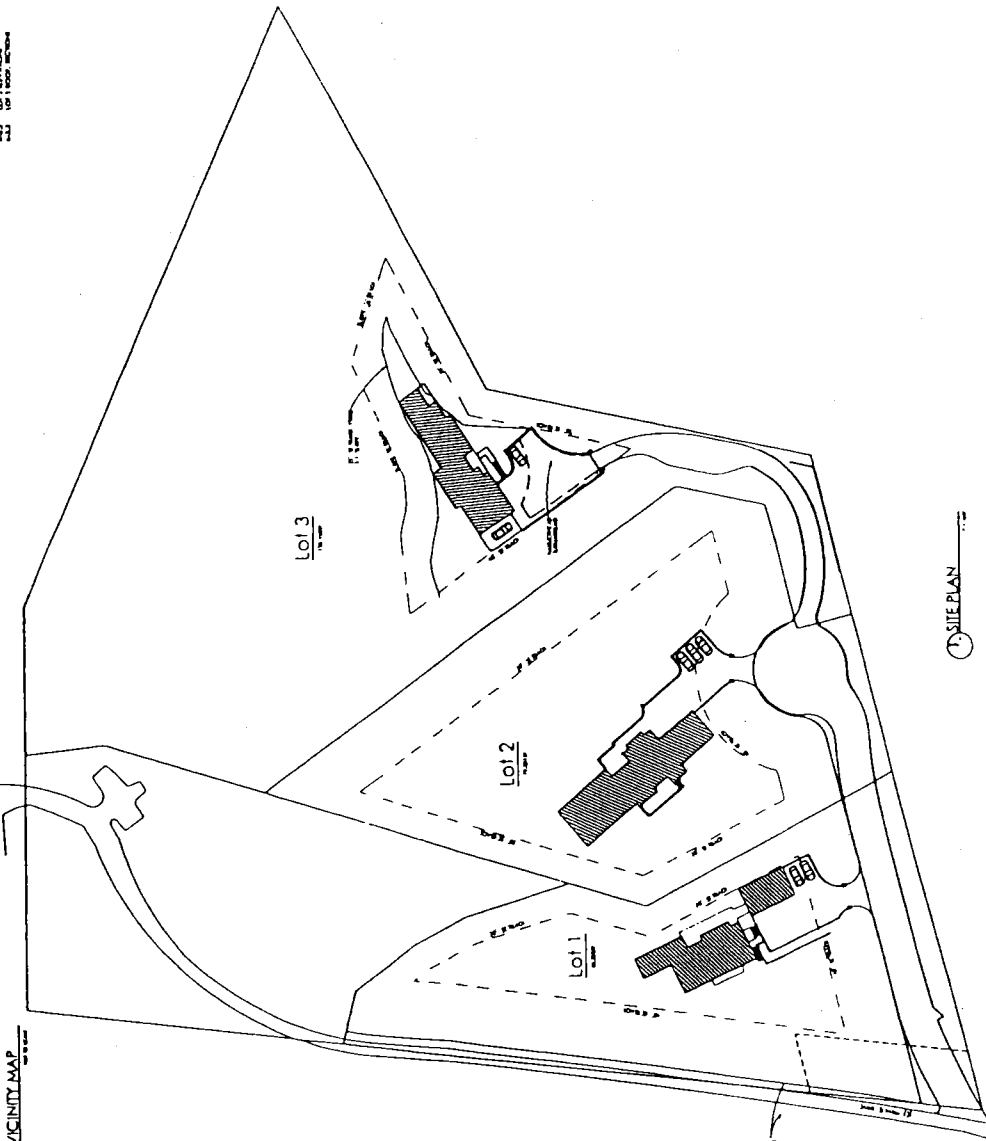
C

○

A-O



VICINITY MAP



1. SITE PLAN

Project Data

Owner & Subdivider

RICHARD ANDERSON
10 BROWNS VALLEY RD
CORRALVILLE, CA 95076
PHONE: (415) 734-1881
FAX: (415) 734-1766

Existing Zoning

R-1.1

Existing Use

VACANT

Proposed Use

DIVIDE PARCEL TO CREATE THREE BUILDING SITES

Water Supply

SOQUEL CREEK WATER DISTRICT

Sewer Disposal

SANTA CRUZ COUNTY SANITATION DISTRICT

Gas & Electric

PACIFIC GAS & ELECTRIC

Area Subject to Easement

NONE

Total Area of Site

8.08 ACRES

PARCEL A 2.9 PM 40
A.P.N. 041-471-09
CALLE AND LILA
CARRASCO 4675 OR 4681

PARCEL B 2.9 PM 40
A.P.N. 041-471-10
ROBERT BRASSFIELD
1527 OR 1541

3/4 PM 54 PARCEL A
A.P.N. 041-471-11
MADE AND CLONIS
BURDICK
5897 OR 59

A.P.N. 041-501-12
HAROLD AND
FRANCIS HELGSON
2017-10-10-2018

A.P.N. 041-501-09
CALLE AND LILA
CARRASCO
4675 OR 4681

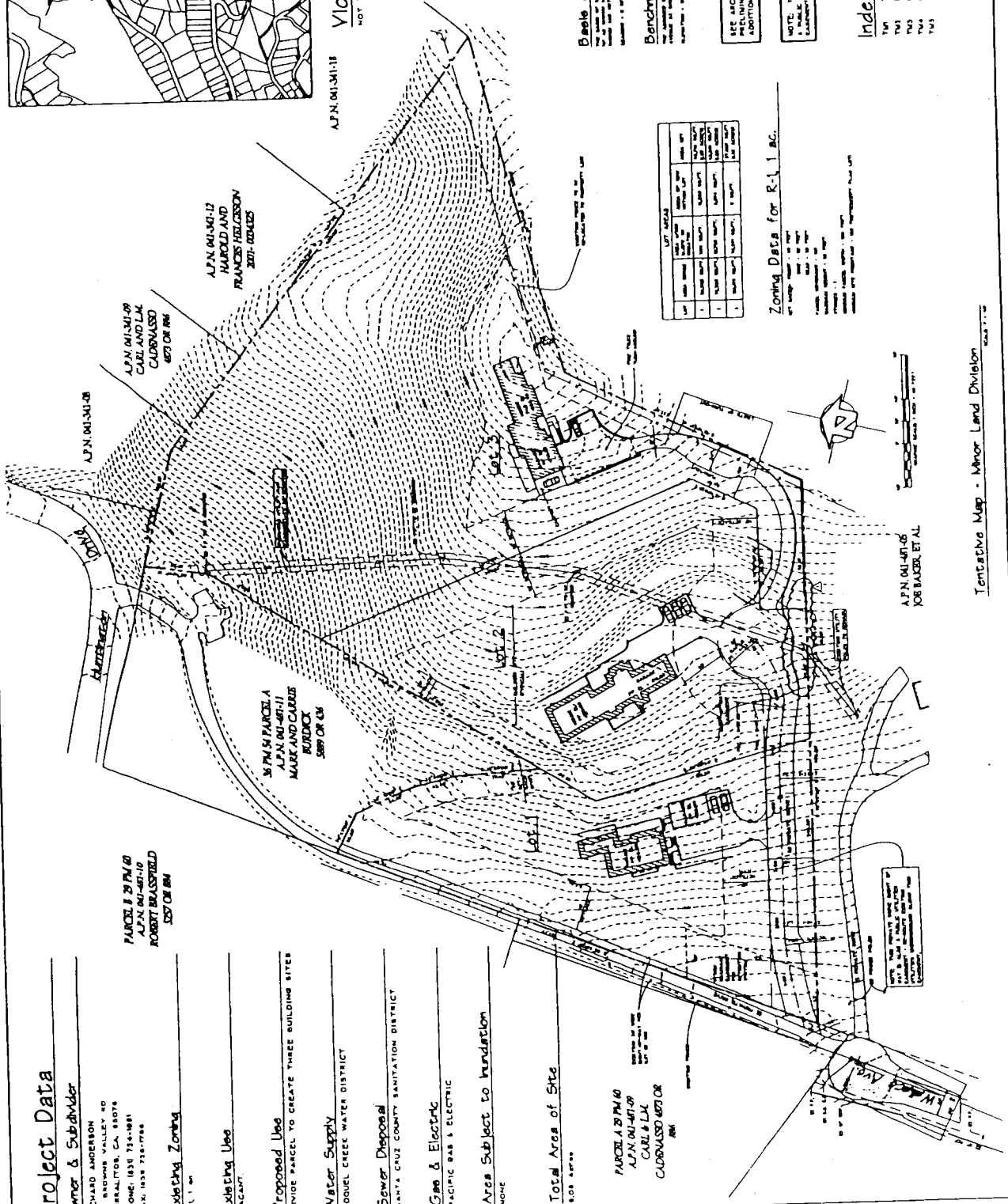
A.P.N. 041-501-08



Vicinity Map

NOT TO SCALE

A.P.N. 041-501-18



LOT	AREA	AREA	AREA	AREA	AREA	AREA	AREA	AREA	AREA
1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
10	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

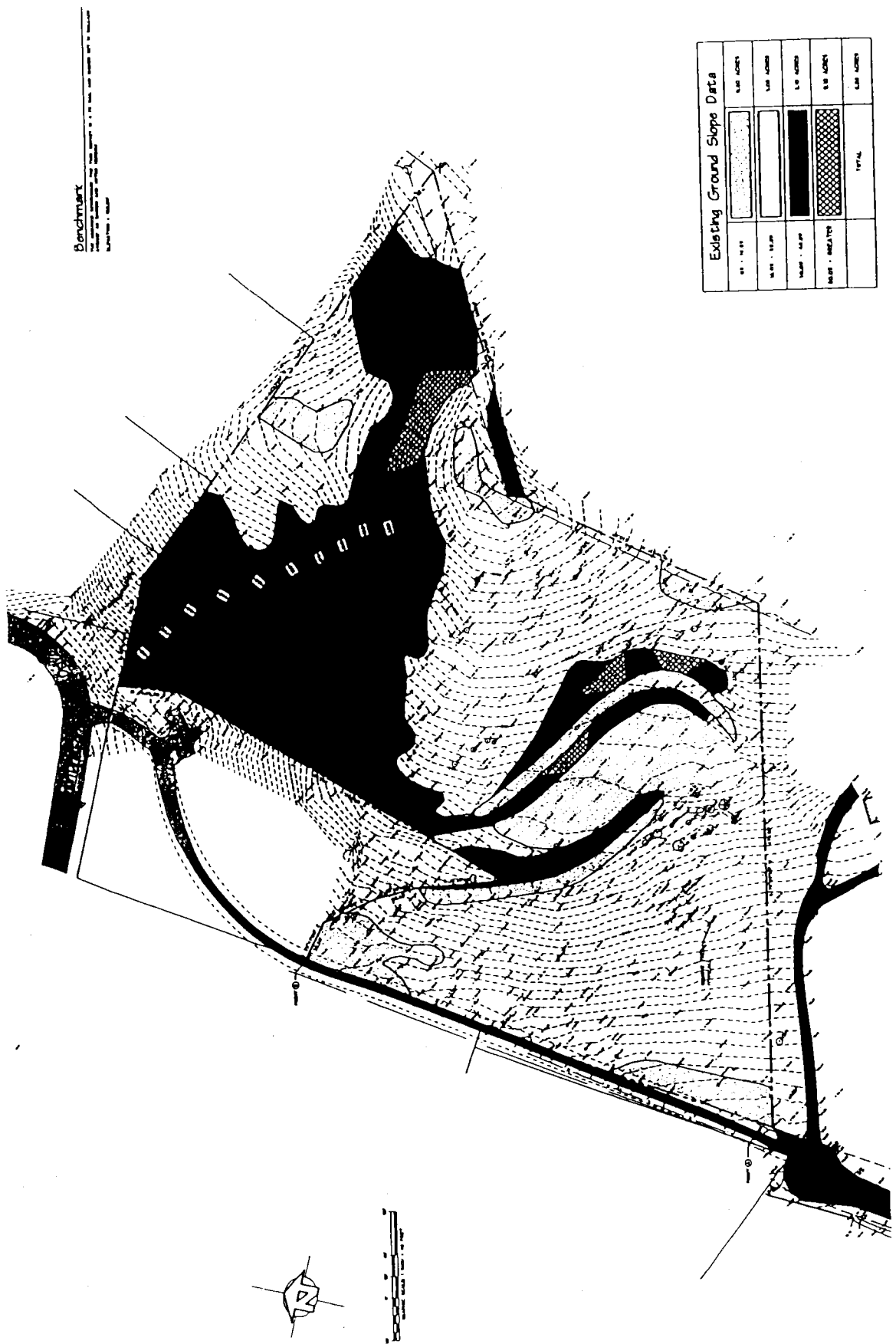
Zoning Data for R-1.1 AC.

Lot 1: 1.0 acre
Lot 2: 1.0 acre
Lot 3: 1.0 acre
Total: 3.0 acres
Zoning: R-1.1 AC
Setback: 10 feet
Height: 10 feet
Area: 1.0 acre
Volume: 1.0 acre
Density: 1.0 acre
Use: Residential
Notes: The lot area is based on the official map of Santa Cruz County. The lot area is not to be used for any other purpose.

A.P.N. 041-471-06
JOE BAKER ET AL

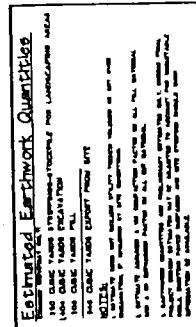
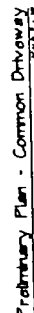
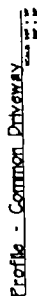
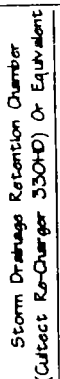
Tentative Map - Minor Land Division

041-501-18

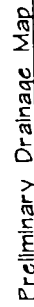


Existing Ground Slope Data	
0% - 10%	1.00 ACRES
10% - 15%	1.00 ACRES
15% - 20%	1.00 ACRES
20% - 25%	1.00 ACRES
25% - 30%	1.00 ACRES
30% - 35%	1.00 ACRES
35% - 40%	1.00 ACRES
40% - 45%	1.00 ACRES
45% - 50%	1.00 ACRES
50% - 55%	1.00 ACRES
55% - 60%	1.00 ACRES
60% - 65%	1.00 ACRES
65% - 70%	1.00 ACRES
70% - 75%	1.00 ACRES
75% - 80%	1.00 ACRES
80% - 85%	1.00 ACRES
85% - 90%	1.00 ACRES
90% - 95%	1.00 ACRES
95% - 100%	1.00 ACRES
TOTAL	1.00 ACRES

Slope Map & Existing Trees



THERE ARE NO EXISTING IMPERVIOUS SURFACES ON THIS SITE.

[illegible]

C1

DATE	10/1/81
BY	ANDREW C. RADOVAN
CHECKED BY	ANDREW C. RADOVAN
SCALE	AS SHOWN
PROJECT	WALLACE AVE. APTOS, CA 95003
APN	041-481-04

WALLACE AVE.
APTOS, CA 95003
APN 041-481-04

WINDOR LAND DIVISION
WALLACE AVE.
LOT 1 CROWDING PLAN

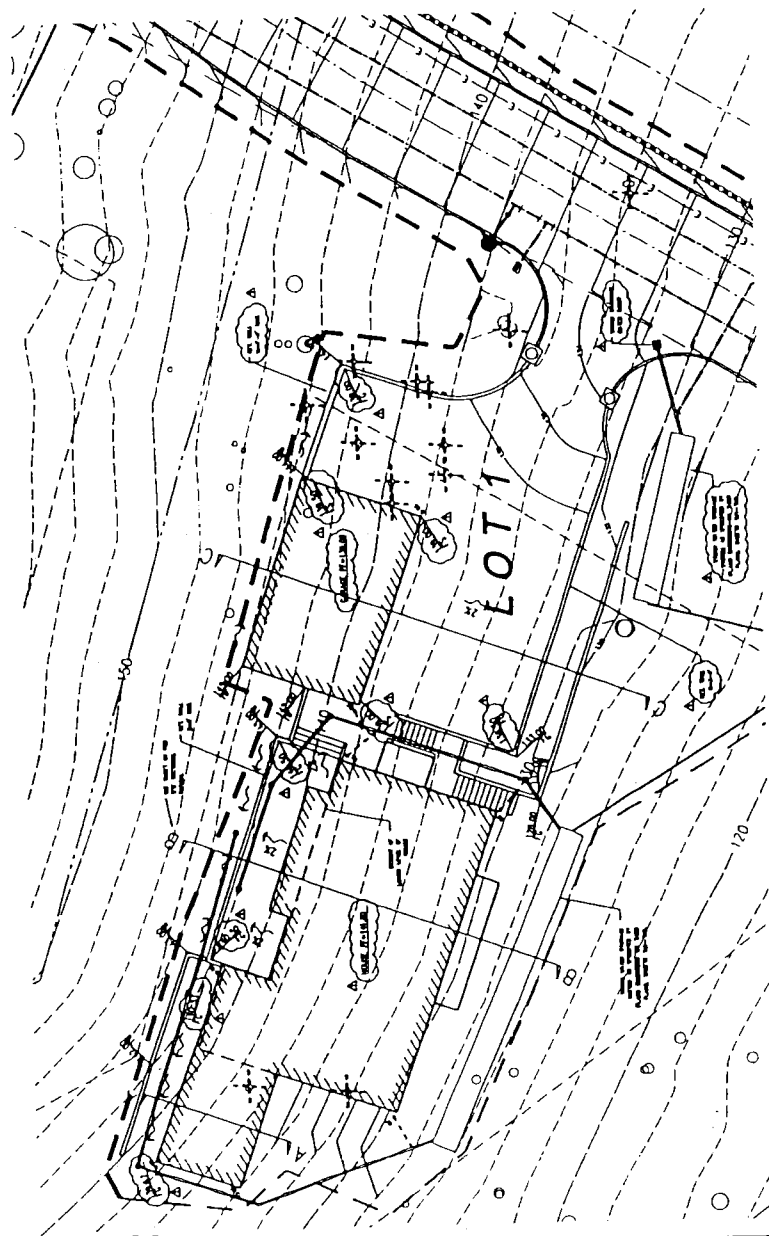
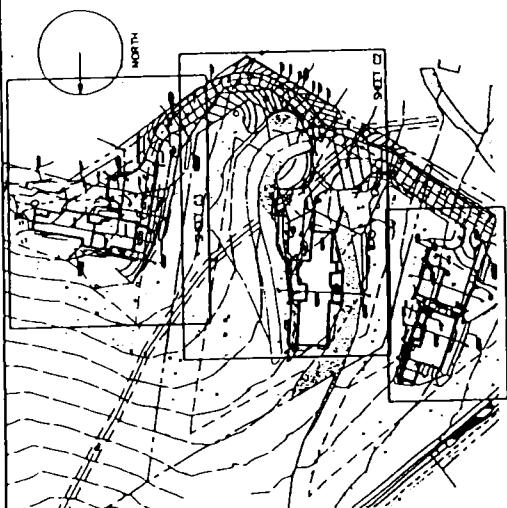
DATE	10/1/81
BY	ANDREW C. RADOVAN
CHECKED BY	ANDREW C. RADOVAN
SCALE	AS SHOWN
PROJECT	WALLACE AVE. APTOS, CA 95003
APN	041-481-04

SYMBOL	DESCRIPTION
(Symbol)	Proposed Building
(Symbol)	Proposed Driveway
(Symbol)	Proposed Parking Area
(Symbol)	Proposed Fencing
(Symbol)	Proposed Retaining Wall
(Symbol)	Proposed Storm Drain
(Symbol)	Proposed Sewer Line
(Symbol)	Proposed Water Line
(Symbol)	Proposed Gas Line
(Symbol)	Proposed Electric Line
(Symbol)	Proposed Telephone Line
(Symbol)	Proposed Cable Line
(Symbol)	Proposed Fire Hydrant
(Symbol)	Proposed Fire Alarm
(Symbol)	Proposed Fire Sprinkler
(Symbol)	Proposed Fire Extinguisher
(Symbol)	Proposed Fire Alarm Box
(Symbol)	Proposed Fire Alarm Bell
(Symbol)	Proposed Fire Alarm Gong
(Symbol)	Proposed Fire Alarm Horn
(Symbol)	Proposed Fire Alarm Siren
(Symbol)	Proposed Fire Alarm Whistle
(Symbol)	Proposed Fire Alarm Bell
(Symbol)	Proposed Fire Alarm Gong
(Symbol)	Proposed Fire Alarm Horn
(Symbol)	Proposed Fire Alarm Siren
(Symbol)	Proposed Fire Alarm Whistle

GENERAL NOTES

1. All proposed work shall be in accordance with the latest edition of the California Building Code.
2. All proposed work shall be in accordance with the latest edition of the California Fire Code.
3. All proposed work shall be in accordance with the latest edition of the California Electrical Code.
4. All proposed work shall be in accordance with the latest edition of the California Gas Code.
5. All proposed work shall be in accordance with the latest edition of the California Plumbing Code.
6. All proposed work shall be in accordance with the latest edition of the California Mechanical Code.
7. All proposed work shall be in accordance with the latest edition of the California Fire Alarm Code.
8. All proposed work shall be in accordance with the latest edition of the California Fire Sprinkler Code.
9. All proposed work shall be in accordance with the latest edition of the California Fire Extinguisher Code.
10. All proposed work shall be in accordance with the latest edition of the California Fire Alarm Box Code.
11. All proposed work shall be in accordance with the latest edition of the California Fire Alarm Bell Code.
12. All proposed work shall be in accordance with the latest edition of the California Fire Alarm Gong Code.
13. All proposed work shall be in accordance with the latest edition of the California Fire Alarm Horn Code.
14. All proposed work shall be in accordance with the latest edition of the California Fire Alarm Siren Code.
15. All proposed work shall be in accordance with the latest edition of the California Fire Alarm Whistle Code.

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PROPOSED DRAINAGE AND DRAINAGE PLAN

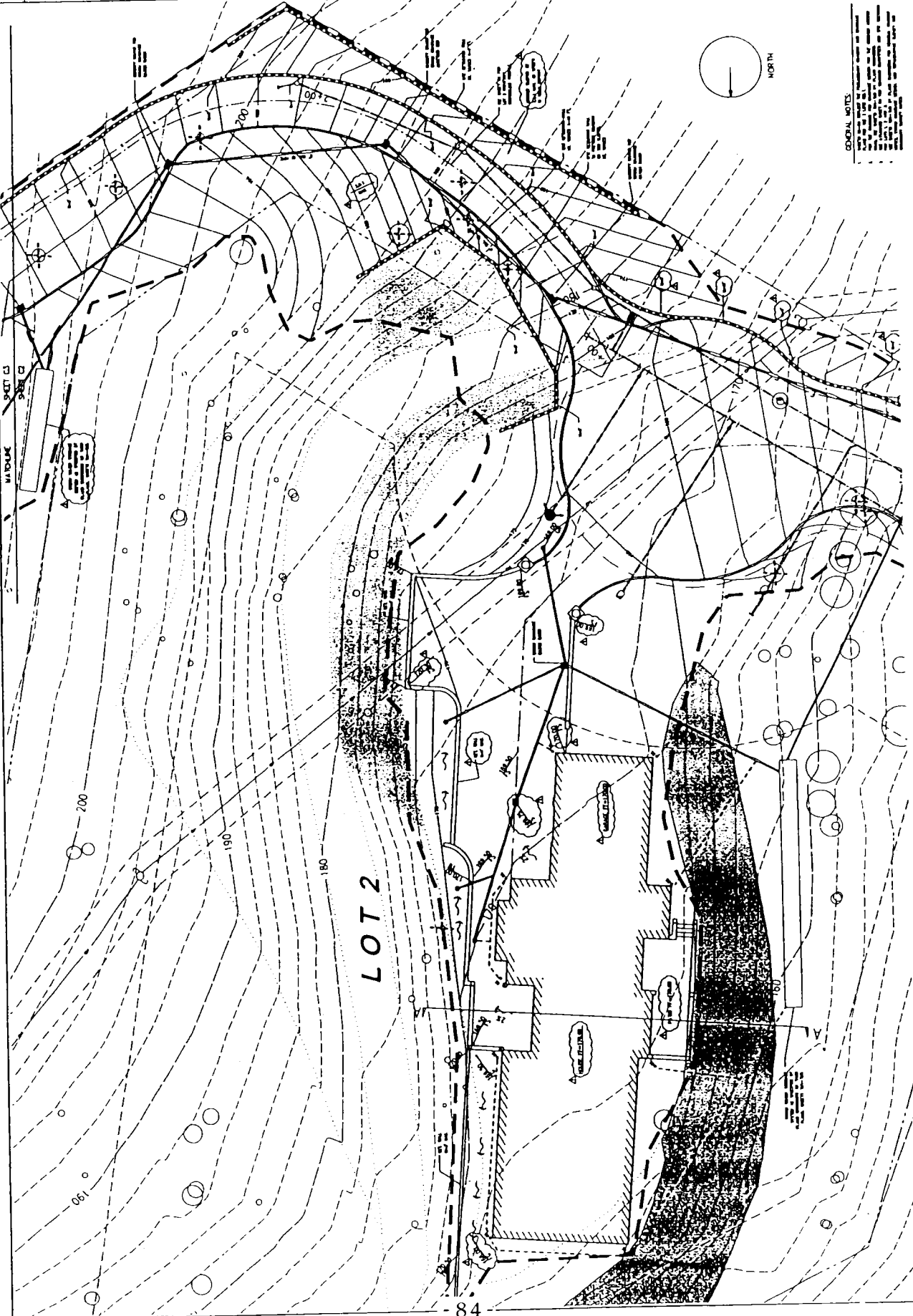
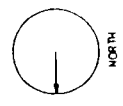


Andrew C. Kadoyan
Civil Engineer

WALLACE AVE
APTOS, CA 95005
APN 041-481-04

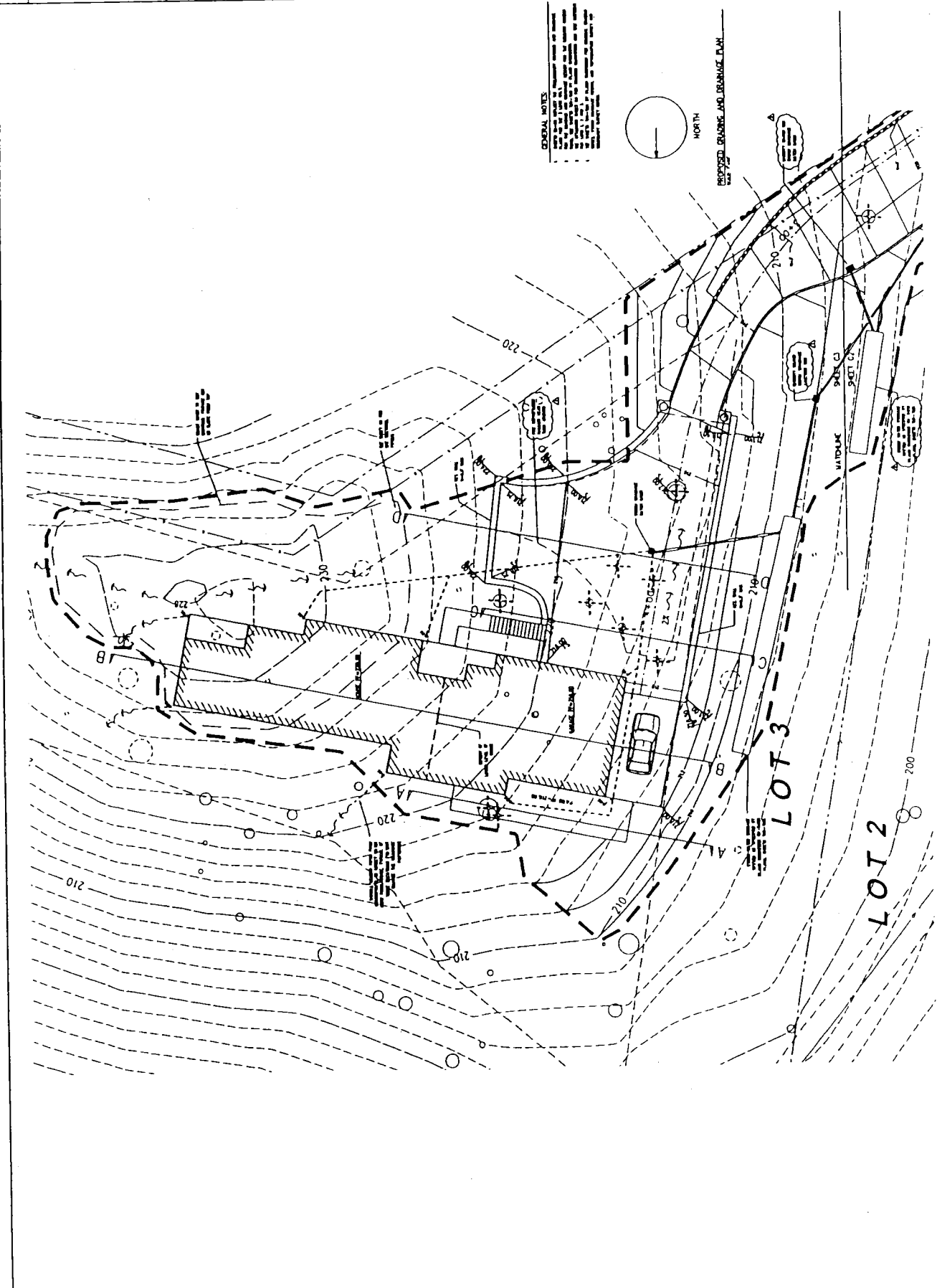
MINOR LAND DIVISION
WALLACE AVE
LOT 2 GRADING PLAN

GENERAL NOTES:
1. ALL EXISTING AND PROPOSED GRADES ARE SHOWN IN FEET ABOVE MEAN SEA LEVEL.
2. ALL PROPOSED GRADES ARE BASED ON THE 1984 DATUM.
3. ALL PROPOSED GRADES ARE BASED ON THE 1984 DATUM.
4. ALL PROPOSED GRADES ARE BASED ON THE 1984 DATUM.
5. ALL PROPOSED GRADES ARE BASED ON THE 1984 DATUM.



PROPOSED GRADING AND DRAINAGE PLAN

		Andrew C. Radovan Civil Engineer 10000 License No. 10000 State of California	WALLACE AVE APTS. CA 95003 APN 041-481-04	JUNIOR LAND DIVISION LOT 3 GRADING PLAN	<table border="1"> <tr> <th>NO.</th> <th>REVISION</th> <th>DATE</th> <th>BY</th> <th>CHKD.</th> </tr> <tr> <td>1</td> <td>AS SHOWN IN RECORD TO THIS PROJECT</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>AS SHOWN IN RECORD TO THIS PROJECT</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>AS SHOWN IN RECORD TO THIS PROJECT</td> <td></td> <td></td> <td></td> </tr> </table>	NO.	REVISION	DATE	BY	CHKD.	1	AS SHOWN IN RECORD TO THIS PROJECT				2	AS SHOWN IN RECORD TO THIS PROJECT				3	AS SHOWN IN RECORD TO THIS PROJECT			
NO.	REVISION	DATE	BY	CHKD.																					
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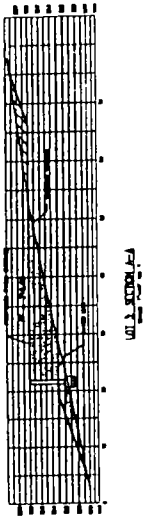
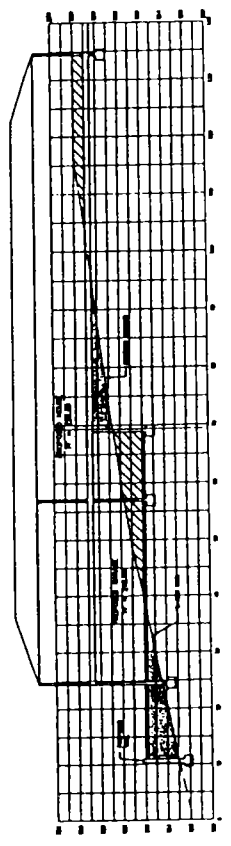
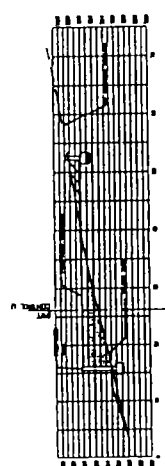
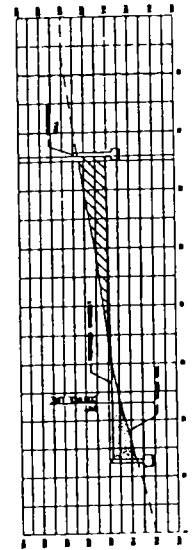
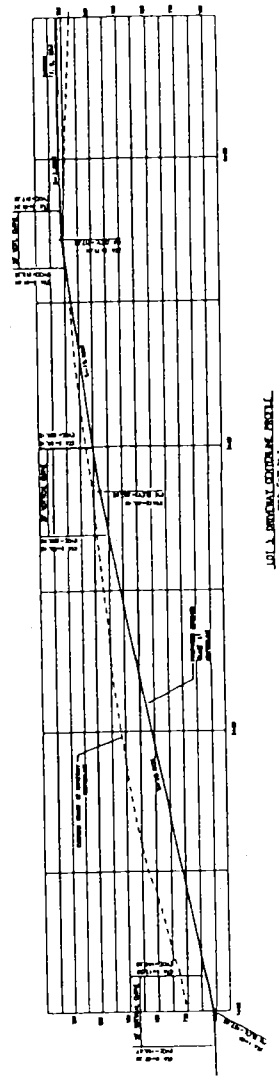
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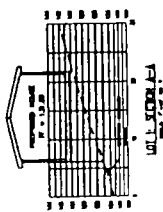
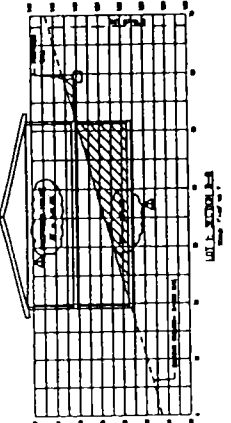
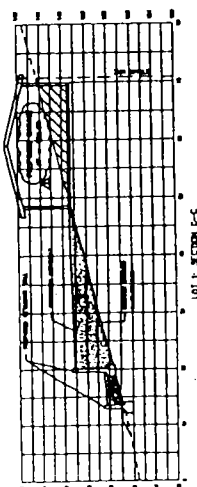
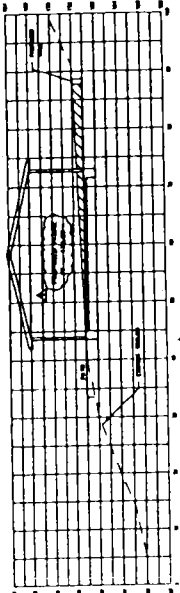
Wallace Ave
APN 041-481-04
Wallace Ave
APN 041-481-04

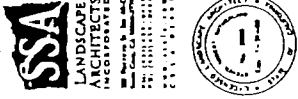
MINOR LAND DIVISION
WALLACE AVE
SECTIONS AND NOTES

DATE	1/1/78
BY	W. J. ...
CHECKED BY	...
APPROVED BY	...
REVISIONS	...



STATION	EXISTING ELEVATION	PROPOSED ELEVATION
0+00	100.00	100.00
0+10	100.00	100.00
0+20	100.00	100.00
0+30	100.00	100.00
0+40	100.00	100.00
0+50	100.00	100.00
0+60	100.00	100.00
0+70	100.00	100.00
0+80	100.00	100.00
0+90	100.00	100.00
1+00	100.00	100.00





TREE REMOVAL PLAN - LEGEND

[illegible]

TREE REMOVAL NOTES

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TREE REMOVAL TABLE - LOT NO. 1

NO.	COMMON NAME / CALPES (2)	CONCENTRATION / SURTANALITY (%)
1	SEA WATER 10'	100
2	SEA WATER 10'	100
3	SEA WATER 10'	100
4	SEA WATER 10'	100
5	SEA WATER 10'	100
6	SEA WATER 10'	100
7	SEA WATER 10'	100
8	SEA WATER 10'	100
9	SEA WATER 10'	100
10	SEA WATER 10'	100
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14	SEA WATER 10'	100
15	SEA WATER 10'	100
16	SEA WATER 10'	100
17	SEA WATER 10'	100
18	SEA WATER 10'	100
19	SEA WATER 10'	100
20	SEA WATER 10'	100
21	SEA WATER 10'	100
22	SEA WATER 10'	100
23	SEA WATER 10'	100
24	SEA WATER 10'	100
25	SEA WATER 10'	100
26	SEA WATER 10'	100
27	SEA WATER 10'	100
28	SEA WATER 10'	100
29	SEA WATER 10'	100
30	SEA WATER 10'	100
31	SEA WATER 10'	100
32	SEA WATER 10'	100
33	SEA WATER 10'	100
34	SEA WATER 10'	100
35	SEA WATER 10'	100
36	SEA WATER 10'	100
37	SEA WATER 10'	100
38	SEA WATER 10'	100
39	SEA WATER 10'	100
40	SEA WATER 10'	100
41	SEA WATER 10'	100
42	SEA WATER 10'	100
43	SEA WATER 10'	100
44	SEA WATER 10'	100
45	SEA WATER 10'	100
46	SEA WATER 10'	100
47	SEA WATER 10'	100
48	SEA WATER 10'	100
49	SEA WATER 10'	100
50	SEA WATER 10'	100
51	SEA WATER 10'	100
52	SEA WATER 10'	100
53	SEA WATER 10'	100
54	SEA WATER 10'	100
55	SEA WATER 10'	100
56	SEA WATER 10'	100
57	SEA WATER 10'	100
58	SEA WATER 10'	100
59	SEA WATER 10'	100
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61	SEA WATER 10'	100
62	SEA WATER 10'	100
63	SEA WATER 10'	100
64	SEA WATER 10'	100
65	SEA WATER 10'	100
66	SEA WATER 10'	100
67	SEA WATER 10'	100
68	SEA WATER 10'	100
69	SEA WATER 10'	100
70	SEA WATER 10'	100
71	SEA WATER 10'	100
72	SEA WATER 10'	100
73	SEA WATER 10'	100
74	SEA WATER 10'	100
75	SEA WATER 10'	100
76	SEA WATER 10'	100
77	SEA WATER 10'	100
78	SEA WATER 10'	100
79	SEA WATER 10'	100
80	SEA WATER 10'	100
81	SEA WATER 10'	100
82	SEA WATER 10'	100
83	SEA WATER 10'	100
84	SEA WATER 10'	100
85	SEA WATER 10'	100
86	SEA WATER 10'	100
87	SEA WATER 10'	100
88	SEA WATER 10'	100
89	SEA WATER 10'	100
90	SEA WATER 10'	100
91	SEA WATER 10'	100
92	SEA WATER 10'	100
93	SEA WATER 10'	100
94	SEA WATER 10'	100
95	SEA WATER 10'	100
96	SEA WATER 10'	100
97	SEA WATER 10'	100
98	SEA WATER 10'	100
99	SEA WATER 10'	100
100	SEA WATER 10'	100

	TOTAL NUMBER OF TUBES TO BE REMOVED	TOTAL NUMBER OF TUBES TO BE REPLACED
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	0	0
25	0	0
26	0	0
27	0	0
28	0	0
29	0	0
30	0	0
31	0	0
32	0	0
33	0	0
34	0	0
35	0	0
36	0	0
37	0	0
38	0	0
39	0	0
40	0	0
41	0	0
42	0	0
43	0	0
44	0	0
45	0	0
46	0	0
47	0	0
48	0	0
49	0	0
50	0	0
51	0	0
52	0	0
53	0	0
54	0	0
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56	0	0
57	0	0
58	0	0
59	0	0
60	0	0
61	0	0
62	0	0
63	0	0
64	0	0
65	0	0
66	0	0
67	0	0
68	0	0
69	0	0
70	0	0
71	0	0
72	0	0
73	0	0
74	0	0
75	0	0
76	0	0
77	0	0
78	0	0
79	0	0
80	0	0
81	0	0
82	0	0
83	0	0
84	0	0
85	0	0
86	0	0
87	0	0
88	0	0
89	0	0
90	0	0
91	0	0
92	0	0
93	0	0
94	0	0
95	0	0
96	0	0
97	0	0
98	0	0
99	0	0
100	0	0

TREE REMOVAL TABLE - LOT NO. 2

NO.	COMMON NAME / CALIBER SIZE	CONVENTION / BULLET NAME
1A	22 CALIBER "P"	ROCK
1B	22 CALIBER "P" / 18"	ROCK
1C	22 CALIBER "P" / 18"	ROCK
1D	22 CALIBER "P" / 18"	ROCK
1E	22 CALIBER "P" / 18"	ROCK
1F	22 CALIBER "P" / 18"	ROCK
1G	22 CALIBER "P" / 18"	ROCK
1H	22 CALIBER "P" / 18"	ROCK
1I	22 CALIBER "P" / 18"	ROCK
1J	22 CALIBER "P" / 18"	ROCK
1K	22 CALIBER "P" / 18"	ROCK
1L	22 CALIBER "P" / 18"	ROCK
1M	22 CALIBER "P" / 18"	ROCK
1N	22 CALIBER "P" / 18"	ROCK
1O	22 CALIBER "P" / 18"	ROCK
1P	22 CALIBER "P" / 18"	ROCK
1Q	22 CALIBER "P" / 18"	ROCK
1R	22 CALIBER "P" / 18"	ROCK
1S	22 CALIBER "P" / 18"	ROCK
1T	22 CALIBER "P" / 18"	ROCK
1U	22 CALIBER "P" / 18"	ROCK
1V	22 CALIBER "P" / 18"	ROCK
1W	22 CALIBER "P" / 18"	ROCK
1X	22 CALIBER "P" / 18"	ROCK
1Y	22 CALIBER "P" / 18"	ROCK
1Z	22 CALIBER "P" / 18"	ROCK
2A	24 CALIBER "P"	ROCK
2B	24 CALIBER "P" / 18"	ROCK
2C	24 CALIBER "P" / 18"	ROCK
2D	24 CALIBER "P" / 18"	ROCK
2E	24 CALIBER "P" / 18"	ROCK
2F	24 CALIBER "P" / 18"	ROCK
2G	24 CALIBER "P" / 18"	ROCK
2H	24 CALIBER "P" / 18"	ROCK
2I	24 CALIBER "P" / 18"	ROCK
2J	24 CALIBER "P" / 18"	ROCK
2K	24 CALIBER "P" / 18"	ROCK
2L	24 CALIBER "P" / 18"	ROCK
2M	24 CALIBER "P" / 18"	ROCK
2N	24 CALIBER "P" / 18"	ROCK
2O	24 CALIBER "P" / 18"	ROCK
2P	24 CALIBER "P" / 18"	ROCK
2Q	24 CALIBER "P" / 18"	ROCK
2R	24 CALIBER "P" / 18"	ROCK
2S	24 CALIBER "P" / 18"	ROCK
2T	24 CALIBER "P" / 18"	ROCK
2U	24 CALIBER "P" / 18"	ROCK
2V	24 CALIBER "P" / 18"	ROCK
2W	24 CALIBER "P" / 18"	ROCK
2X	24 CALIBER "P" / 18"	ROCK
2Y	24 CALIBER "P" / 18"	ROCK
2Z	24 CALIBER "P" / 18"	ROCK
3A	30 CALIBER "P"	ROCK
3B	30 CALIBER "P" / 18"	ROCK
3C	30 CALIBER "P" / 18"	ROCK
3D	30 CALIBER "P" / 18"	ROCK
3E	30 CALIBER "P" / 18"	ROCK
3F	30 CALIBER "P" / 18"	ROCK
3G	30 CALIBER "P" / 18"	ROCK
3H	30 CALIBER "P" / 18"	ROCK
3I	30 CALIBER "P" / 18"	ROCK
3J	30 CALIBER "P" / 18"	ROCK
3K	30 CALIBER "P" / 18"	ROCK
3L	30 CALIBER "P" / 18"	ROCK
3M	30 CALIBER "P" / 18"	ROCK
3N	30 CALIBER "P" / 18"	ROCK
3O	30 CALIBER "P" / 18"	ROCK
3P	30 CALIBER "P" / 18"	ROCK
3Q	30 CALIBER "P" / 18"	ROCK
3R	30 CALIBER "P" / 18"	ROCK
3S	30 CALIBER "P" / 18"	ROCK
3T	30 CALIBER "P" / 18"	ROCK
3U	30 CALIBER "P" / 18"	ROCK
3V	30 CALIBER "P" / 18"	ROCK
3W	30 CALIBER "P" / 18"	ROCK
3X	30 CALIBER "P" / 18"	ROCK
3Y	30 CALIBER "P" / 18"	ROCK
3Z	30 CALIBER "P" / 18"	ROCK
4A	36 CALIBER "P"	ROCK
4B	36 CALIBER "P" / 18"	ROCK
4C	36 CALIBER "P" / 18"	ROCK
4D	36 CALIBER "P" / 18"	ROCK
4E	36 CALIBER "P" / 18"	ROCK
4F	36 CALIBER "P" / 18"	ROCK
4G	36 CALIBER "P" / 18"	ROCK
4H	36 CALIBER "P" / 18"	ROCK
4I	36 CALIBER "P" / 18"	ROCK
4J	36 CALIBER "P" / 18"	ROCK
4K	36 CALIBER "P" / 18"	ROCK
4L	36 CALIBER "P" / 18"	ROCK
4M	36 CALIBER "P" / 18"	ROCK
4N	36 CALIBER "P" / 18"	ROCK
4O	36 CALIBER "P" / 18"	ROCK
4P	36 CALIBER "P" / 18"	ROCK
4Q	36 CALIBER "P" / 18"	ROCK
4R	36 CALIBER "P" / 18"	ROCK
4S	36 CALIBER "P" / 18"	ROCK
4T	36 CALIBER "P" / 18"	ROCK
4U	36 CALIBER "P" / 18"	ROCK

1.6 INVENTORY NO. 101

LOT NO. 3 TREE REMOVAL TABLE CONTINUES ON SHEET 1-13 INCLUDING TREE REMOVAL TOTALS



TREE REMOVAL PLAN

NO.	DATE	DESCRIPTION
1	10/1/00	ISSUED FOR PERMIT
2	10/1/00	ISSUED FOR CONSTRUCTION
3	10/1/00	ISSUED FOR CONSTRUCTION
4	10/1/00	ISSUED FOR CONSTRUCTION
5	10/1/00	ISSUED FOR CONSTRUCTION
6	10/1/00	ISSUED FOR CONSTRUCTION
7	10/1/00	ISSUED FOR CONSTRUCTION
8	10/1/00	ISSUED FOR CONSTRUCTION
9	10/1/00	ISSUED FOR CONSTRUCTION
10	10/1/00	ISSUED FOR CONSTRUCTION
11	10/1/00	ISSUED FOR CONSTRUCTION

A B C D E F G H I J K L M N O P

MATERIALS & FINISHES PLAN - LEGEND

- 1. 1" CONC. CURB
- 2. 1" CONC. CURB
- 3. 1" CONC. CURB
- 4. 1" CONC. CURB
- 5. 1" CONC. CURB
- 6. 1" CONC. CURB
- 7. 1" CONC. CURB
- 8. 1" CONC. CURB
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- 96. 1" CONC. CURB
- 97. 1" CONC. CURB
- 98. 1" CONC. CURB
- 99. 1" CONC. CURB
- 100. 1" CONC. CURB

MATERIALS & FINISHES SCHEDULE

1. 1" CONC. CURB
2. 1" CONC. CURB
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89. 1" CONC. CURB
90. 1" CONC. CURB
91. 1" CONC. CURB
92. 1" CONC. CURB
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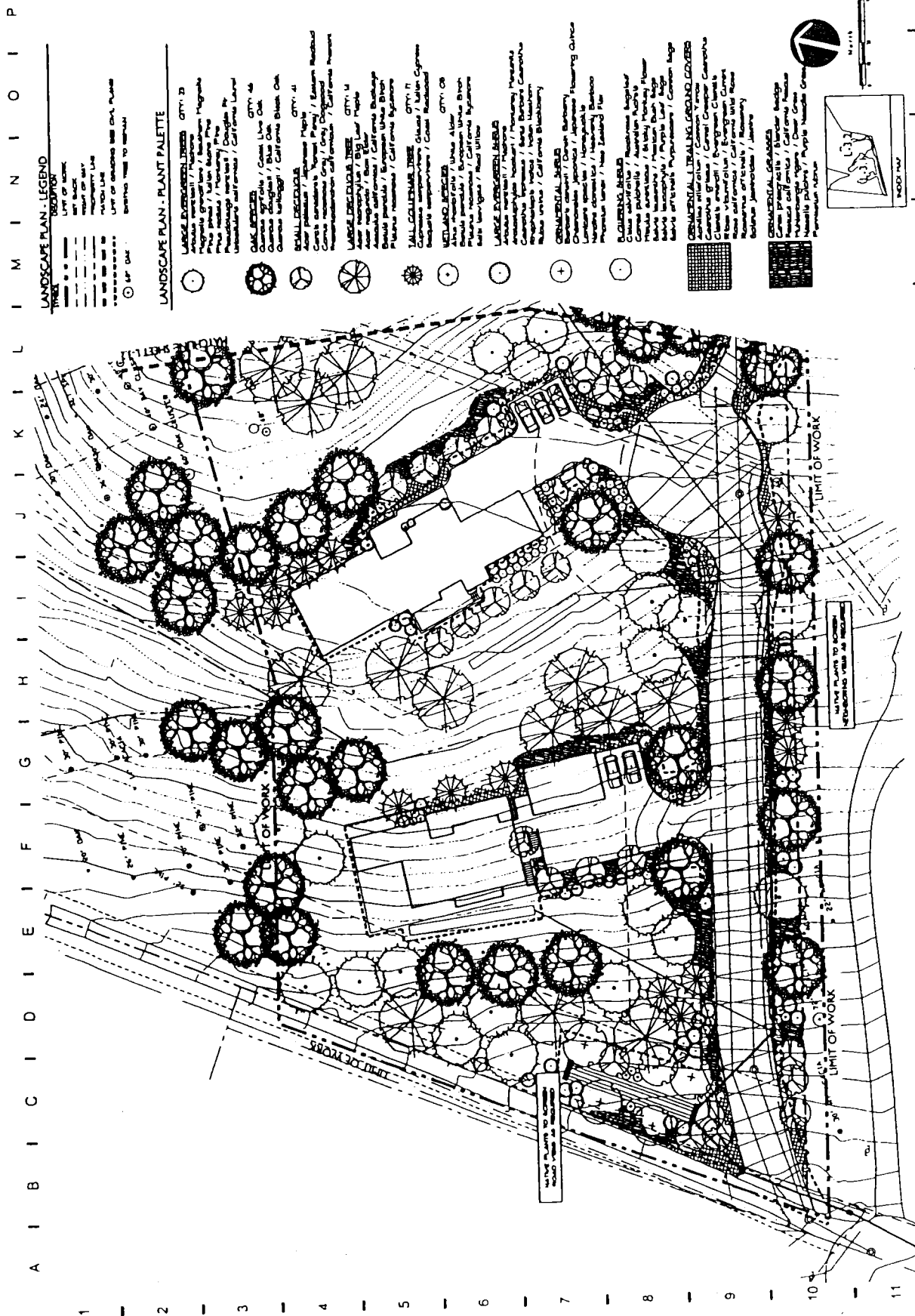


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COUNTY RE-SUBMITTAL: NOT FOR CONSTRUCTION

A B C D E F G H I J K L M N O P

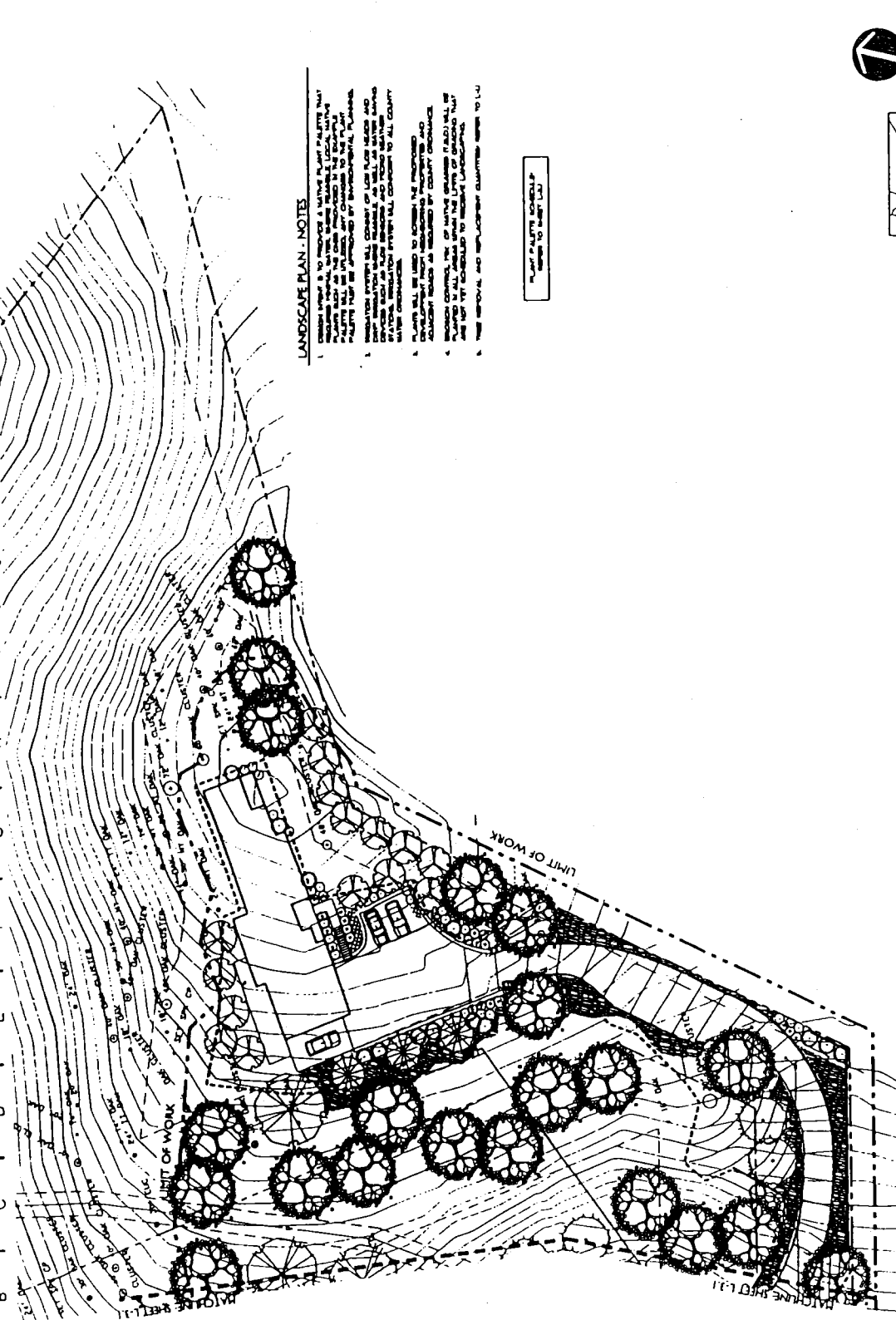




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COUNTY RE-SUBMITTAL - NOT FOR CONSTRUCTION

A B C D E F G H I J K L M N O P

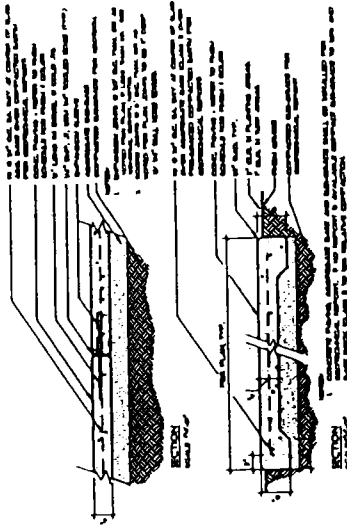


LANDSCAPE PLAN - NOTES

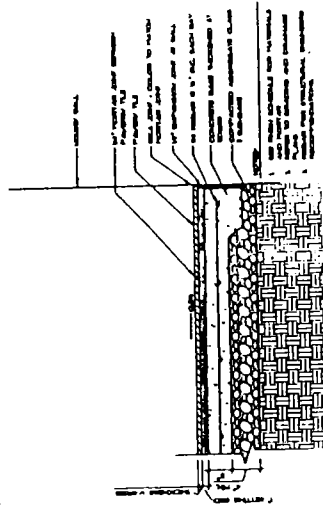
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2. PLANTING MATERIALS SHALL BE SPECIFIED BY THE LANDSCAPE ARCHITECT AND SHALL BE SUBJECT TO THE APPROVAL OF THE COUNTY ENGINEER.
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11. PLANTING MATERIALS SHALL BE SPECIFIED BY THE LANDSCAPE ARCHITECT AND SHALL BE SUBJECT TO THE APPROVAL OF THE COUNTY ENGINEER.

PLANT MATERIALS SHALL BE SPECIFIED BY THE LANDSCAPE ARCHITECT

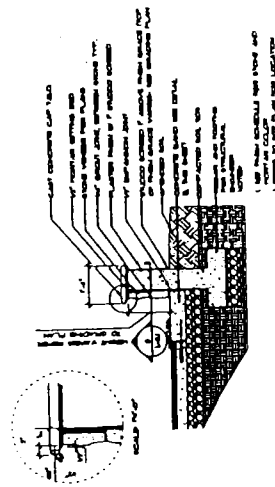
COUNTY RE-SUBMITTAL NOT FOR CONSTRUCTION



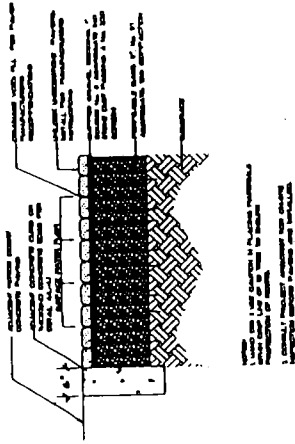
A CONCRETE PAVING
SCALE 1/4" = 1'-0"



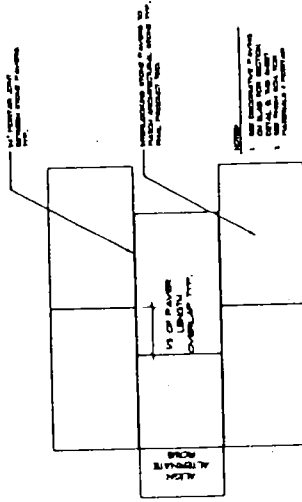
B DECORATIVE STONE PAVING - SECTION VIEW
SCALE 1/4" = 1'-0"



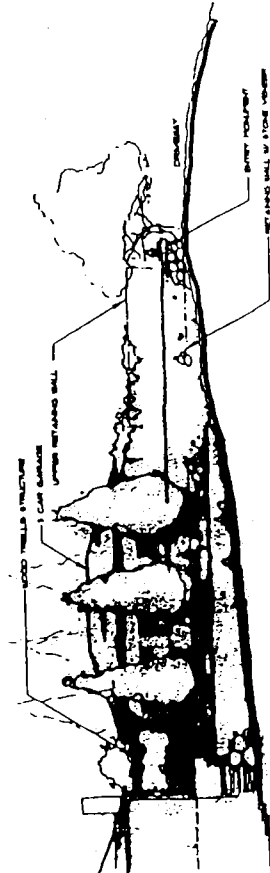
C CONCRETE SEAT WALL
SCALE 1/4" = 1'-0"



D PERMEABLE PAVERS
SCALE 1/4" = 1'-0"



E DECORATIVE STONE PAVING - PLAN VIEW
SCALE 1/4" = 1'-0"



F LOT 1 ENTRY ELEVATION
SCALE 1/4" = 1'-0"

CONSTRUCTION
DETAILS

L-4.1



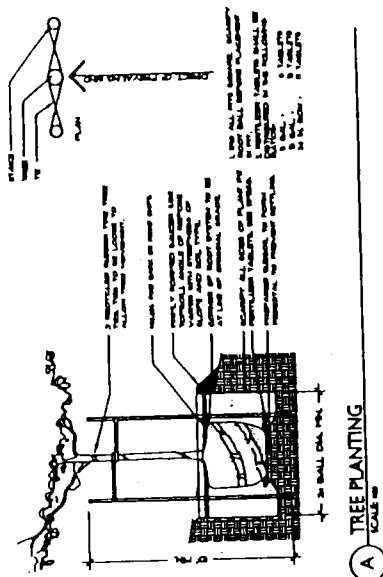
CONSTRUCTION DETAILS

CONSTRUCTION DETAILS	
DATE	BY
11-11-61	W. H. H.
APPROVED BY	FLYNN
DATE	11-11-61
BY	W. H. H.

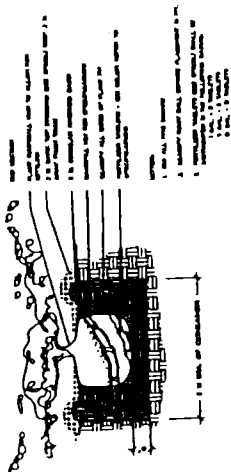
CONSTRUCTION DETAILS

L-4.2

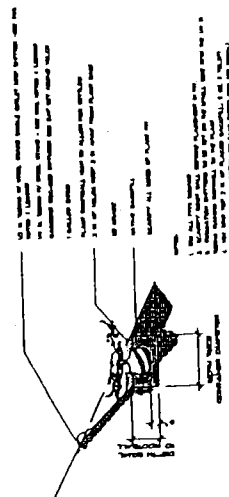
COUNTRY RE-SUBMITTAL: NOT FOR CONSTRUCTION



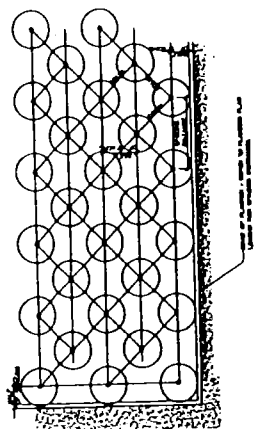
TREE PLANTING



B SHRUB PLANTING
SCALE 1/8" = 1'



C SHRUB PLANTING ON HILLSIDE
SCALE: 1"=40'



(D) GROUND COVER SPACING
SCALE 1:100

ANDERSON
MCKELVEY
ARCHITECTURE
& PLANNING

1111 LOVELL AVE.
SAN FRANCISCO, CA 94103
VOICE: 415 487 8500
FAX: 415 487 3774



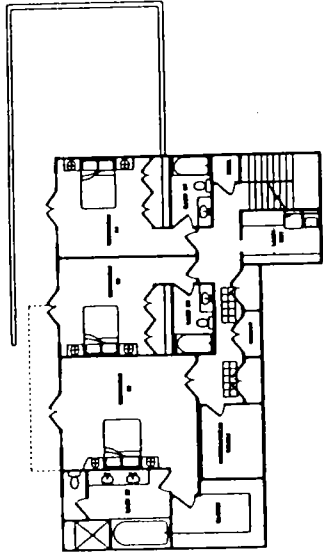
MINOR LAND DIVISION
WALLACE AVE
SAN FRANCISCO, CA 94103

LOI-1 FLOOR
PLANS

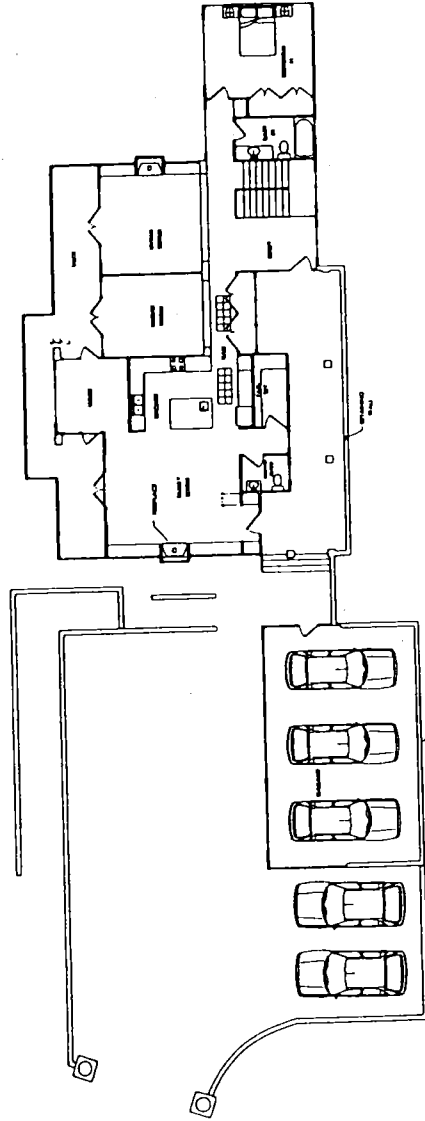
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CHECKED: [Signature]

REVISIONS
1. [Blank line]
2. [Blank line]
3. [Blank line]
4. [Blank line]
5. [Blank line]

A-1.1



1st FLOOR
1/8" = 1'-0"



2nd FLOOR (STREET LEVEL)
1/8" = 1'-0"

134 LOQUEL AVE
MANTACRE, CA 91023
VOICE: 818 437 8346
FAX: 818 437 8346



MINOR LAND DIVISION
WALLACE AVE
SAN FRANCISCO, CALIF.
JAN 10 1961

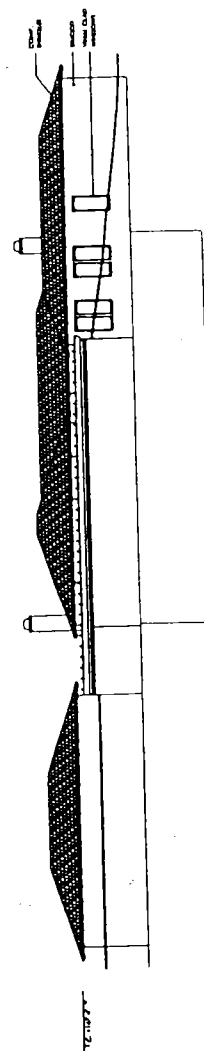
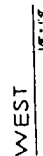
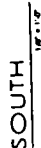
LOT-1
ELEVATIONS

SECRET

Date Rec'd _____
 By _____
 NAME _____

MAIL ROOM
 1-11-68
 8-11-68

A-1.2



EAST

ANDERSON
MCKELVEY
ARCHITECTURE
& PLANNING

1341 LOGGERS AVENUE
LAUREL, CA 94550
VOICE 925-275-0000
FAX 925-275-0001

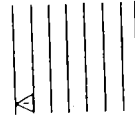


MINOR LAND DIVISION
WALLACE AVE
100 WALLACE AVE
LAUREL, CA 94550

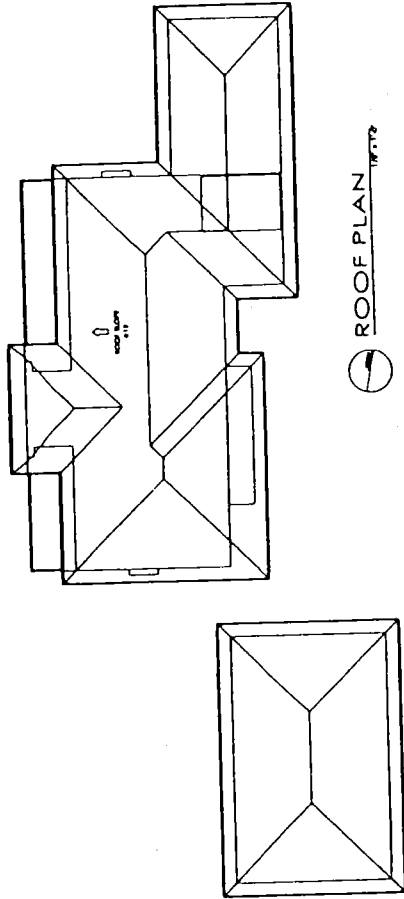
LOT-1 ROOF
PLAN, BUILDING
SECTIONS

DATE: 10/1/00
DRAWN BY: JLM
CHECKED BY: JLM

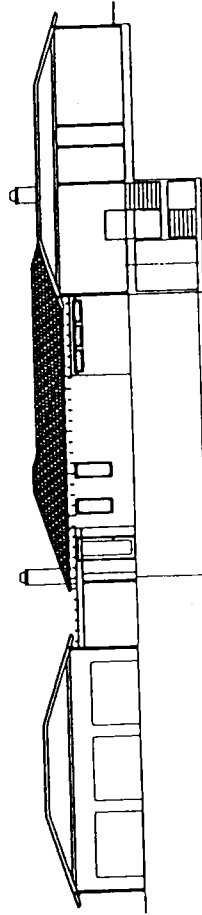
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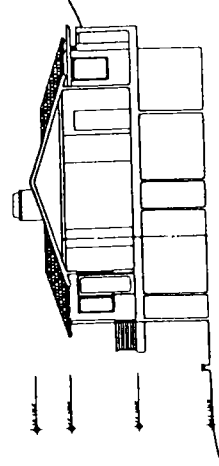
A-1.3



ROOF PLAN
1/8" = 1'-0"



BUILDING SECTION A
1/8" = 1'-0"



BUILDING SECTION B
1/8" = 1'-0"

ANDERSON
MCKELVEY
ARCHITECTURE
& PLANNING

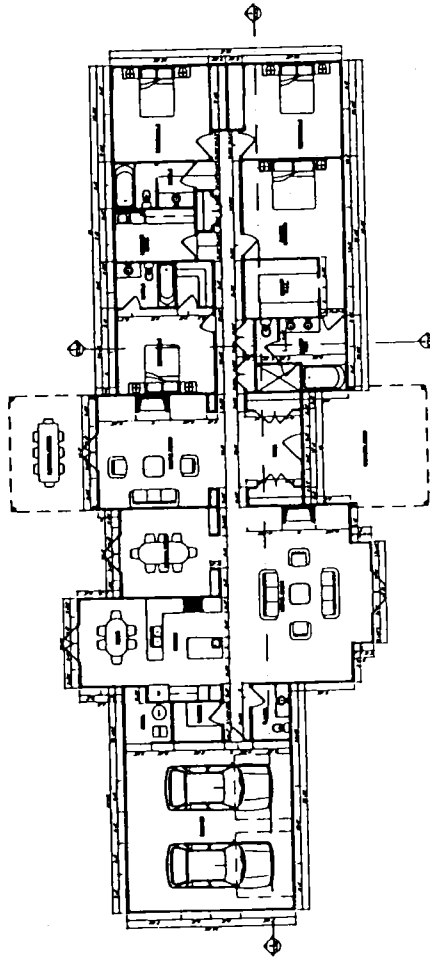
315 TROBELL AVE
WALLACE, CA 95986
PHONE: 916.432.8348
FAX: 916.432.8774



MINOR LAND DIVISION
WALLACE AVE
95986 CA 95986
916.432.8348

LOT 2 FLOOR
PLAN

FLOOR PLAN



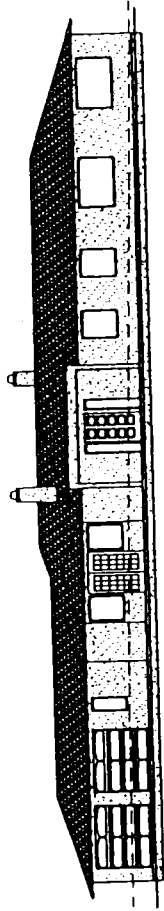
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ANDERSON
MCKELVEY
ARCHITECTURE
& PLANNING

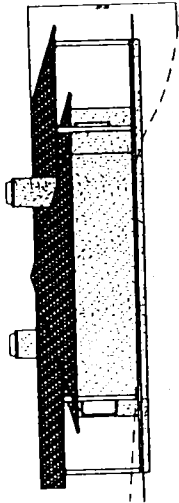
331 TOQUILL AVE
LAKE CHARLES, LA 70601
PHONE: 813 374 1111
FAX: 813 374 1111



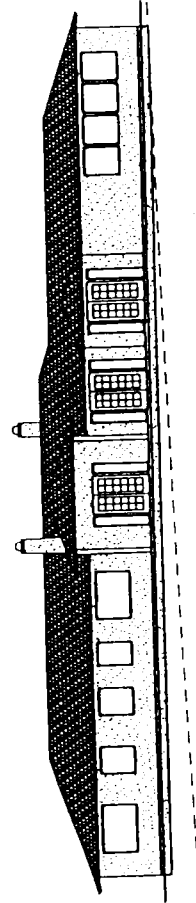
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WALLACE AVE
LAKE CHARLES, LA 70601
PHONE: 813 374 1111
FAX: 813 374 1111



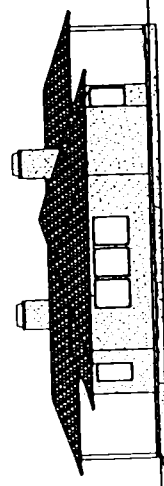
NORTH ELEVATION



WEST ELEVATION



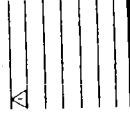
SOUTH ELEVATION



EAST ELEVATION

LOT 1-2
ELEVATIONS

Scale:	1" = 10'
North Arrow:	↑



A-2.2

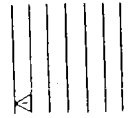
ANDERSON
MCKELVEY
ARCHITECTURE
& PLANNING
1311 100VILL AVE
MARTIN, CA 95040
TEL: 415 455 5751



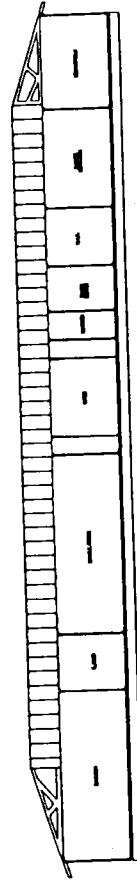
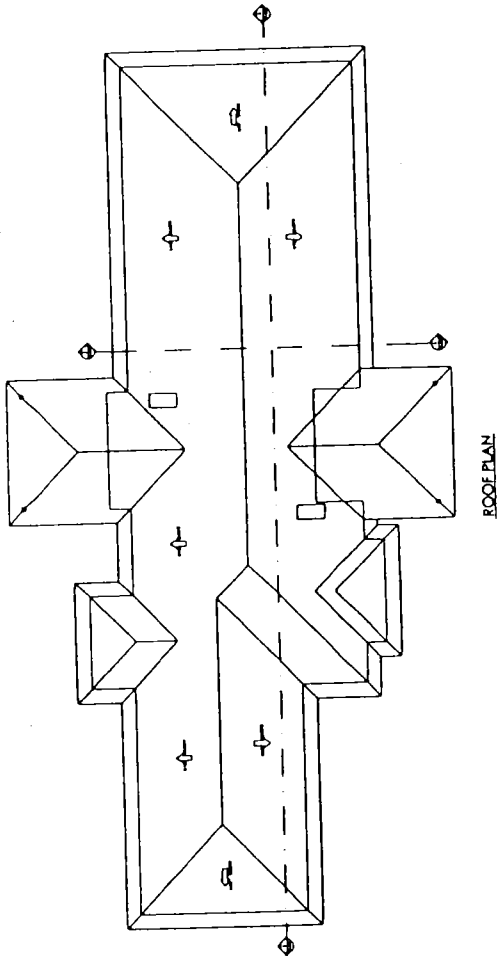
MINOR LAND DIVISION
WALLACE AVE
10000
10000
10000

LOT 1-2 ROOF
PLAN, BUILDING
SECTIONS

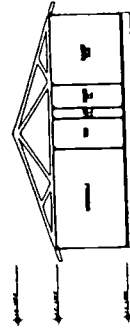
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CHECKED: [Signature]



A-2.3



BUILDING SECTION A



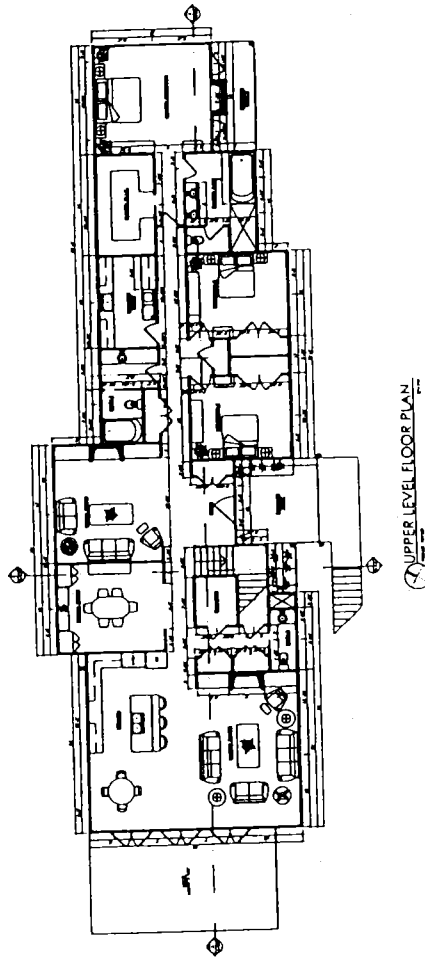
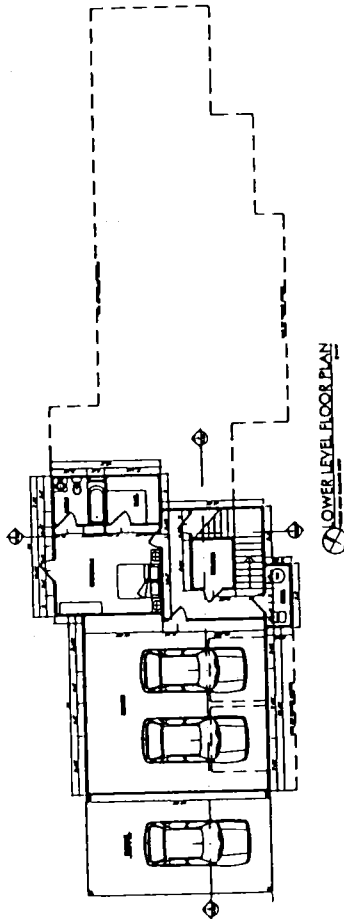
BUILDING SECTION B

ANDERSON
MCKELVEY
ARCHITECTURE
& PLANNING

1111 LORETTA, S.W.
DALLAS, TEXAS 75201
VOICE: 817-437-8348
FAX: 817-437-7774



MINOR LAND DIVISION
WALLACE AYE



LOT 3 FLOOR PLANS

DATE: 11.11.00
BY: [Signature]
CHECKED BY: [Signature]
SCALE: 1/8" = 1'-0"

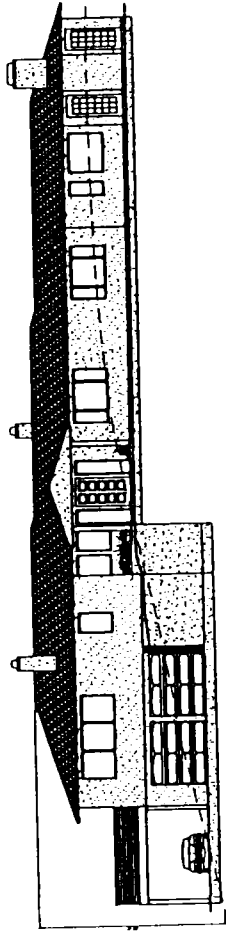
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ANDERSON
MCKELVEY
ARCHITECTURE
& PLANNING

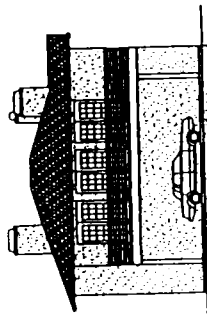
114 JOHNS AVE
SAN JOSE, CA 95128
PHONE: 408.281.8282
FAX: 408.281.8274



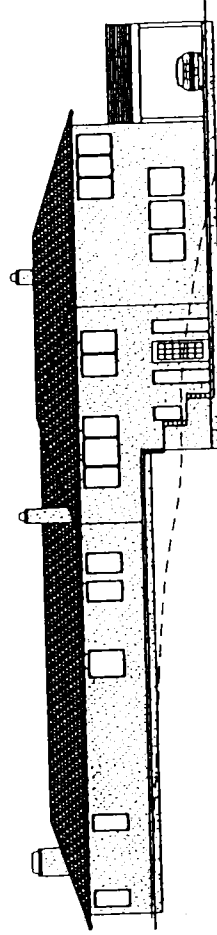
MINOR LAND DIVISION
WALLACE AVE



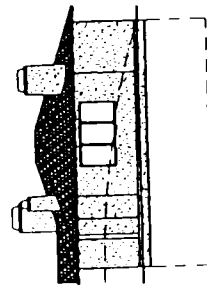
NORTH ELEVATION



WEST ELEVATION



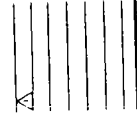
SOUTH ELEVATION



EAST ELEVATION

LOT 3
ELEVATIONS

DATE: 11/11/03	BY: [Signature]
CHECKED BY: [Signature]	DATE: 11/11/03



A-3.2

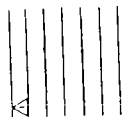
134 100TH AVE
LAKELAND, CA 92033
VOICE: 614-671-0308
FAX: 614-671-1724



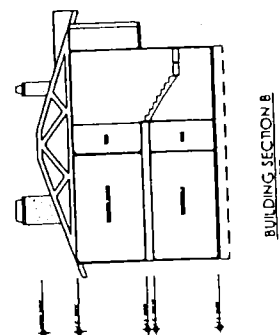
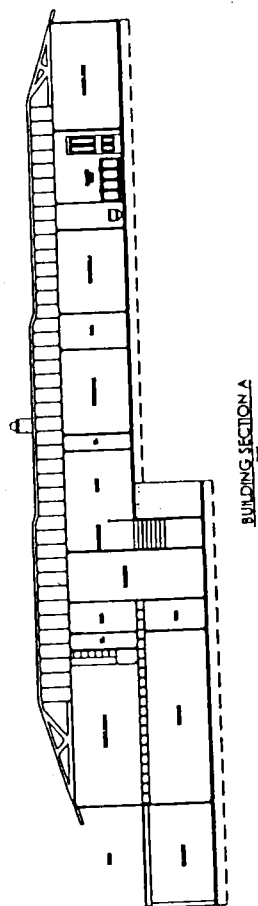
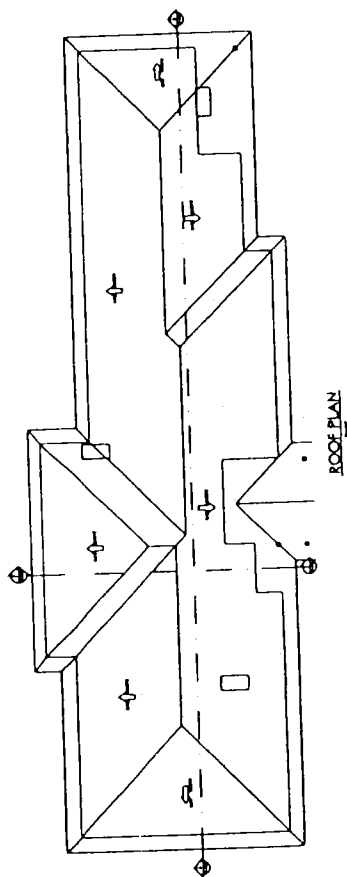
MINOR LAND DIVISION
WALLACE AVE
LOS ANGELES 4 98
APRIL 24 1968
100 - 100 - 100

LOT-3 ROOF
PLAN, BUILDING
SECTIONS

NO
7-18
7-19



A-3.3



ACE

AMSO CONSULTING ENGINEERS
SOILS, FOUNDATIONS & ENVIRONMENTAL ENGINEERING

1478 B STREET, SUITE 1C, HAYWARD, CALIFORNIA 94541
Phone (510) 690-0714, Fax: (510) 690-0721, email: basil@amsconsulting.com

March 14, 2006
Project 3362
Revised on August 10, 2007

Mr. Richard Anderson
110 Brown Valley Road
Corralitos, California 95076

Subject: Geotechnical Investigation for
Three Lots Minor Land Division
End of Wallace Avenue, APN 041-481-04
Aptos, Santa Cruz County, California

Dear Mr. Anderson:

This report presents our geotechnical investigation for your property located at the end of Wallace Avenue, APN 041-481-04 in Aptos, Santa Cruz County, California.

As now proposed and based on the tentative map prepared by Ifland Engineers and provided by Lawler Land Use and Consulting the property will be divided into three building sites. Access to the new parcels will be provided by a new private driveway from Wallace Avenue. The purpose of this investigation is to provide generalized geotechnical recommendation for site development.

SCOPE OF WORK

We performed the following scope of work for this geotechnical investigation.

1. Reviewed geologic and geotechnical information in our files pertinent to the site and the surrounding area.
2. Explored, sampled and classified foundation soils by means of eight exploration borings. All holes were advanced to at least 10 feet into competent soil or to drilling refusal. At the end of drilling, all holes will be backfilled with soil cutting.
3. Performed laboratory test on selected soil samples obtained from the exploration holes to determine their index and engineering characteristics.
4. Reviewed and analyzed information collected above.

March 14, 2006
Revised on August 10, 2007

Project 3362

5. Developed site seismic characteristics, zone factor (Z) and seismic near-source factors (N_a and N_v) for site structure resonance in accordance with the 1997 Uniform Building Code.
6. Prepared this report summarizing our findings, conclusions, and geotechnical recommendations.

FINDINGS

Surface Conditions

The property is located in Aptos, Santa Cruz County, California along north side of a the end of Wallace Avenue (see Figure 1, Vicinity Map). The property slopes down to the north and west at gradients of between 2 and 4 to 1 (horizontal to vertical). Ground elevations at the property range from an assumed elevation of 100 feet near Wallace Avenue to about 230 feet (Based on the Tentative Map prepared by Ifland Engineers, Inc.)

At the time of our subsurface exploration, the site was vacant of any structure. The majority of the site was covered with native trees, eucalyptus trees, bushes and grass.

Subsurface Conditions

Subsurface conditions at the site were explored by means of six exploration drill holes extended to a depth of between 9 and 20 feet. Within the depth of our exploration, the native soils at the site consist of clay, silt, sand and weathered sandstone.

A surficial layer of sandy clay (CL) of low plasticity and low potential for expansion was encountered in all exploration holes. This layer of sandy clay varies in thickness between 2 and 3 feet below existing ground surface and is underlain by very dense to hard and slightly cemented clayey sand (weathered sandstone). This layer of sandstone extends to the maximum depth of our exploration.

No ground water was encountered in any of our borings at the time of our subsurface exploration.

The descriptions given above pertain only to the subsurface conditions found at the site at the time of our subsurface exploration in February of 2006. Subsurface conditions, particularly ground water levels and the consistency of the near-surface soils will vary with the seasons.

Detailed descriptions of the materials encountered in the borings are given on the appended boring log together with the results of some of the laboratory tests performed on selected samples obtained from the boring.

AMSO CONSULTING ENGINEERS

Seismic Considerations

This site is located within a seismically active region but outside any of the Alquist-Priolo Earthquake Fault Zones. Type A and Type B faults as defined in the UBC 1997 that are close to the site are listed in the following table.

TABLE 1 - TYPES A AND B FAULTS CLOSE TO THE SITE						
Fault	Type	Maximum Moment Magnitude	Slip Rate (mm/yr)	Distance (miles) (km)		Peak Site Acceleration (g)
SAN ANDREAS (1906)	A	7.9	24	5	8	0.52
SAN GREGORIO	A	7.3	5	18	29	0.18
ZAYANTE-VERGELES	B	6.8	0.1	2.3	3.6	0.55
SARGENT	B	6.8	3	9	14	0.28
MONTEREY BAY - TULARCITOS	B	7.1	0.5	13	21	0.25
MONTE VISTA - SHANNON	B	6.8	0.4	16	26	0.16
CALAVERAS (So. of Calaveras)	B	6.2	15	20	31	0.07

Seismic hazards can be divided into two general categories, hazards due to ground rupture and hazards due to ground shaking. Since no active faults are known to cross this property, the risk of earthquake-induced ground rupture occurring across the project site appears to be remote.

Should a major earthquake occur with an epicentral location close to the site, ground shaking at the site will undoubtedly be severe, as it will for other property in the general area. Even under the influence of severe ground shaking, the soils that underlie the area proposed for development are unlikely to liquefy.

The following general site seismic parameters may be used for design in accordance with the 1997 Uniform Building Code.

AMSO CONSULTING ENGINEERS

March 14, 2006
Revised on August 10, 2007

Project 3362

Seismic Zone: 4
Soil Type: Sc: Very Dense Soil and Soft Rock
Seismic Source: Type A; (San Andreas); 8 km
Type B; (Zayante – Vergeles); 3.6 km
Near Source Factors: Consistent with source type A of distance 8 km and for source type B of distance less than 3.6 km

N_s : 1.14

N_v : 1.39

We should point out that the structural seismic design is not intended to eliminate damage to a structure. The goal of the design system is to minimize the loss of human life. It is unlikely that any structure can be designed to withstand the forces of a great earthquake without any damage at all.

Potential Geologic and Geotechnical Hazards

There are several potential geologic and geotechnical hazards that can affect any given site. They are discussed below, along with any required mitigation measures.

Ground Rupture: In our opinion, this is not a significant hazard to this site. No mitigation is required.

Ground Shaking: This hazard is common to all properties in California. Mitigate by proper structural design and by following the recommendations presented in this report.

Lurching and Lateral Spreading: Such seismically generated movements are induced in areas with weak soils near open cuts or slopes. Such conditions do not exist on this site. No mitigation is required.

Liquefaction: In our opinion, liquefiable soils are not a hazard to this property. No mitigation is required.

Landsliding: Slope stability analysis was beyond the scope of this investigation. Based on the consistency and strength of the shallow sandstone at this site, it is our opinion that landsliding is not a potential hazard to this property provided that recommendations for surface and subsurface drainage are followed. No mitigation is required.

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- Compressible Soils: Compressible soils are not present on this site. No mitigation is required
- Expansive Soils: No potentially expansive soils were found at this site. No mitigation is required.
- Erosion: The site soils are easily eroded. Mitigate by controlling the discharge of concentrated water, both during and after construction.
- Flooding: Flooding is not a potential hazard to this site. No mitigation is required.

CONCLUSIONS AND RECOMMENDATIONS

In our opinion, the site is suitable for the proposed new houses provided the recommendations presented in this report are followed. Considering the sloping nature of the ground, however, the houses should be supported on reinforced concrete piers and beam foundation.

The following recommendations, which are presented as guidelines to be used by project planners and designers, have been prepared assuming AMSO CONSULTING ENGINEERS will be commissioned to review the grading and foundation plans prior to construction, and to observe and test during site grading and foundation construction. This additional opportunity to inspect the project site will allow us to compare subsurface conditions exposed during construction with those that were observed during this investigation.

Site Preparation, Grading and Compaction

Trees and shrubs designated for removal on the Project Plans should be felled and their stumps and roots should be grubbed. Areas of the site that will be built on or paved should be stripped to remove surface vegetation and organics. Soils containing more than 2% by weight of organic matter should be considered organic.

Any loose soils below areas of the site to be paved should also be excavated. The depth and horizontal limits of these excavations should be determined in the field by the Soils Engineer at the time of excavation.

Soil surfaces exposed by removal of trees and bushes and by removal of any loose soils should be scarified to a depth of 8 inches, conditioned with water (or allowed to dry, as necessary) to produce a soil water content of about 2 percent above the optimum value and then compacted to at least 90 percent relative compaction based on ASTM Test D1557-91.

AMSO CONSULTING ENGINEERS

March 14, 2006
Revised on August 10, 2007

Project 3362

Structural fill may then be placed up to design grades in the proposed building and pavement areas. Structural fill using on-site inorganic soil, or approved import, should be placed in layers, each not exceeding 8 inches thick (before compaction), conditioned with water (or allowed to dry, as necessary) to produce a soil water content of about 2 percent above the optimum value, and then compacted to at least 90 percent relative compaction based of ASTM Test D1557-91. The upper 8 inches of pavement subgrades should be compacted to about 95 percent relative compaction based on ASTM Test D1557-91.

Structural fill placed on sloping ground should be keyed in accordance with the CALTRANS STANDARD SPECIFICATIONS, latest edition. The following excerpt from subsection 19-6.01 of those specifications is pertinent:

"When embankment is to be made and compacted on hillsides....the slopes of original hillsides....shall be cut into a minimum of 6 feet horizontally as the work is brought up in layers. Material thus cut out shall be compacted along with the new embankment material....."

The toe key for structural fill placed on sloping ground should be at least 8 feet wide with its base horizontal or gently sloping back into the hillside.

Cut and fill slopes should be constructed no steeper than $2\frac{1}{2} : 1$ (horizontal to vertical).

On-site soils proposed for use as structural fill should be inorganic, free from deleterious materials, and should contain no more than 15% by weight of rocks larger than 3 inches (largest dimension) and no rocks larger than 6 inches. The suitability of existing soil for reuse as a structural fill should be determined by a member of our staff at the time of grading. We expect that most of the existing soil will be suitable for reuse as structural fill. If import is required for use as structural fill, it should be inorganic, should preferably have a low expansion potential and should be free from clods or rocks larger than 4 inches in largest dimension. Prior to delivery to the site, proposed import should be tested in our laboratory to verify its suitability for use as structural fill and, if found to be suitable, further tested to estimate the water content and density at which it should be placed.

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Building Foundation

The proposed houses should be supported on reinforced concrete "pier and beam" foundations with the piers deriving their vertical support from "skin friction" or adhesion. Piers should extend to a depth of at least 12 feet below the bottom of grade beams and should penetrate at least 6 feet into native undisturbed soil.

Piers should be spaced at least 3 diameters apart (center to center) but no more than 8 feet apart. The allowable load-carrying capacity (dead plus normal live loads) of each pier may be calculated assuming "skin friction" or adhesion of 400 psf between the shaft of the pier and the adjacent soil. "End bearing" of the pier should also be ignored. For lateral resistance, a passive pressure of 350 pounds per cubic foot acting across 1.5 pier diameter may be used.

The allowable foundation pressures given previously may be increased by one-third when considering additional short-term wind or seismic loading.

Perimeter reinforced concrete foundation beams should be designed to safely transmit all imposed loads to the supporting piers.

During foundation construction, care should be taken to minimize evaporation of water from foundation and floor subgrades. Scheduling the construction sequence to minimize the time interval between foundation excavation and concrete placement is important. Concrete should be placed only in foundation excavations that have been kept moist, are free from drying cracks and contain no loose or soft soil or debris.

Concrete Slabs-On-Grade

Concrete floor slabs should be constructed on compacted soil subgrades prepared as described in the section on Site Preparation, Grading and Compaction.

To minimize floor dampness, a section of capillary break material at least five inches thick and covered with a membrane vapor barrier should be placed between the floor slab and the compacted soil subgrade. The capillary break should be a free-draining material, such as 3/8" pea gravel or a permeable aggregate complying with CALTRANS Standard Specifications, Section 68, Class 1, Type A or Type B. The material proposed for use as a capillary break should be tested in our laboratory to verify its effectiveness as a capillary break. The membrane vapor barrier should be a high quality membrane such as Moistop (by Fortifiber Corporation) or similar. A protective cushion of sand or capillary break material at least two inches thick should be placed between the membrane vapor barrier and the floor slab.

AMSO CONSULTING ENGINEERS

March 14, 2006
Revised on August 10, 2007

Project 3362

If floor dampness is not objectionable, concrete slabs may be constructed directly on the water-conditioned and compacted soil subgrade.

Retaining Walls

The following may be used in the design calculations for any reinforced concrete retaining walls that may be needed at this site.

1. The average bulk density of material placed on the backfill side of the wall will be 120 pcf.
2. The vertical plane extending down from the ground surface to the bottom of the heel of the wall will be subject to pressure that increases linearly with depth as follows.

<u>Condition</u>	<u>Design Pressure</u>
Active, drained	45 pcf
At-rest, drained	65 pcf

The above values are non-seismic conditions. Active pressures should only be used for walls that are not restrained to move. At-rest pressures should be used for the design of the basement walls.

3. The effects of earthquakes may be simulated by applying a horizontal line load surcharge to the stem of the wall at a rate of $14 H^2$ lb/horizontal foot of wall, where H is the height of the surface of the backfill above the base of the wall. This surcharge should be applied at a height of 0.6H above the base of the wall.
4. A coefficient of "friction" of 0.35 may be used to calculate the ultimate resistance to horizontal sliding of the wall base over the ground beneath the base.
5. An equivalent fluid pressure of 350 psf/ft may be used to calculate the ultimate passive resistance to lateral movement of the ground in front of the toe of the wall and in front of any "key" beneath the toe or stem of the wall.
6. 2000 psf may be used as the maximum allowable bearing pressure for the ground beneath the toe of the wall. This value is for non-seismic conditions and may be increased to 3000 psf when considering additional loads on the wall resulting from earthquakes.

A zone of drainage material at least 18 inches wide should be placed on the backfill side of walls designed for drained condition. This zone should extend up the back of the wall to about 18 inches down from the proposed ground surface above. The upper 18 inches or so of material above the

AMSO CONSULTING ENGINEERS

March 14, 2006
Revised on August 10, 2007

Project 3362

drainage material should consist of native, clayey soil.

The drainage material and the clayey soil cap should be placed in layers about 6 inches thick and moderately compacted by hand-operated equipment to eliminate voids and to minimize post-construction settlement. Heavy compaction should not be applied; otherwise, the design pressure on the wall may be exceeded.

The drainage material should consist of either Class 2 Permeable Material complying with Section 68 of the CALTRANS Standard Specifications, latest edition, or 3/4 to 1½ inch clean, durable coarse aggregate. If the coarse aggregate is chosen as the drainage material, it should be separated from all adjacent soil by Mirafi 700X or a similar filter fabric approved by the project Soil Engineer.

Any water that may accumulate in the drainage material should be collected and discharged by a 4-inch-diameter, perforated pipe placed "holes down" near the bottom of the drainage material. The perforated pipe should have holes no larger than 1/4-inch diameter.

Utility Trenches

The attention of contractors, particularly the underground contractor, should be drawn to the requirements of California Code of Regulations regarding Safety Orders for "Excavations, Trenches, Earthwork".

For purposes of this section of the report, bedding is defined as material placed in a trench up to 1 foot above a utility pipe and backfill is all material placed in the trench above the bedding.

Unless concrete bedding is required around utility pipes, free-draining sand should be used as bedding. Sand proposed for use in bedding should be tested in our laboratory to verify its suitability and to measure its compaction characteristics. Sand bedding should be compacted by mechanical means to achieve at least 90 percent compaction density based on ASTM Tests D1557-91.

Approved, on-site, inorganic soil, or imported material may be used as utility trench backfill. Proper compaction of trench backfill will be necessary under and adjacent to structural fill, building foundations, concrete slabs and vehicle pavements. In these areas, backfill should be conditioned with water (or allowed to dry) to produce a soil-water content of about 3 percent above the optimum value and placed in horizontal layers not exceeding 6 inches in thickness (before compaction). Each layer should be compacted to 90 percent relative compaction based on ASTM Test D1557-91.

Where any trench crosses the perimeter foundation line of any building, the trench should be completely plugged and sealed with compacted clay soil for a horizontal distance of at least 2 feet on either side of the foundation.

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Surface Drainage

Surface drainage gradients should be planned to prevent ponding and to promote drainage of surface water away from building foundations, slabs, edges of pavements and sidewalks, and towards suitable collection and discharge facilities.

Water seepage or the spread of extensive root systems into the soil subgrades of foundations, slabs, or pavements, could cause differential movements and consequent distress in these structural elements. This potential risk should be given due consideration in the design and construction of landscaping.

Providing adequate surface and subsurface drainage is of great importance, as most structures constructed on a hillside and/or with raised floors are generally prone to drainage problems. All site drainage waters should be handled and discharged in a legal, prudent, reasonable and proper manner so as not to create a nuisance, risk or hazard to this property or adjoining properties.

We generally recommend that structures be equipped with roof gutters and downspouts. All runoff waters including all downspouts, patio, parking, and driveway drainage, and all other drainage should be collected in closed solid pipes with periodic cleanouts and discharged into legal approved area storm drain system.

If the above is not totally practical or feasible, then all site drainage waters should be discharged well away from edge of pavements and all building and foundation areas. Care should be used so that drainage waters are not concentrated and discharged on adjacent properties. Site drainage waters should be well dispersed in as natural a manner as possible and should not be discharged in a concentrated manner if a legally-approved storm drain system is not present.

It should be noted that moisture is usually present under most structures, as surface and subsurface waters flow from higher surrounding elevations. To minimize the amount of moisture under a structure, a sub-surface drainage system may be constructed around the perimeter of the structure. The building designer and contractor should very carefully consider and provide for drainage waters that might flow into and be trapped in the foundation crawl space area and also consider potential higher humidity and very good cross-ventilation.

The above site drainage recommendations are general in nature and should be carried out by the house designer, contractor, owner, and future owners to the fullest possible extent. However, from many years of soil engineering experience within Northern California, we have found that water and moisture below most structures is relatively common. Therefore, we suggest that if the owner desires assurance with respect to site drainage, an expert in the field of hydrology and drainage should be retained to prepare specific recommendations.

AMSO CONSULTING ENGINEERS

March 14, 2006
Revised on August 10, 2007

Project 3362

Follow-up Geotechnical Services

Our recommendations are based on the assumption that AMSO CONSULTING ENGINEERS will be commissioned to perform the following services.

1. Review final grading and foundation plans prior to construction.
2. Observe, test and advise during grading and placement of structural fill.
3. Observe and advise during foundation construction.
4. Observe, test and advise during utility trench backfilling

LIMITATIONS

The recommendations contained in this report are based on certain plans, information and data that have been provided to us. Any change in those plans, information and data will render our recommendations invalid unless we are commissioned to review the change and to make any necessary modifications and/or additions to our recommendations.

Subsurface exploration of any site is necessarily confined to selected locations. Conditions may, and often do, vary between and around such locations. Should conditions different from those encountered in our explorations come to light during project development, additional exploration, testing and analysis may be necessary; changes in project design and construction may also be necessary.

Our recommendations have been made in accordance with the principles and practices generally employed by the geotechnical engineering profession. This is in lieu of all other warranties, express or implied.

AMSO CONSULTING ENGINEERS

March 14, 2006
Revised on August 10, 2007

Project 3362

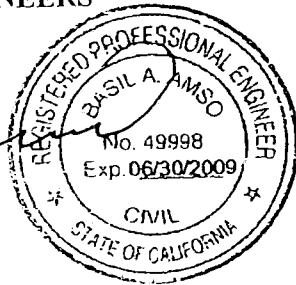
All earthwork and associated construction should be observed by our field representative, and tested where necessary, to compare the generalized site conditions assumed in this report with those found at the site at the time of construction, and to verify that construction complies with the intent of our recommendations.

Report prepared by:

AMSO CONSULTING ENGINEERS



Basil A. Amso
CE 49998



AMSO CONSULTING ENGINEERS



COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT

701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123

TOM BURNS, PLANNING DIRECTOR

April 8, 2008

Richard and Loreta Anderson, Trustees
C/o Owen Lawlor
612 Spring Street
Santa Cruz, CA 95060

Subject: GEOLOGIC HAZARDS ASSESSMENT
APN: **041-481-04**
LOCATION: **Wallce Avenue**
PERMIT APPLICATION NUMBER: **07-0112**
OWNER: Richard and Loreta Anderson, Trustees

Dear Richard and Loreta Anderson,

I performed a site reconnaissance of the parcel referenced above on April 3, 2008, where a 6-acre parcel is proposed to be divided into three smaller parcels. The parcel was evaluated for possible geologic hazards due to its location adjacent to steep slopes. This letter briefly discusses my site observations and conclusions, and state conditions to be included of the minor land-division approval. The letter will also briefly describe requirements for further technical investigation.

Completion of this hazards assessment included a site reconnaissance, a review of maps and other pertinent documents on file with the Planning Department, and an evaluation of aerial photographs. The scope of this assessment is not intended to be as detailed as a full geologic or geotechnical report completed by a state registered consultant. Rather the work is completed to determine what additional information about the site's geologic hazards and constraints are required to comply with County Code.

SITE DESCRIPTION

The parcel is located off Wallace Road in the Aptos area of Santa Cruz, CA. The 6.08-acre parcel is currently undeveloped except for older site grading. Application 07-0112 proposes to divide this property into three lots of 1.44 acre, 1.34 acres and 3.30 acre. The proposed building sites are located on a 10 to 30% slope that drains towards Wallace Avenue. As currently shown, an access to these new parcels will require the grading of a single access roadway adjacent to the southerly property line that will require a moderate amount of grading. Each pad will require grading and drainage improvements. Although the southerly portion of the property is relatively flat the

northern portion of the property has a hillslope that drops off towards the north with a slope of 50 percent.

SEISMIC HAZARDS

This property is located in a seismically active region of northern California and very strong ground shaking is likely to occur on the parcel during the anticipated lifetime of the proposed dwellings. Current California Building Standards require the homes on the proposed lots be constructed based upon the classification of the site soils in a manner that is different than those specified by Amso Consulting Engineers Report for the site's geotechnical investigation dated March 14, 2006 (hereafter ACE.) This is not fault of ACE since the report predates the enactment of these requirements, but will need to be modified before the preparation of the staff report for the approval of the project by the Planning Commission.

In addition to intense ground shaking hazard, development on this parcel could be subject to the effects of ridgetop shattering, ridge and/or lateral spreading, and seismically-induced landsliding during a large magnitude earthquake occurring along one several active nearby faults.

SLOPE STABILITY HAZARDS AND OTHER ISSUES RELATED TO SLOPES

A field reconnaissance was conducted on the property, along with the review of several sets of aerial photographs, general geologic maps of the area, unpublished consultant reports, and the map entitled "Preliminary Map of Landslide Deposits in Santa Cruz County" which was prepared in 1975 as part of the County's General Plan.¹ Our evaluation of the steep slopes, on the northern part of the parcel, was to determine if these steep slopes are related to landsliding or rapid erosion. This evaluation was also completed to determine if a building setback is necessary from these steep slopes on Lot 3 to compensate for any future erosion or landsliding of this slopes.

The Cooper Clark map does show a large landslide to the north of this property (see the attached Geologic Hazards Map figure 1.) After our site review and review of aerial photographs several processes were considered for the formation of this slope. One possible process for formation of the steep slope on proposed Lot 3 could be related to

¹ The Preliminary Map of Landslide Deposits in Santa Cruz County" was prepared in 1975 as part of the County's General Plan. This interpretive map was prepared from aerial photographs and was designed only for "regional land use evaluations." The map indicates areas where questionable, probable, or definite past instability is suspected. While not a susceptibility map indicating potential site-specific stability problems, when utilized in conjunction with other published data and documents the map is a useful planning resource.

the hypothesized landslide shown on the Cooper Clark map. This hypothesis would assume that the Cooper Clark landslide actually exists and similar or related landsliding processes have occurred on this property (see the Geologic Location Map figure 2). In this case, the steep slope on Lot 3 would indicate the location of the pull-apart of this landslide.

Processes other than landsliding could also have caused the steep slope. Without geologic mapping and additional exploration any correlation of this slope's formation to landsliding is hypothetical, and is presented here to help explain a building setback that will be required (as explained in the next paragraph). No recent landslide movement was obvious in the site reconnaissance, but erosion continues on the slope. This setback will compensate for any uncertainty concern the slope's stability, and/or ground cracking near these steeper slopes.

The California Building Code requires a setback based upon the height of the slope, which on this site, results in a maximum setback of 40 feet from the base of the foundation to the face of the slope. In addition to this setback, this GHA² will establish a minimum setback of 50 feet from the edge of the 30 to 50% slope line to the home and related development (see the attached copy of sheet TM2 of the Ifland Inc Plan). No decks requiring building permits, fills, drainage systems, septic system components and related improvements are allowed in the setback. This setback shall be shown on the recorded map with reference to Lot 3.

Alternatively, the applicants' geotechnical engineer may work with an engineering geologist to determine a smaller setback, but this work and determination must be completed prior to recordation of the minor land division, and their setback must shown on the record map.³ The County must also review and approve these reports to confirm the adequacy of the setback.

No drainage shall be diverted over the steeper slopes on the property especially on Lot 3.

Other steep slopes occur on the property near the building site for Lot 2. These slopes appear to be excavated slopes related to grading for a flat pad and access driveways on this property. This pad is over fifty years old, and has concrete drainage devices that have now deteriorated to the point that they no longer function. The excavated slopes expose a well indurated green/buff to red colored sandstone at its base and a soil zone of approximately five feet in depth is exposed above the sandstone. Even with the

² This setback is based upon the use of a pier and grade beam foundation designed to current code requirements.

³ This is a completeness issue and must be determined before the project is complete.

extent of deterioration the cut and fill slopes have only minor amounts of visible failure. In accordance with the ACE report, these slopes must be either regarded to the 2.5 horizontal to 1 vertical ratio slope gradient proposed, retained, or combination of regrading and retention of the slopes must occur to achieve a final slope with a ratio of 2.5 horizontal to 1 or flatter.

ACE may also desire to remove the debris from the excavated slope and re-evaluate their recommendation that excavations should have a final slope ratio of 2.5 horizontal to 1 or flatter.

ON SITE GEOLOGIC UNITS AND SOILS:

The information about the site's geologic and soils characteristics cannot be determined reliably without better exposures. Some generalities can be made about these materials as follows.

The geotechnical engineer's exploration suggests that the site is underlain by dense sandstone. Alternatively, the geologic mapping shows the site as underlain by the Aromas Formation, which is characterized by medium to lower density sands. This difference between the map formation and testing data could mean that the current geologic maps are incorrect and the site is underlain by another formation. I observed only one obscured exposure of well-indurated buff to reddish green sandstone. This exposure did not look like the Aromas formation, but I cannot make a definitive statement about the nature of the bedrock without other exposures.

Legacy fill has also been placed on part of the property in relationship to an older grading operation. This fill varies from a few feet in thickness along an access roadway and up to 8 feet in the vicinity of the graded pad. Minor grading has occurred throughout the property and small amounts of fill can be expected throughout the property.

Several feet of soil covers the site. Deeper soils can be expected in the vicinity of Lot 1 (see the attached copy of sheet TM2 of the Ifland Inc Plan.)

REPORT REQUIREMENTS

Based on my site visit and review of pertinent maps and other documents, further geologic evaluation in the form of a full geologic report is not required for your proposed development on this parcel. You may choose to obtain the services of an engineering geologist if you desire a more complete evaluation of the sites geologic constraints and

hazards, or to reduce the setback that is required by this letter. The geotechnical engineer must modify his report to comply with the current California Building Code, as well as review and approve all of the proposed improvement plans.

Two copies of this modified report must be submitted to County Planning Department for review. These reports must be wet stamped and must include necessary modifications to comply with the current CBC seismicity and other foundation related provisions. If the geotechnical engineer addresses this request with an addendum letter two wet signed copies of the addendum and the original report must be submitted. The following apply to any future geotechnical engineering work:

- A. All slope stability analysis' shall include the determination of the strength of the on-site earth material based upon appropriate testing of the materials.
- B. The Engineering Geologist must assist the geotechnical engineer in their analysis of the slope stability. As part of this assistance they must prepare an accurate and precise cross-section based upon a surveyed topographic map.
- C. The Engineering Geologist must help the geotechnical engineer to determine correct seismic parameters to apply to analysis of the slope's stability.

PERMIT CONDITIONS

Permit conditions will be developed for your proposal after the technical report has been reviewed. At a minimum, however, you can expect to be required to follow all the recommendations contained in the report in addition to the following items:

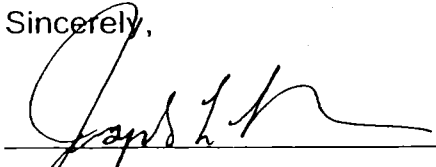
- I. Grading activities must be kept to a minimum.
- II. No building site may be located on slopes over 30 %.
- III. An engineered grading, drainage, erosion control, and driveway plan is required.
- IV. The driveway through Lot 2 must be completed before pouring of the foundations of any of the buildings.
- V. The grading and drainage plan must correct any concentrated erosion problem as part of the installation of the driveway to Lot 2.

- VI. Unless overridden by other County Resource issues, all tree removal must be completed before the start of construction on any of these parcels. Your landscape architect shall prepare a final revegetation plan with the assistance of a registered professional forester. A primary goal of this plan shall be the restoration of natural vegetation and the reduction of erosion.
- VII. All lots shall be conditioned to maintain the vegetation outside of the building envelopes in accordance with the approved site revegetation plan.
- VIII. Drainage from impermeable surfaces (such as the proposed roof and driveway) must be collected and properly disposed of as required by the Drainage Section of the Public Works Agency. Runoff must not be allowed to sheet off these areas in an uncontrolled manner, and any onsite retention of drainage must be pre-approved by the geotechnical. Drainage control along the driveway must be design so as to not cause damage to Wallace Road.
- IX. The geotechnical engineer shall review and approve the locations of the septic system drain fields.
- X. The geotechnical engineer shall review and approve all of the improvement plans including the drainage plans, grading plans, utility plans and other construction related plans for the project improvements and building permits.
- XI. A building envelope shall be designated on the recorded map and shall include the septic system and all accessory structures including non-habitable structures, pools, and septic systems. The geotechnical engineer and the County Geologist shall review these envelopes.
- XII. Excavations and fill slopes shall have a maximum steepness of a 2.5 horizontal to 1 vertical ratio.
- XIII. The existing excavated embankments steeper that 2.5 horizontal to 1 vertical must be either regraded to the 2.5 horizontal to 1 vertical ratio slope gradient proposed within the ACE report, retained, or combination of regrading and retention of the slopes must occur to achieve a final slopes with a ration of 2.5 horizontal to 1 or flatter.

- XIV. All fills within the building envelope must be removed and replaced as engineered fills at with a ration of 2.5 horizontal to 1 or flatter.
- XV. The proposed home on Lot 3 must be set back a minimum setback of 50 feet from the edge of the 30 to 50% slope line on shown on TM2 of the Ifland Inc Plan. No decks that requiring building permits, fills or cuts, drainage systems, septic system components and related improvements are allowed in the setback, and this setback shall be shown on the recorded map with reference to Lot 3.

Final building plans submitted to the Planning Department will be checked to verify that the project is consistent with the conditions outlined above prior to issuance of a building permit. If you have any questions concerning these conditions, the hazards assessment, or geologic issues in general, please contact me at 454-3175. It should be noted that other planning issues not related specifically to geology may alter or modify your development proposal and/or its specific location.

Sincerely,



JOE HANNA
County Geologist
CEG #1313

Date

9/8/09

For: Claudia Slater
Principal Planner
Environmental Planning

Enclosure(s)

Geologic Hazards Map
Geologic Location Map
Reduced Copy of the TM2 Ifland Engineers Map

07-0112
041-481-04
Anderson Trust
References:

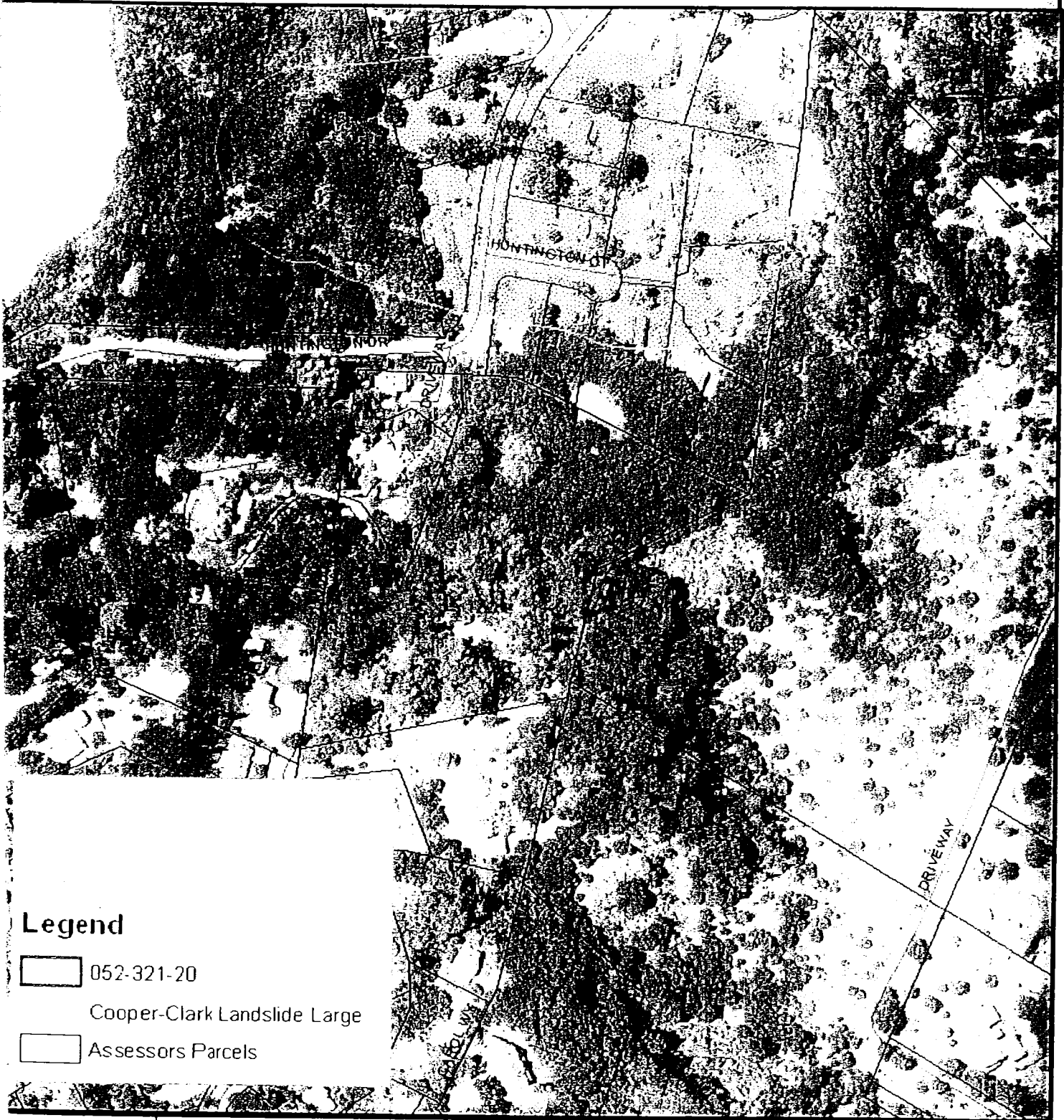
Maps and Reports

ACE, Amso Consulting Engineers, Unpublished Report on a Geotechnical Investigation for Four Lots Minor Land Division, End of Wallace Avenue, APN 041-481-04, Aptos, Santa Cruz County, California dated March 14, 2006

Brabb, E.E., 1989, Geologic map of Santa Cruz County, California, U.S. Geological Survey Miscellaneous Investigations Series Map I-1905, scale 1:62,000.

Cooper, Clark and Associates, 1975, Preliminary map of landslide deposits in Santa Cruz County, California, scale 1:62,000

Geologic Hazards Map
Anderson Property
APN 041-481-04



Legend

- 052-321-20
- Cooper-Clark Landslide Large
- Assessors Parcels



0 55 110 220 330 440
Feet

Figure #

1

Map created by JLH
April 2008

Geologic Location Map

714 Casserly Road

Watsonville, CA

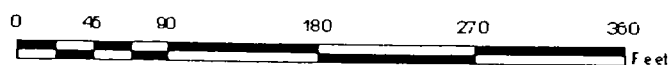
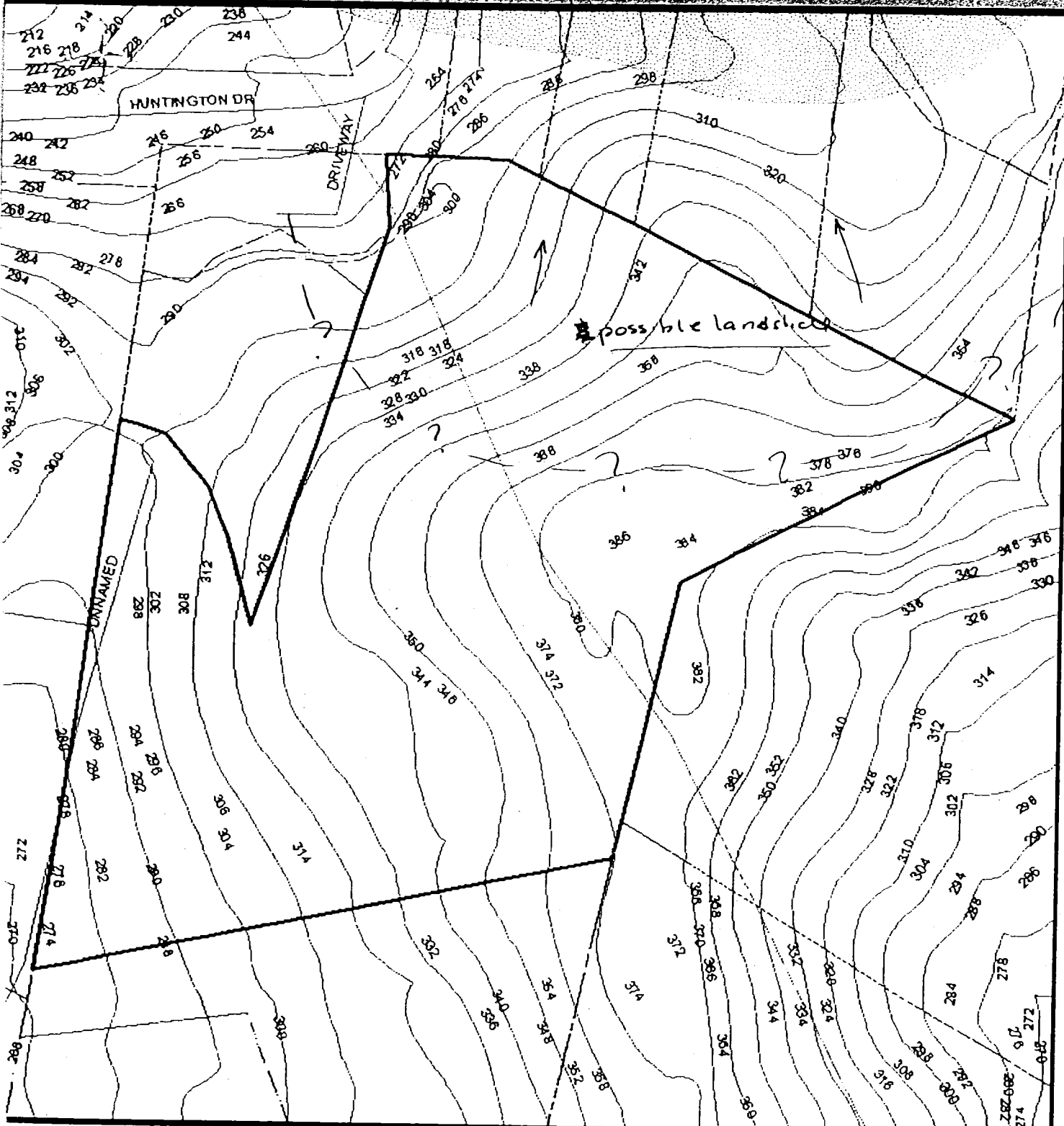


Figure #

2

Map created by JLH
April 2008

Benchmark

THE BENCHMARK IS LOCATED AT THE CORNER OF THE LOT. THE BENCHMARK IS A 1" DIA. IRON ROD SET IN CONCRETE. THE BENCHMARK IS 10' HIGH AND IS 10' FROM THE CORNER OF THE LOT.

NOTE:

THE ENGINEER HAS MADE A SITE VISIT TO FIELD CHECK THE DATA PROVIDED. WE ASSUME NO RESPONSIBILITY FOR THE ACCURACY OF THE DATA PROVIDED OR THE BOUNDARY AND/OR TOPOGRAPHIC DATA.

THE AREA OUTLINED THIS HAS BEEN GRADED MANY YEARS AGO AND THUS DOES NOT REPRESENT A NATURAL CONDITION

Existing Ground Slope Data		
0% - 4.99%	[Pattern]	0.40 ACRES
5.00% - 9.99%	[Pattern]	1.00 ACRES
10.00% - 14.99%	[Pattern]	1.10 ACRES
15.00% - 19.99%	[Pattern]	0.80 ACRES
20.00% - 24.99%	[Pattern]	0.40 ACRES
TOTAL		3.70 ACRES

Slope Map & Existing Trees

NIELSEN and ASSOCIATES

ENGINEERING GEOLOGY AND COASTAL CONSULTING

GEOLOGIC REPORT for a PROPOSED SINGLE FAMILY HOMESITE

**Wallace Avenue, Aptos
Santa Cruz County
APN 041-481-04**

Job No. SCr-2009-G

May 2008

NIELSEN and ASSOCIATES

ENGINEERING GEOLOGY AND COASTAL CONSULTING

May 20, 2008

Job No. SCr-2009-G

Richard and Loreta Anderson, Trustees
c/o Lawlor LandUse, Owen Lawlor
612 Spring Street
Santa Cruz, CA 95060

SUBJECT: Geologic Investigation of a proposed single family homesite, one of three in a proposed minor land division, focusing specifically on slope stability issues and development of a building setback from moderately steep slopes.

REFERENCE: The uppermost proposed homesite on APN 041-481-04, Wallace Avenue, Aptos, Santa Cruz County, California

Dear Mr. and Mrs. Anderson:

This report presents the results of our Geologic Investigation which addressed the geologic conditions at the upper proposed homesite of three on a 6.9 acre property at the end of Wallace Avenue in Aptos. A letter from the County Geologist, Joseph Hanna, suggested a building setback of 50 feet from greater than 50% slopes but left open the option of reducing that setback based on site specific work.

The upper homesite is located near a hilltop, the highest part of the property. The area is covered with a dense forest of eucalyptus trees. At the time of our study, there were no signs of erosion on the side slopes off this ridge. The steepest slopes lie to the north and southeast sides of the ridge. The majority of slopes below these short sections are predominantly less than 50%, but there is a very short section of hillside in excess of 55% gradient off the north side. We saw no signs of concentrated runoff anywhere on the property.

Our study revealed that the study area is underlain entirely by eolian sand of the Aromas Formation which consists of very fine to fine-grained sand. A 61-foot deep boring encountered only such sand, and the local geologic map indicates the sand continues another 120 feet below this.

In our opinion, the geologic conditions at the homesite are not adverse with respect to potential landsliding or slope instability. However, we still recommend a 25-foot setback from greater than 30% slopes.

The property is not located in a known fault zone, the closest of which is the Zayante fault situated about 2¾ miles northeast of the property. The property can be expected to experience

Anderson Report
Wallace Avenue, APN 041-481-04
Job No. SCr-2009-G

-2-

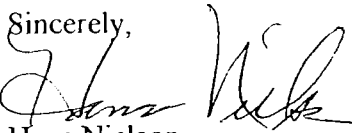
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Santa Cruz County
California

moderate to severe ground shaking during the lifetime of the proposed home due to its proximity to several active and potentially active faults.

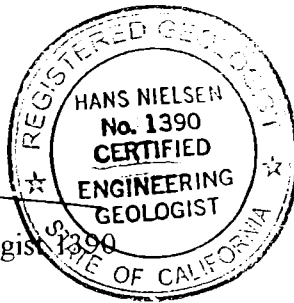
The greatest hazard at the property is erosion from concentrated runoff. The earth materials are highly susceptible to erosion due to their uncemented, friable character. It is very important that drainage from impermeable surfaces be collected and well controlled, either by dispersion or disposal in the subsurface.

In general, the proposed building site is well suited for the proposed development of the new home provided that our building setbacks are adhered to.

Sincerely,


Hans Nielsen

Certified Engineering Geologist No. 1390



NIELSEN and ASSOCIATES

TABLE OF CONTENTS

INTRODUCTION	5
SITE CONDITIONS	5
SITE GEOLOGY	8
LANDSLIDES	9
DRAINAGE	11
FAULTS and EARTHQUAKE HAZARDS	11
CONCLUSIONS	14
RECOMMENDATIONS	15
INVESTIGATION LIMITATIONS	17
REFERENCES	18
APPENDIX A - Boring Logs by Amso Consulting	20
APPENDIX B - Boring Logs by Nielsen and Associates for This Study	21
APPENDIX C - Geologic Site Map and Geologic Cross Sections	22

LIST OF ILLUSTRATIONS

FIGURES

1. Location
2. Geologic Map
3. 1974 Landslide Map
4. Regional Fault Map

PLATES (in pocket)

- | | |
|----------|------------------------|
| Plate 1. | Site Geologic Map |
| Plate 2. | Geologic Cross Section |

INTRODUCTION

This report presents the results of our geologic investigation of one homesite of three in a proposed minor land division of a 6.9 acre property known by the Assessors Parcel Number 041-481-04. Two of the homesites are located on moderate slopes with no apparent concerns for slope instability as indicated in a letter from the Santa Cruz County Geologist, Joseph Hanna, dated 8 April 2008. The third and uppermost homesite is located near 30% and greater slopes from which the County Geologist recommended a 50 foot building setback but allowed for the reduction in this setback based on site specific work. The purpose of our study was to assess the geologic conditions at the upper homesite in this regard.

The investigation consisted of: 1) a review of selected pertinent published and unpublished geologic literature and information including a geotechnical study by Amso Consulting Engineers in March 2006, 2) examination and interpretation of four sets of historical stereoscopic aerial photographs dating back to 1939, 3) field traverse of the property, 4) geologic mapping and the construction of geologic cross sections, 4) observation and logging of a 61-foot deep exploratory boring, 5) discussions with the project geotechnical engineer, 6) discussions with the project planner Owen Lawlor, and 7) preparation of this report and the accompanying graphics.

SITE CONDITIONS

The property occupies the west side of a hillside in the foothills of the Santa Cruz Mountains near the town of Aptos (Figures 1 and 2). Access is Wallace Avenue which the property is at the end of.

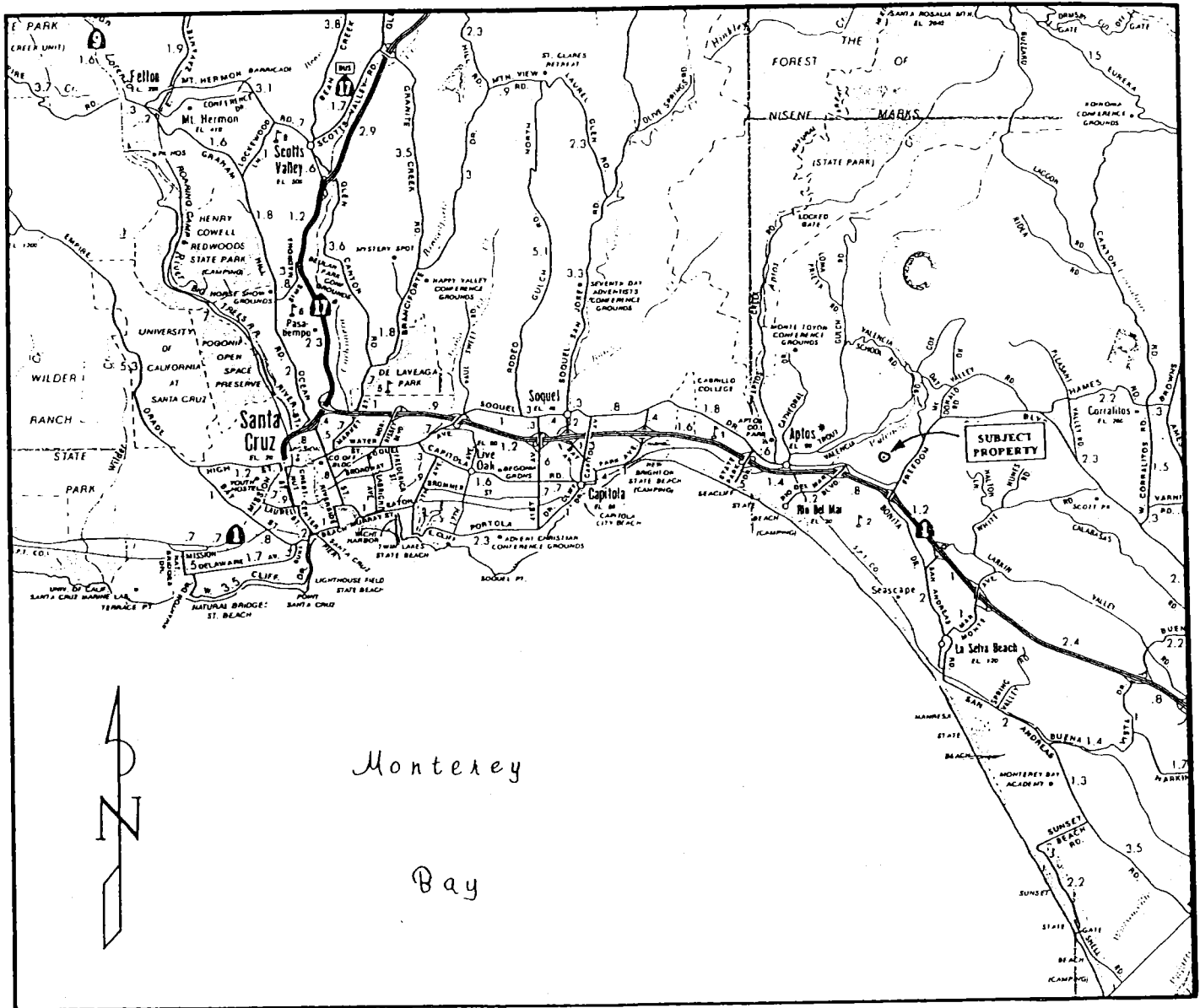
Slopes on the southwest side of the property, where the three homesites are located, are moderate. There are steeper slopes on the north side of the property and off the property to the east that drop down towards Freedom Blvd. In the development area, the property climbs at a moderate gradient of 15% to 20% from Wallace Avenue. Elevation gain is on the order of 120 feet to a ridge top in the northeast part of the property. Off the north side of the ridge, slopes drop at 30% to 50% gradient to adjacent properties and Huntington Drive. Off the southeast side of the ridge, slopes also decline on the order of 30%-50% gradient for several hundred feet. These conditions are shown on Plate 1 in Appendix C.

The property is vegetated with grasses and a dense eucalyptus forest. The southern part of the property, where two of the three homesites are located, is primarily open grassland with sparse eucalyptus trees. In the area of the upper homesite, situated near the ridge top in the northeastern part of the property, there is a dense eucalyptus forest. The northern part of the property is covered in widely spaced oak trees as are the hillsides east of the property.

At the time of our study, there was no indication of significant active erosion occurring anywhere on the property. Minor rilling was taking place on cutslopes along the rear of a large graded pad in the south-central part of the property. This pad was constructed prior to 1939.

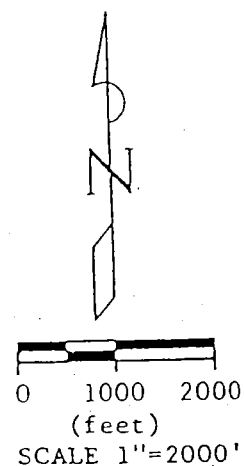
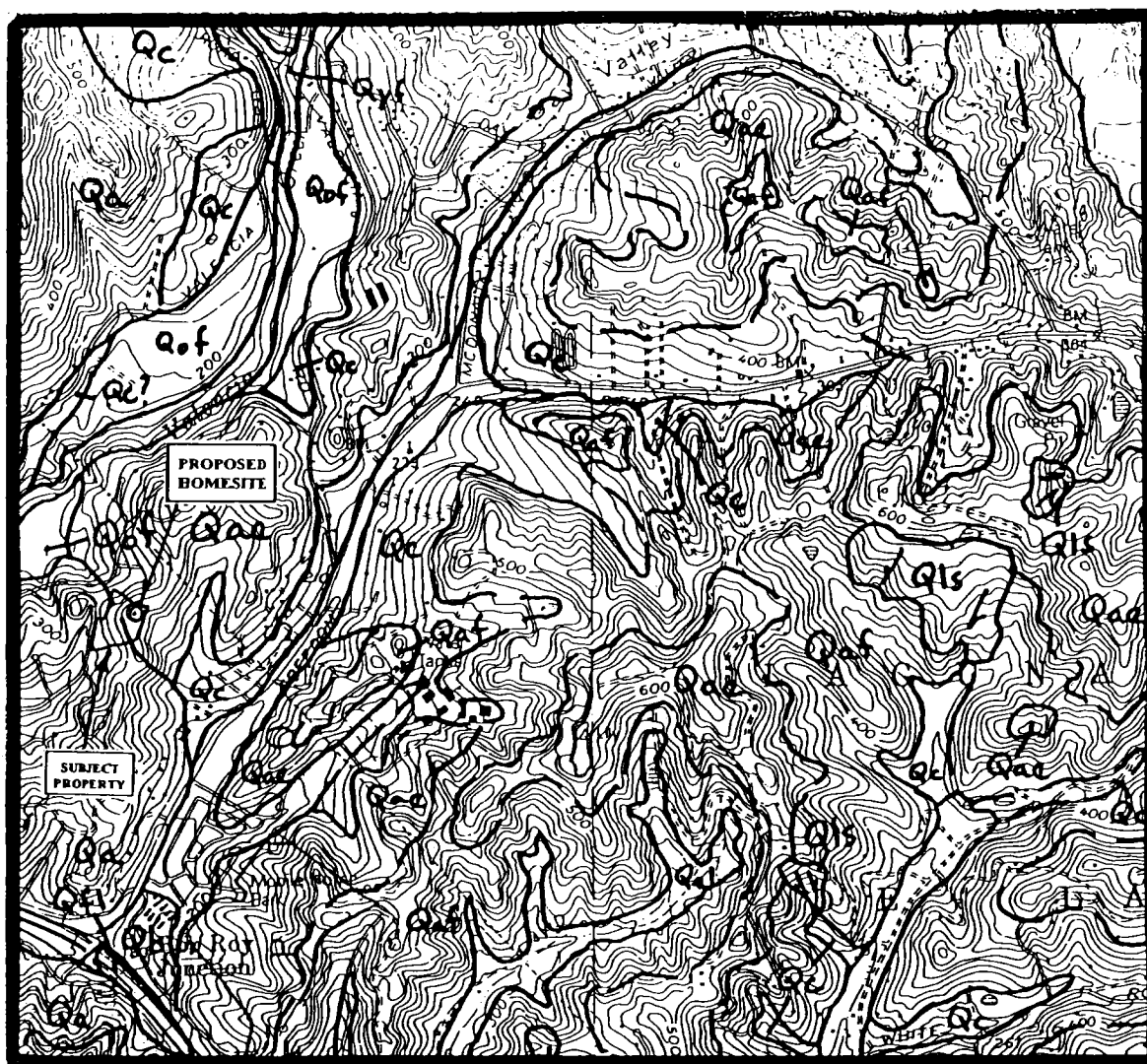
LOCATION MAP

Figure 1.



GEOLOGIC MAP

Figure 2.




EARTH MATERIALS

- Qn Fill - man made fill from grading
- Qb Basin Deposits
- Qyf Younger Fluvial Deposits
- Qof Older Fluvial Deposits
- Qc Colluvium: sand, silt, clay and rock debris
- Qcu Coastal Terrace Deposits

AROMAS FORMATION

- Qa Aromas Fm. - undifferentiated
- Qae Eolian (dune) Sands of the Aromas Fm.: red sands deposited by wind in near shore dune fields
- Qaf Fluvial Deposits of the Aromas Fm.: interlayered sand, clay, silts and gravels deposited in a meandering stream environment

SYMBOLS

-  Geologic Contact: dashed where approximately located

Portion of the Watsonville West USGS 7.5 min. Quadrangle

Geology from: Tinsely and Duprè, 1980

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based on stereo aerial photographs that show a long narrow building on this pad, the building appearing to be a chicken shack. Considering that this pad is over 70 years old, it illustrates the stable nature of the land since there has been essentially no significant erosion or slope instability caused by the creation of a large level pad on the hillside where the homes are proposed.

SITE GEOLOGY

According to the local geologic map, the property is underlain by the Aromas Formation. The map, Figure 2, shows the northeast half of the property underlain by the eolian facies of the Aromas Formation and the southwest half by undifferentiated Aromas. The Aromas is comprised of two distinctly different suites of earth materials called facies - a well sorted red brown sand (Qae) deposited in an ancient coastal sand dune field, and a heterogenous fluvial unit (Qaf) containing interbedded and interlayered sands, silts, clays, and gravelly sands (Dupré, 1975; Dupré and Tinsley, 1980). The Aromas is geologically young at ½ to 1½ million years old; it was the last major geologic unit deposited in what would become the Pajaro Valley and Watsonville Lowlands. In a regional sense, contacts between various earth materials in the Aromas Formation are roughly flat lying but may be locally gently inclined. However, the two facies can be juxtaposed due to their depositional environment that consisted of large rivers flowing through and over a massive sand dune field.

To evaluate the earth materials beneath the property, exploratory borings were drilled with a tractor-mounted drill rig using solid-flight auger and a 140-pound cable operated slide hammer for sampling. Eight borings were drilled by the project geotechnical engineer two years ago during their study of the property; their descriptive logs are presented in Appendix A for reference. We drilled two additional borings to aid in our interpretation of the geology, a 61-foot deep boring at the ridge top in the vicinity of the upper homesite, and a 36-foot deep boring in the southern part of the property. The latter boring was drilled to assess the nature of the "undifferentiated" Aromas. The boring locations are shown on Plate 1, and descriptive logs of our two borings are presented in Appendix B. Our interpretation of the subsurface conditions is presented in two cross sections in Appendix C. Since our study focused on only the upper homesite, our geologic cross sections are specific to this site.

Our deep boring at the ridge top, #9, encountered fine to very fine-grained brown to red brown sand for its entire depth. There was minor clay in the top five feet, the clay being a product of weathering and soil development. No groundwater nor indications of significant moisture variations were present. Our second boring, #10, encountered an 18-foot thick gravelly sand about 11 feet below ground surface which in turn was underlain by very fine-grained sand. None of the geotechnical engineer's borings encountered gravelly sands to depths of 20 feet below ground surface, one of which (#2) was located quite close to our Boring 10.

The drill data indicate that the local geologic map, Figure 2, accurately reflects the geology at the property. Our deep boring proved that the ridge is underlain by at least 61 feet of eolian sand, and the local geologic map shows another 120 feet of eolian sand below this depth.

The gravelly sand encountered in our second boring is clearly fluvial in origin. Our geologic map, Plate 1, shows this boring situated on the southwest side of the contact between eolian and undifferentiated Aromas taken from the local geologic map. Therefore, the "undifferentiated" Aromas in the southwestern half of the property is the fluvial facies.

Our best guess is that the fluvial sediments in the southwest part of the property are in buttress conformity with the eolian sands to the northeast. The depositional character of the Aromas, according to Dupré, 1975, involved a large river (or rivers) flowing through a massive field of sand dunes. It is easy to postulate that the river cut into the dunes in places depositing fluvial sediments on and against the dune sands. The absence of gravels in ALL of the geotechnical engineer's borings further suggests that the gravelly sand encountered in our Boring 10 is a local deposit, most likely a relatively small channel gravel. It is our opinion that further study of the relationship between the fluvial and eolian deposits on the property is unwarranted given the following: 1) the predominance of permeable sand found in the 10 exploratory borings, 2) the moderate to gentle nature of the hillsides on the property, and most importantly, 3) the absence of evidence of landsliding and slope instability on and adjacent the property.

LANDSLIDES

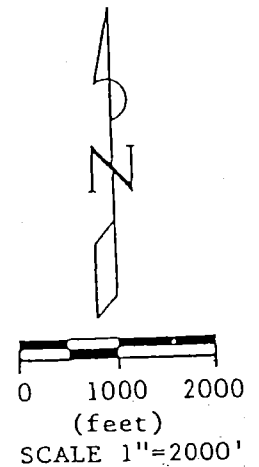
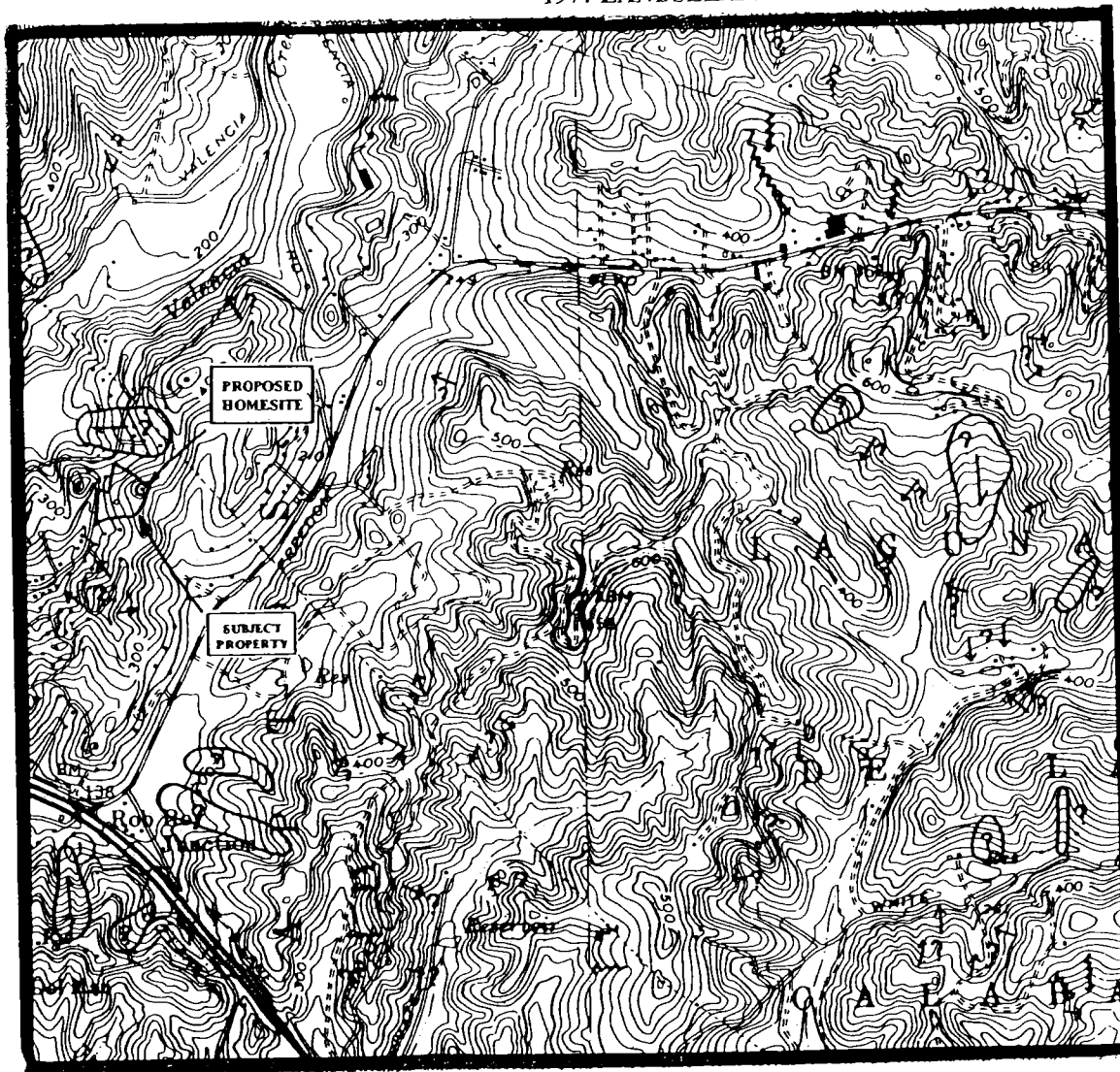
To evaluate landslides near the property for this study, we: 1) reviewed a 1974 map of landslide deposits in Santa Cruz County, 2) examined four sets of historical stereo aerial photographs, 3) reviewed the logs of eight borings drilled by the project geotechnical engineer, 4) drilled and logged two additional exploratory borings for this study, and 5) traversed the hillsides on and around the property.

Small-scale and moderate-sized landslides are not uncommon in the vicinity of the property as shown in Figure 3, The Map of Landslide Deposits in Santa Cruz County (Cooper-Clark and Associates, 1974). Many landslides in the Aromas Formation are relatively small debris flows that occur in the heads of drainages. However, there are large-scale landslides in the Aromas commonly associated with the fluvial facies where clays create low permeability horizons on which groundwater accumulates leading to excessive saturation and slope instability. Although present on the property, the fluvial facies is composed primarily of well-drained fine-grained sand and gravelly sand, conditions not conducive to landslide development.

The 1974 Landslide Map does show one significant landslide a short distance north of the property that does not directly affect the property. There is good reason to believe the existence of this slide based on evidence in stereo aerial photographs. However, there is no evidence in either the photographs nor on the ground that such sliding has taken place on the property. The hillside on the property is quite regular with no sharp drops or hillside hollows, features associated with landslides. Furthermore, there is a small ridge on this hillside (see Cross Section B-B') that greatly reduces the overall gradient as the hillside drops to Huntington Drive at the base of the slope.

Figure 3.

1974 LANDSLIDE MAP



LARGE LANDSLIDE DEPOSIT

More than 500 feet in maximum dimension. Arrows indicate general downslope direction of movement. D: definite landslide deposit; P: probable landslide deposit; ? : questionable landslide deposit; R: possible rapid rate of landslide movement (several feet to over 100 feet per second). Hachured line shows approximate position of inferred main scarp.

SMALL LANDSLIDE DEPOSIT AND GULLY

50 to 500 feet in maximum dimension. Arrow indicates general direction of downslope movement and is centered over location of deposit. Included are gullies which exhibit observable side bank slumping.

SOIL CREEP

Areas of suspected soil creep, a gradual downslope movement of soil and loose rock material on a slope. Wiggly arrow indicates general direction of soil creep and is centered over location of creeping area.

From: Cooper Clark and Associates (1974)

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In regards to defining the building area at the upper homesite on the ridge top, we share the County Geologist's opinion that the home should be setback from moderately steep slopes. However, our findings indicate no adverse geologic conditions below this ridge top. A 25-foot building setback from the crest of 30%-50% slopes is sufficient to mitigate slope instability concerns at the homesite. We have shown this building setback on Plate 1 from both the north and southeast sides of the ridge top. The slopes to the west of the hilltop are less than 30% gradient, so no building setback is warranted here.

DRAINAGE

Drainage on and around the property is dominantly sheetwash. There was no evidence of concentrated flow nor significant erosion on the property at the time of our study. However, we consider erosion to be a significant concern at the property.

Erosion potential will be mitigated by controlling, dispersing, and properly disposing of runoff from impermeable surfaces. Our findings strongly suggest that the sediments underlying the property are quite permeable, and therefore, capable of absorbing the majority of runoff from the proposed development. Without evidence to the contrary, the property appears to be an excellent candidate for subsurface disposal of runoff. However, we recommend percolation testing to verify the permeability of sediments in and below subsurface disposal areas. The hillsides downslope of the homesites are not steep, so the excessive saturation created by subsurface disposal should not have an adverse affect on slope stability. It will be important to mitigate the concentration of runoff from overflow of subsurface disposal systems, and this should be accomplished by creating a system that will disperse any overflow runoff.

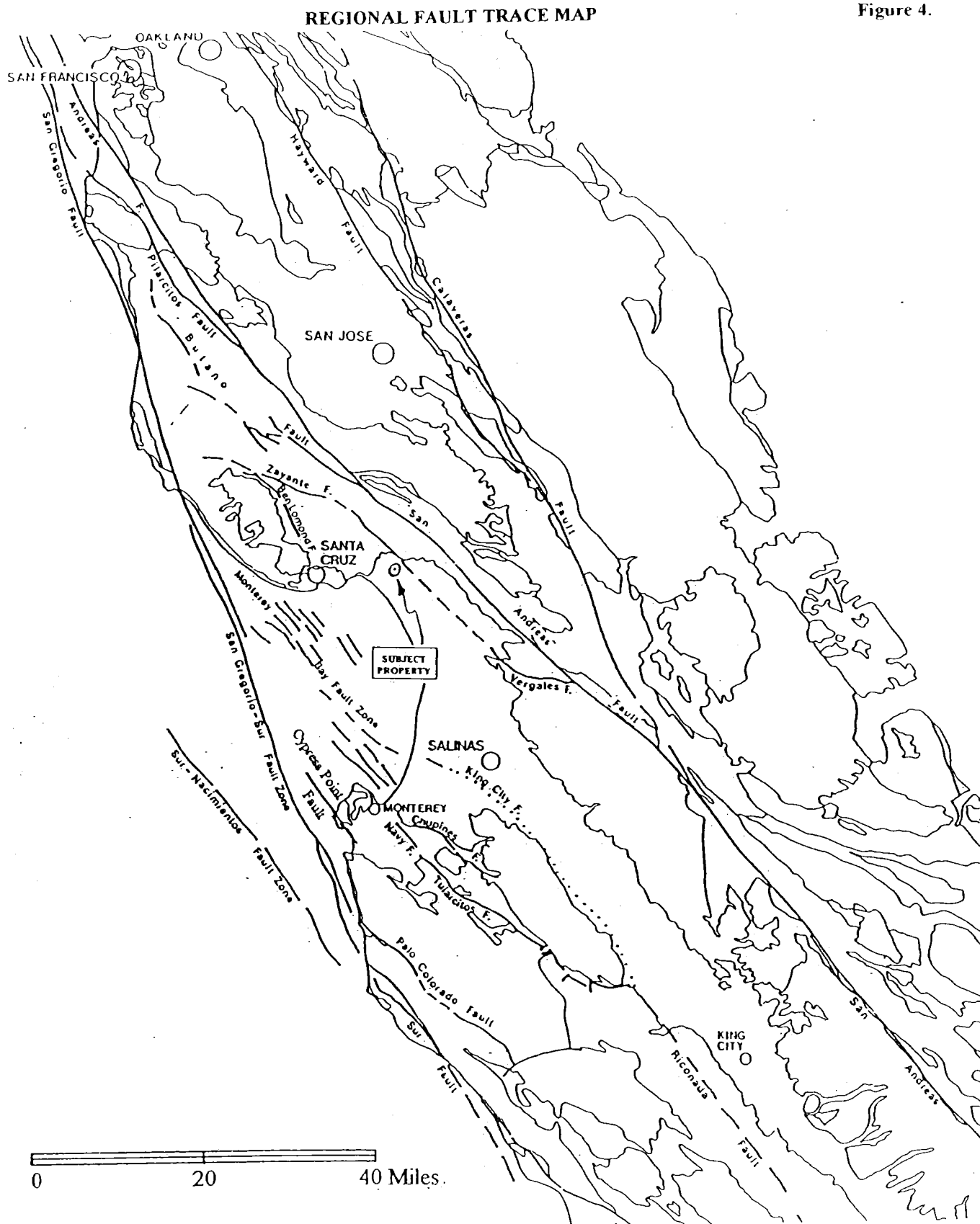
Runoff that is not disposed of in the subsurface should be dealt with by dispersion and the use of energy dissipaters designed to spread out flow and prevent concentration. The near-surface earth materials at the property are highly susceptible to erosion from concentrated runoff, and there is no concentrated runoff flowing across this ground now. The ground is capable of absorbing overland flow so long as concentration is kept to a minimum, and dispersed overland flow will also greatly reduce the amount of runoff leaving the property. Discharge of runoff on the gentle slopes near the base of the property is most favorable.

We recommend that we be afforded an opportunity to review the drainage plan for this property prior to its finalization and implementation.

FAULTS and EARTHQUAKE HAZARDS

The subject property lies in a highly seismically active region of California. A broad system of inter-related northwest-southeast trending strike-slip faults represent a segment of the boundary between the Pacific and North American crustal plates. For approximately the past 15 million years (mid-Miocene) the Pacific plate has been slipping northwestward with respect to the North American plate (Atwater, 1970; Graham, 1978). The majority of movement has been taken

Figure 4.



From: McCrory and Others. 1977

up by the San Andreas fault itself, however, there are many faults within this broad system that have also experienced movement at one time or another. Significant faults include, but are not limited to, the San Andreas Fault, Zayante Fault, the offshore San Gregorio Fault, and Hayward Fault in the east San Francisco Bay Area. The active San Andreas Fault lies about $6\frac{1}{4}$ miles northeast of the property. The potentially active Zayante Fault lies about $2\frac{3}{4}$ mile northeast. The active San Gregorio Fault lies about 18 miles to the southwest offshore, and the active Hayward Fault lies about 28 miles to the north (Figure 4).

The San Andreas, San Gregorio and Hayward faults are all considered active and capable of generating 7+ magnitude earthquakes. The San Andreas and Hayward faults are currently considered to be the faults with the highest potential of generating the next large earthquake in the area. To a lesser extent, the San Gregorio is considered a significant seismic threat. The Zayante fault is a potential threat, but its history is much less understood than that of these active faults. Whereas the recurrence interval of large magnitude earthquakes on the three active faults are measured in hundreds of years, the recurrence interval for the Zayante is currently estimated to be on the order of 8800 years, but there is no data as to when the last major earthquake occurred on the Zayante (Frankel, 1996).

The San Andreas and Hayward faults are considered to have high probabilities of generating large magnitude earthquakes in the next 30 years. The most recent assessment of seismic hazards in California was published jointly by the U.S. Geological Survey and the California Division of Mines and Geology in December 1996 (Frankel and others). This document is the result of a combined effort by many geologists and seismologists and is considered the most up to date compilation of fault parameters in California. The report indicates that the San Andreas fault in the vicinity of the property is capable of generating a Moment Magnitude 7.9 earthquake. The Hayward fault may also generate an earthquake with a Magnitude in excess of 7, but the greater distance from the property indicates that the greatest ground shaking at the property will be generated by the San Andreas fault.

Strong ground shaking is associated with large magnitude earthquakes, and ground shaking affects structures and the stability of landslide masses and hillsides. A number of different parameters may be used to characterize ground motion for the purpose of seismic design. Typically, these include (but are not limited to) peak horizontal acceleration, peak horizontal velocity, and duration of motion. Most emphasis in engineering practice has been placed on peak horizontal ground acceleration. Empirically derived attenuation relationships for average peak horizontal ground acceleration (PHGA) have been developed that typically relate PHGA in terms of a percentage of the force of gravity (g) to the distance from the causative fault for a specified magnitude earthquake. It has also been recognized that the attenuation relationships differ depending upon the soil conditions underlying the site.

We used attenuation equations developed by Abrahamson and Silva (1997) to estimate the ground motion parameter of horizontal ground acceleration at the properties. These attenuation equations are relative to the type of bedrock or thickness of recent sediments covering

bedrock. We consider the earth materials present in the hillside at the properties to be soft rocks or deep soil because of their uncemented character.

The two faults of interest are the San Andreas and Zayante faults. The San Andreas is much more active than the Zayante; however, the Zayante is much closer to the property than the San Andreas. The Zayante is only $2\frac{3}{4}$ miles to the northwest whereas the San Andreas is $6\frac{1}{4}$ miles to the northwest. The currently accepted maximum Moment Magnitude Earthquake on the San Andreas is 7.9 and on the Zayante is 6.8.

Using Abrahamson and Silva's (1997) attenuation equations, the estimated mean peak horizontal ground acceleration for sites underlain by deep soil-type earth materials are:

SAN ANDREAS FAULT

0.36g Mean
0.56g Mean + 1 standard deviation

ZAYANTE FAULT

0.43g Mean
0.68g Mean + 1 standard deviation

The Zayante values are greater than the San Andreas values due to the proximity of the former fault. This presents a dilemma due to the extreme nature of the values for the Zayante. We are hesitant to suggest that the Zayante values be ignored since the fault is recognized in the current literature as being capable of generating a Moment Magnitude 6.8 Earthquake. On the other hand, we think the probability of an earthquake occurring on the San Andreas is far greater than one occurring on the Zayante during the lifetime of the proposed home. Engineers should decide which values to use and contact us with any questions.

The house should be designed to stringent seismic resistant standards. Not only will the site probably be subjected to moderate, possibly severe, ground shaking from a large magnitude earthquake, but the position of the homesite on a ridge top increases the potential for amplification of ground motion due to topographic effects. We do not consider ridge top cracking, a phenomenon that occurred on some ridge tops in the Santa Cruz Mountains, a potential hazard at the homesite since the earth materials are uncemented sands. In almost all instances of ridge top cracking, the ridges were underlain by hard cemented brittle sandstone.

CONCLUSIONS

1. This study evaluated one of three proposed homesites on a 6.9 acre property proposed for a minor land division into three separate parcels. The property was undeveloped with structures at the time of our study, but a rather large graded pad more than 70 years old still exists in the area of the proposed development.
2. The proposed homesite is situated near a ridge top on moderate slopes of less than 30% gradient in the area of dense eucalyptus forest. Moderately steep slopes of 30%-50% gradient drop off this ridge to the north and southeast.

3. The homesite is underlain by the eolian facies of the Aromas Formation that extends at least 61 feet beneath the homesite and probably as deep as 180 feet. These earth materials consist of very fine to fine-grained, well sorted, uncemented ancient dune sands.
4. No landslides were evident on the hillsides immediately surrounding the proposed homesite. The geologic conditions are not adverse with respect to landslide potential, but it is prudent to set the home back from moderately steep slopes in excess of 30% gradient.
5. No groundwater nor evidence of it was found during this study. Additionally, there was no concentrated drainage at the property at the time of our study.
6. The property is located 2¾ mile south of the Zayante fault zone. The active San Andreas fault lies about 6¼ miles northeast of the property. The active San Gregorio fault lies about 18 miles to the southwest offshore, and the active Hayward fault lies about 28 miles to the north in the East San Francisco Bay Area.
7. Moderate to severe ground shaking is likely at the site in the next 30 years. Ground motion parameters at the site in the event of a large magnitude earthquake on the San Andreas and Zayante faults are presented in this report.
8. The property is geologically acceptable for the proposed new single family home so long as development adheres to the building setbacks noted herein.

RECOMMENDATIONS

1. This study followed an investigation by the geotechnical engineering firm of Amso Consulting in March 2006. Their report, including updates, shall be considered an integral part of the evaluation of the property and shall accompany this geologic report in all future phases of the project including but not limited to review, design, and construction.
2. The proposed single family home should adhere to the building setbacks shown on Plate 1 of this report. Nielsen and Associates or a California Certified Engineering Geologist shall review any home location prior to finalization and approve the location relative to the information presented herein.
3. A geotechnical engineer shall investigate the earth materials beneath the homesite and provide criteria for foundation design. We understand that Amso Consulting is doing this.
4. An engineered drainage plan shall be developed for the homesite. Efforts should be made to dispose of runoff in the subsurface and by overland flow so long as runoff is well dispersed to mitigate concentrated flow which can and most likely will lead to adverse erosion. Energy dissipaters shall be installed at discharge points to both reduce erosive

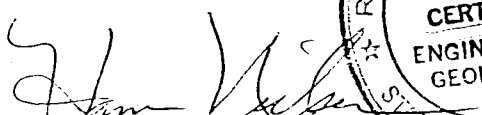
energy and to disperse runoff. We recommend percolation testing to verify the ability of the ground to accept subsurface disposal of runoff in the areas of percolation fields.

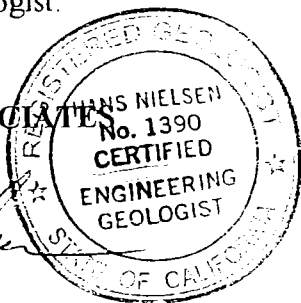
5. We recommend that we, or a certified engineering geologist in the State of California, be provided the opportunity for a general review of final design specifications. If we are not accorded the privilege of making the recommended reviews, we can assume no responsibility for misinterpretation of our recommendations.
6. If any unexpected variations in soil conditions, or if any unanticipated geologic conditions are encountered during construction, or if the proposed project will differ from that discussed or illustrated in this report, we require to be notified so supplemental recommendations can be given.

INVESTIGATION LIMITATIONS

1. This report presents the results of our Geologic Investigation which addresses the geologic conditions and potential geologic hazards associated with the upper homesite of three in a proposed minor land division. This report outlines the general geologic conditions at the site and presents general recommendations to help mitigate potential risks associated with the geologic hazards. This report does not include geotechnical engineering, structural engineering, civil engineering, or architectural evaluations.
2. This written report comprises all of our professional opinions, conclusions and recommendations. This report supersedes any oral communications concerning our opinions, conclusions and recommendations.
3. The conclusions and recommendation noted in this report are based on probability and in no way imply the site will not possibly be subjected to ground failure or seismic shaking so intense that structures will be severely damaged or destroyed. The report does suggest that building structures at the recommended site, in compliance with the recommendations noted in this report and any other engineering reports, reduces the potential for damage to the home.
4. This report is issued with the understanding that it is the duty and responsibility of the owner, or of their representative or agent, to ensure that the recommendations contained in this report are brought to the attention of the architect and engineer for the project, incorporated into the plans and specifications, and that the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.
5. The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they be due to natural processes or to the works of man, on this or adjacent properties. In addition, changes in applicable or appropriate standards occur whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated, wholly or partially, by changes outside our control. Therefore, this report should not be relied upon after a period of three years without being reviewed by an engineering geologist.

NIELSEN AND ASSOCIATES


Hans Nielsen
C.E.G. 1390



NIELSEN and ASSOCIATES



COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT

701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123

TOM BURNS, PLANNING DIRECTOR

August 12, 2008

Richard and Loreta Anderson, Treasurer
C/o Lawlor LandUse, attention: Owen Lawlor
612 Spring Street
Santa Cruz, CA 95060

**Subject: Review of Engineering Geology Report, by Nielsen and Associates.
Dated May 20, 2008; Project # SCR-2009-G
Review of Geotechnical Engineering Report, by ACE Engineering
Dated March 14, 2006; Project # 3362
APN 041-481-04, Application #: 07-0112**

Dear Applicant:

The purpose of this letter is to inform you that the Planning Department has accepted the subject reports and the following items shall be required:

1. All construction shall comply with the recommendations of the reports.
2. The setbacks for Lot 3 shall be as indicated on Plate 1 of the approved Engineering Geology report. Prior to the submittal of the proposed building plans Nielsen and Associates, or an Certified Engineering Geologist, must review and approve the location of the setback on the construction plans.
3. The setback shown on Plate 1 of the subject report shall be recorded with the other development envelopes on the final map of the minor land division. Slopes over 30% shall not be included in the development envelopes, and all access roadways/driveways, drainage dispersion areas, and building areas shall be included within the development envelopes.
4. All of the conditions of the Geologic Hazards Assessment prepared for this project shall remain project conditions.
5. A separate project specific geotechnical engineer report update shall be prepared for each of the proposed homes. These updates must be prepared to comply with the requirements of the 2007 CBC. Please note that your report has identified potentially expansive soils (Section 1802.3.2 of the 2007 CBC) and the updates will need to address expansive soils per the requirements of the 2007 CBC.
6. Final plans shall reference the reports and include a statement that the project shall conform to the reports' recommendations. Plans shall also provide a thorough and realistic representation of all grading necessary to complete this project
7. Prior to building permit issuance and approval of the improvement plans a *plan review letter* from the geotechnical engineer and engineering geologist shall be submitted to

(over)

Environmental Planning. The authors of the reports shall write the *plan review letters*. These letters shall state that the project plans conform to the reports' recommendations.

8. The geotechnical engineer recommends that all excavations and fill embankments be constructed at a slope gradient of 2.5:1. Implicit in this requirement is the need to re-grade the existing excavations and fill embankments to a slope gradient that is 2:5:1 or less steep.
9. Please submit an electronic copy of the soils report in .pdf format via compact disk or email. Emails may be directed to pln829@co.santa-cruz.ca.us.

After building permit issuance the soils engineer and engineering geologist *must remain involved with the project* during construction. Please review the *Notice to Permits Holders* (attached).


Our acceptance of the reports is limited to its technical content. Other project issues such as zoning, fire safety, septic or sewer approval, etc. may require resolution by other agencies.

Please call the undersigned at (831) 454-3175 if we can be of any further assistance.

Sincerely,



Joe Hanna
County Geologist CEG1313



Kent Edler PE
Senior Civil Engineer



Carolyn Banti PE
Associate Engineer

Cc: Antonella Gentile, Resource Planner
Carolyn Banti, Civil Engineer
Nielsen and Associates
ACE Inc.

C O U N T Y O F S A N T A B A R B A R A
DISCRETIONARY APPLICATION COMMENTS

Project Planner: Randall Adams
Application No.: 07-0112
APN: 041-481-04

Date: August 13, 2009
Time: 09:55:12
Page: 1

Environmental Planning Completeness Comments

===== UPDATED ON DECEMBER 31, 2008 BY CAROLYN I BANTI =====
Comments from previous dates have been deleted due to lack of space, but can be found in the project file.

The site was staked and field reviewed by Planning staff on 12/22/08. Full grading plans have been prepared and reviewed. Comments are as follows:

1. Grading quantities for the project exceed 1000 cubic yards and will require environmental review.
2. It appears there may be discrepancies in the grading quantities. Please provide backup grading calculations for review.
3. Please provide a grading cross-section for Lot 2.
4. Grading plans for Lot 3 must include the western retaining walls shown on cross-sections A and B.
5. Please provide updated plan review letters from the soils engineer and engineering geologist that reference the revised plan set. ===== UPDATED ON APRIL 14, 2009 BY ANTONELLA GENTILE =====
Update the tentative map to reflect correct lowest finished floor elevations for Lot 1 and the removal of parking in the fire truck turnaround for Lot 3.

All other completeness items have been addressed per Environmental Planning.

Environmental Planning Miscellaneous Comments

===== UPDATED ON DECEMBER 31, 2008 BY CAROLYN I BANTI =====

Comments from previous dates have been deleted due to lack of space, but can be found in the project file.

--- Compliance --- Fourth Review --- Soils and Grading ---

After reviewing the staked site, it was determined that existing Lot 1 grades are in compliance with the grades required by the General Plan. Driveway grades have also been revised to comply with Code requirements. The following are the remaining Compliance Comments:

1. It appears grading can be minimized on Lot 1 by utilizing alternate site design and foundation approaches as recommended in General Plan Policy 6.3.9. Please revise.
2. The current plans show the Lot 3 fire truck turn-around obstructed by parked cars; please revise the plans to show the entire fire truck turn-around free of parking.
3. The grading plans show a retaining wall adjacent to the driveway on Lot 2 to

Discr ionary Comments - Continued

Project Planner: Randall Adams
Application No.: 07-0112
APN: 041-481-04

Date: August 13, 2009
Time: 09:55:12
Page: 2

prevent grading on 30-percent slopes. This wall should also be shown on the Tentative map and preliminary driveway plan.

--- Misc. Comments/Conditions --- Fourth Review --- Soils and Grading ---

During our recent field visit, it was noted that there is a portion of the property on Lot 2 that is greater than 30 percent and not designated on the slope map. This portion does not impact the feasibility of the development, but is provided for informational purposes only. ===== UPDATED ON DECEMBER 31, 2008 BY ANTONELLA GENTILE =====

Additional compliance comments:

4. The tree removal plan is misleading in that groups of trees are counted as single trees in order to provide tree removal totals. Change the wording to reflect this detail.

5. It appears that some trees are being removed that can be saved and are in fair condition. Provide an explanation for removal or change the plans to show these trees to remain. Such trees include: the 14" pine included in tree cluster 1.04, the 30" pine (tree 1.11), the 16" pine (tree 2.14), and several oaks in the northwestern portion of the development area of lot 3.

6. The 60" oak cluster within the right of way on lot 3 shown to remain on sheet L1.2 is not shown on sheet L3.2.

7. Removed oak trees with 5" or greater DBH shall be replaced with oaks on a 3:1 basis. The current tree removal plan shows removal of 12 oak trees and clusters. Please indicate the total number of oaks with DBH of 5" or greater. Individual oak trees on the landscape plan (currently 14) will count toward overall oak tree replacement; however, an area should be designated for oak tree replacement outside of the development area.

8. Show a minimum of 3 new oak trees for each oak tree with DBH over 5" to be removed. ===== UPDATED ON APRIL 14, 2009 BY ANTONELLA GENTILE =====
Compliance comments:

Although it is foreseeable that minor changes to the landscape plan may be necessary, any changes to the plant palette must be approved by Environmental Planning. Note 1 on sheet L3.2 should be revised to reflect this requirement or deleted.

Driveway grading plans show cut/fill slopes at 2:1, while the soils report requires a maximum 2.5:1 for these slopes. The soils engineer will be required to approve driveway grading plans prior to improvement plan approval by Environmental Planning. If the soils engineer cannot approve these slopes, changes to proposed retaining walls along the driveway will be required.

All other compliance comments have been addressed.

Please note that Environmental Review is required for this project because the grading amounts exceed 1,000 cubic yards.

Discr ionary Comments - Continued

Project Planner: Randall Adams
Application No.: 07-0112
APN: 041-481-04

Date: August 13, 2009
Time: 09:55:12
Page: 3

Additional Conditions:

Prior to parcel map recordation, plan review letters shall be required from the soils engineer and engineering geologist.

Prior to building permit issuance, plan review letters shall be required from the soils engineer and engineering geologist.

Improvement plans and subsequent building plans shall show tree protection measures for all mature trees to be retained. These plans shall be approved by the project arborist.

Any changes to the plant palette shall be subject to review and approval/denial by Environmental Planning.

A preconstruction meeting shall be scheduled by the project applicant and held on-site prior to the beginning of improvement construction. The soils engineer, grading contractor, Department of Public Works inspector, applicant, project arborist, and Environmental Planning staff shall attend the meeting.

A minimum of three oak trees shall be planted for each oak tree removed.

A mitigation and monitoring plan shall be required for the new oaks prior to improvement plan approval. ===== UPDATED ON APRIL 14, 2009 BY ANTONELLA GENTILE =====

Dpw Drainage Completeness Comments

LATEST COMMENTS HAVE **NOT YET** BEEN SENT TO PLANNER FOR THIS AGENCY

===== REVIEW ON APRIL 3, 2007 BY ALYSON B TOM ===== Application with civil plans dated 2/20/07 has been received. Please address the following: 1) This project is required to

1) This project is required to limit post development runoff rates to predevelopment levels. Utilizing detention to meet this requirement is only allowed if other measures are not feasible. Are facilities to retain and infiltrate added runoff due to additional impervious areas feasible on this site? If so, please incorporate retention/infiltration measures prior to detention. If not, please submit reasons and technical support of infeasibility for review. If detention is accepted the required storage volume should be recalculated and redesigned for grading. Per SWM-15A and SWM-17 the required storage is around 1535 c.f. Why was figure SWM-15C referenced on sheet TM6?

2) This project is required to provide mitigations for new impervious areas for a range of storms. Best management practices such as minimizing impervious areas, expanded pervious surfacing, disconnected impervious area, etc. should be considered and appropriate measures should be incorporated per the County Design Criteria (CDC). The proposed project does not appear to provide any mitigations for storms smaller than the 10 year storm. How will impacts to these small storms be mitigated?

Project Planner: Randall Adams
Application No.: 07-0112
APN: 041-481-04

Date: August 13, 2009
Time: 09:55:12
Page: 4

3) The proposed plan indicates the majority of runoff from proposed impervious areas will discharge to a pipe and open channel system along Wallace Avenue. Are the 12 inch pipe sections shown on sheet TM3 existing or proposed? Please demonstrate that this system is adequate to handle all existing and proposed runoff. Based on the results of the assessment this project may be required to upgrade downstream facilities and/or provide additional on-site mitigations.

4) The preliminary drainage map has been received. Please show proposed impervious areas on the map. How will proposed impervious areas in drainage areas 2, 3, and 4 on lots 3 and 4 be mitigated for? Since a complete grading plan was not provided please confirm that the existing drainage patterns shown on the drainage map will not be altered with the land division or lot grading. If complete grading plans will not be provided include this at least as a note on the preliminary and final plans.

5) Completely detailed drainage plans for each individual lot are not required as part of the land division. However, the methods and patterns of dealing with runoff from proposed lot development are required. Also, if common facilities (ex: detention pond) to be built as part of the land division will be providing mitigation for lot development then the maximum impervious area allowed per lot should be included as part of the land division as well as requirements for routing for meeting CDC requirements.

6) It was not clear from the grading information provided on TM3 that only runoff from proposed impervious areas would be routed to the proposed detention facility per CDC requirements. Plans should clearly describe how open area runoff will be routed safely around the proposed detention pond. Contours shown on sheet TM3 indicate runoff may be routed into the detention facility.

7) Please submit a review letter from the Geotechnical engineer approving of the preliminary drainage plan. The letter should refer to dated plans.

8) The extent of the proposed development included as part of the minor land division is unclear and inconsistent between the architectural, landscaping and civil plans. Please clearly describe what work is included under this specific application.

All submittals for this project should be made through the Planning Department. For questions regarding this review Public Works stormwater management staff is available from 8-12 M-F at 454-2160.

===== UPDATED ON OCTOBER 5, 2007 BY RACHEL J FATOOHI =====

It is understood that the retention chambers will be used on each parcel to mitigate small storms for runoff from house roofs, patios and parking areas. Please show tentative location of these chambers and show how over flow from them is being handled without impacting adjoining parcels. Please account for the overflow path/amounts in the site's drainage system design. Since the retention chambers are feasible for these impervious areas, please investigate such feasibility to intercept driveway runoff at different segments along the driveway and treat it in the same fashion for a range of storms. supporting calculations for the retention system are required prior to recording the map. Because this project is within the Aptos

Project Planner: Randall Adams
Application No.: 07-0112
APN: 041-481-04

Date: August 13, 2009
Time: 09:55:12
Page: 5

Creek Watershed area, release rate from the detention system shall be based on a 5-year storm predevelopment rate conditions. detailed drawings and calculations are required during the map recording process.

===== UPDATED ON OCTOBER 5, 2007 BY RACHEL J FATOOHI =====

===== UPDATED ON AUGUST 8, 2008 BY ALYSON B TOM ===== Application with civil plans dated 7/22/08 has been received. Please address the previous completeness comments from October 5, 2007 along with the following:

1) The photocopied plans received are not legible. Text in hatched areas cannot be read.

2) The extent of the proposed development included as part of the minor land division is unclear and inconsistent between the architectural, landscaping and civil plans. Please clearly describe what work is included under this specific application.

===== UPDATED ON DECEMBER 29, 2008 BY ALYSON B TOM ===== Previous completeness comments from 10/5/07 and 8/8/08 have been partially addressed. The following is still outstanding from 10/5/07:

Since the retention chambers are feasible for small storm mitigations for runoff from the house roofs, please investigate such feasibility to intercept driveway and parking area runoff at different segments along the driveway and treat it in the same fashion for a range of storms. As proposed, it appears that there are no mitigations provided for impacts to small storms for runoff from new driveway and parking areas.

===== UPDATED ON APRIL 8, 2009 BY GERARDO VARGAS ===== Previous completeness comment not addressed. See below.

Since the retention chambers are feasible for small storm mitigations for runoff from the house roofs, please investigate such feasibility to intercept driveway and parking area runoff at different segments along the driveway and treat it in the same fashion for a range of storms. As proposed, it appears that there are no mitigations provided for impacts to small storms for runoff from new driveway and parking areas.

Please see compliance issues to be addressed prior to final map recordation. Please call the Dept. of Public Works, Stormwater Management Section, from 8:00 am to 12:00 noon if you have questions.

Dpw Drainage Miscellaneous Comments

LATEST COMMENTS HAVE **NOT YET** BEEN SENT TO PLANNER FOR THIS AGENCY

===== REVIEW ON APRIL 3, 2007 BY ALYSON B TOM ===== The following should be addressed prior to final map recordation.

1) All runoff from parking and driveway areas should go through water quality treatment prior to discharge from the site. Consider outsloping driveways to drain to landscaped areas for filtering prior to discharge from the site. If structural treatment is proposed, recorded maintenance agreement(s) are required.

Disc: Dictionary Comments - Continued

Project Planner: Randall Adams
Application No.: 07-0112
APN: 041-481-04

Date: August 13, 2009
Time: 09:55:12
Page: 6

2) Please show drainage easements for all common drainage facilities, including the detention system. Specify on the final plans and in recorded eement(s) who is responsible for maintaining these common drainage facilities.

3) Please provide permanent markings at each inlet that read: "No Dumping Drains To Bay - No Tire Desecho Al Mar", or equivalent. The homeowner's association should be responsible for maintaining these markings.

4) Submit detailed plans and supporting calculations demonstrating that the site storm water system, including the proposed detention system, meets CDC requirements (capacity, safe overflow, freeboard, velocity, etc.). Include drainage area maps.

5) Include maintenance requirements for proposed drainage facilities including all best management practices on the final plans. The plans should also specify who is responsible for maintenance.

6) Please submit a review letter from the Geotechnical engineer approving of the final drainage plan. The letter should refer to dated plans.

7) Construction activity resulting in a land disturbance of one acre or more, or less than one acre but part of a larger common plan of development or sale must obtain the Construction Activities Storm Water General NPDES Permit from the State Water Resources Control Board. Construction activity includes clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement. For more information see:
<http://www.swrcb.ca.gov/stormwtr/constfaq.html>

===== UPDATED ON OCTOBER 5, 2007 BY RACHEL J FATOOHI =====

Currently the site is not in a drainage zone. If the site will be annexed to the sanitation district, it will also be annexed to Zone 6 flood Control District and Zone 6 fees will be assessed for the net increase in impervious area. Semi impervious area are encouraged and are charged half the fees compared to impervious surfacing. Currently the fees for impervious area are \$1.00 per square foot. ===== UPDATED ON AUGUST 8, 2008 BY ALYSON B TOM ===== COMPLIANCE ISSUES: 1) The preliminary drainage map has been received. The notes indicate a proposed diversion of runoff from the building on lot 3 to drain to drainage area 1 rather than drainage area 2 per topography. Please update plans to eliminate this diversion.

2) It was not clear from the grading information provided on TM3 that only runoff from proposed impervious areas would be routed to the proposed detention facility per CDC requirements. Plans should clearly describe how open area runoff will be routed safely around the proposed detention facilities (the detention system should be located -off-line-). Contours shown on sheet TM3 indicate open area runoff may be routed into the detention facility.

3) Submit detailed plans and supporting calculations demonstrating that the on-site storm water system, including the proposed detention/retention systems, meets CDC requirements (capacity, safe overflow, freeboard, velocity, etc.). Include drainage area maps that are consistent with the calculations (e.g. what does an area of 0.95 acres used in detention volume calculation correspond to?). Provide details and analysis for the outflow restriction for the detention facility. How have the sys-

Project Planner: Randall Adams
Application No.: 07-0112
APN: 041-481-04

Date: August 13, 2009
Time: 09:55:12
Page: 7

tems been designed to minimize clogging and maintenance? Provide safe overflow details for the systems. Analysis for the pipe system should be on Figure SWM-6.

INFORMATION ISSUES: 1) Completely detailed drainage plans for each individual lot are not required as part of the land division if separate building permits will be obtained for each lot. However, the methods and patterns of dealing with runoff from proposed lot development are required. Also, if common facilities (ex: detention) to be built as part of the land division will be providing mitigation for lot development then the maximum impervious area allowed per lot should be included as part of the land division as well as requirements for routing for meeting CDC requirements.

2) All runoff from parking and driveway areas should go through water quality treatment prior to discharge from the site. Consider outsloping driveways to drain to landscaped areas for filtering prior to discharge from the site. How will runoff from the base of the new private drive be treated?

3) Include maintenance requirements for proposed drainage facilities including all best management practices on the final plans. The plans should also specify who is responsible for maintenance. Submit a recorded maintenance agreement for the proposed detention and structural water quality treatment systems.

4) Please submit a review letter from the Geotechnical engineer approving of the final drainage plan. The letter should refer to dated plans.

5) Construction activity resulting in a land disturbance of one acre or more, or less than one acre but part of a larger common plan of development or sale must obtain the Construction Activities Storm Water General NPDES Permit from the State Water Resources Control Board. Construction activity includes clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement. For more information see:
<http://www.swrcb.ca.gov/stormwtr/constfaq.html>

6) As proposed the retention system may be regulated by the EPA as a Class V injection well. The applicant/owner is responsible for meeting the EPA-s requirements, if necessary. For more information see: <http://www.epa.gov/npdes/pubs/swclasswells-fs.pdf>

===== UPDATED ON DECEMBER 29, 2008 BY ALYSON B TOM ===== Previous compliance issue No. 1 has been addressed. All other compliance and information issues from 8/8/08 are still outstanding.

The following is an additional compliance comment:

4) Sheets C1-C4 show proposed discharge pipes from the proposed retention chambers crossing property boundaries (from Lot 3 to Lot 2). Easements are required for these types of common drainage facilities. Show how these pipes will connect with the system shown on sheets TM3.

The following is an addition to previous information comment No. 4.

4) Please submit a review letter from the Geotechnical engineer approving of the final drainage plan. The letter should refer to dated plans and should specifically

Discretionary Comments - Continued

Project Planner: Randall Adams
Application No.: 07-0112
APN: 041-481-04

Date: August 13, 2009
Time: 09:55:12
Page: 8

approve of the outlet design to the ditch along Wallace. The letter should state that as designed the outlet should will not cause erosion or stability problems.

Dpw Road Engineering Completeness Comments

===== REVIEW ON MARCH 28, 2007 BY GREG J MARTIN =====

The access road from Wallace Avenue is recommended to be 24 feet wide within a 40 foot right-of-way for the first 50 feet from Wallace Avenue. A transition with a 15:1 taper is recommended as well. The pavement is recommended to be a minimum of 2 inches of asphalt concrete over 6 inches of aggregate base.

----- Contact
Greg Martin at 831-454-2811 with questions. ===== UPDATED ON OCTOBER 3, 2007 BY
GREG J MARTIN =====

Previous comments apply. ===== UPDATED ON AUGUST 7, 2008 BY GREG J MARTIN
=====

Previous comments apply.

Dpw Road Engineering Miscellaneous Comments

===== REVIEW ON MARCH 28, 2007 BY GREG J MARTIN =====

===== UPDATED ON OCTOBER 3, 2007 BY GREG J MARTIN =====

===== UPDATED ON AUGUST 7, 2008 BY GREG J MARTIN =====

Dpw Sanitation Completeness Comments

===== UPDATED ON APRIL 5, 2007 BY DREW BYRNE =====

The subject parcel is outside the District boundary; therefore, sewer service is not currently available. Contact the Local Agency Formation Commission regarding annexation into the District.

This application is incomplete because the engineered preliminary sewer plan needs to be revised as noted below. The noted conditions regarding sewer redesign and sewer lateral abandonment shall be included on the proposed tentative map. The District reserves the right to expand, modify, /or rescind these requirements up to the time the tentative map is approved.

The proposed collector sewer shall be publicly maintained, shall be placed in a minimum 20-foot wide easement dedicated to the District, and shall be eight-inch in diameter. No. 07-0112 Review Summary Statement; APN: 41-481-04:

The Proposal is out of compliance with District or County sanitation policies and the County Design Criteria (CDC) Part 4, Sanitary Sewer Design, June 2006 edition, and also lacks sufficient information for complete evaluation. The District/County Sanitation Engineering and Environmental Compliance sections cannot recommend approval of the project as proposed.

Reference for County Design Criteria: <http://www.dpw.co.santa-cruz.ca.us/DESIGNCRITERIA.PDF>

Policy Compliance Items:

Discretionary Comments - Continued

Project Planner: Randall Adams
Application No.: 07-0112
APN: 041-481-04

Date: August 13, 2009
Time: 09:55:12
Page: 9

Item 1) This review notice is effective for one year from the issuance date allow the applicant the time to receive tentative map, development or other discretionary permit approval. If after this time frame this project has not received approval from the Planning Department, a new availability letter must be obtained by the applicant. Once a tentative map is approved this letter shall apply until the tentative map approval expires.

Information Items:

Item 1) A complete engineered sewer plan, addressing all issues required by District staff and meeting County -Design Criteria- standards (unless a variance is allowed), is required. District approval of the proposed discretionary permit is withheld until the plan meets all requirements. The following items need to be shown on the plans:

Proposed sewer shall be publicly maintained. Minimum size of public sewer is 8-inch diameter.

Include profile of proposed sewer with slope, length of pipe and elevations man-holes. Show pipe elevations at utility crossings.

Replace upstream cleanout with manhole. Note on plans that all manhole frames and covers shall meet new District standard detail. Sewer shall be centered in 20-foot wide easement to Sanitation District.

Include finished floor elevations for backflow prevention device requirements.

Include Sanitation District -General Notes.-

Any questions regarding the above criteria should be directed to Diane Romeo of the Sanitation Engineering division at (831) 454-2160.

There are no miscellaneous comments. ===== UPDATED ON JANUARY 21, 2009 BY DREW BYRNE =====

After approval of annexation into the District, sewer service would be available. Applicable conditions noted previously will be enforced after tentative map approval.

Dpw Sanitation Miscellaneous Comments

===== REVIEW ON APRIL 5, 2007 BY DREW BYRNE =====

Following completion of the discretionary permit process and prior to obtaining a building permit, the following conditions shall be met during the final plan (Public Works) review process:

Item 1) Department of Public Works and District approval shall be obtained for an engineered sewer improvement plan showing sewers needed to provide service to each lot or unit proposed. This plan shall be approved by the District and the County of Santa Cruz Public Works prior to the issuance of building permits. This plan shall conform to the County of Santa Cruz Design Criteria and shall show any easements necessary. Existing and proposed easements shall be shown on any required Final Map.

Discr onary Comments - Continued

Project Planner: Randall Adams
Application No.: 07-0112
APN: 041-481-04

Date: August 13, 2009
Time: 09:55:12
Page: 10

The proposed road right-of-way shall be separately offered for dedication to the District and be shown on the Final Map.

Item 2) The applicant proposes to extend a public sewer across private property (APN: 41-481-09). An offer of dedication to the District for a minimum 20-foot wide sewer easement shall be obtained across this parcel. Following completion of the above mentioned engineered sewer plan and Final ; the following conditions shall be met during the building permit process: Item 3) Proposed location of on site sewer lateral(s), clean out(s), and connection(s) to existing public sewer must be shown on the plot plan of the building permit application. Item 4) Show all existing and proposed plumbing fixtures on floor plans of building application. Completely describe all plumbing fixtures according to table 7-3 of the uniform plumbing code.
===== UPDATED ON APRIL 5, 2007 BY DREW BYRNE =====

Aptos-La Selva Beach Fire Prot Dist Completeness C

LATEST COMMENTS HAVE **NOT YET** BEEN SENT TO PLANNER FOR THIS AGENCY

===== REVIEW ON APRIL 16, 2007 BY ERIN K STOW =====

DEPARTMENT NAME: Aptos/La Selva Fire Dept. DENIED

The access road shall be 24 feet minimum width and maximum twenty percent slope with NO PARKING ON EITHER SIDE. Roadway shall be marked as a FIRE LANE - NO PARKING and have painted red curbs and proper signs.

The access road shall be in place to the following standards prior to any framing construction, or construction will be stopped:

- The access road surface shall be "all weather", a minimum 6" of compacted aggregate base rock, Class 2 or equivalent, certified by a licensed engineer to 95% compaction and shall be maintained.
- ALL WEATHER SURFACE: shall be minimum of 6" of compacted Class II base rock for grades up to and including 5%, oil and screened for grades up to and including 15% and asphaltic concrete for grades exceeding 15%, but in no case exceeding 20%. The maximum grade of the access road shall not exceed 20%, with grades greater than 15% not permitted for distances of more than 200 feet at a time. The access road shall have a vertical clearance of 14 feet for its entire width and length, including turnouts. A turn-around area which meets the requirements of the fire department shall be provided for access roads and driveways in excess of 150 feet in length. Drainage details for the road or driveway shall conform to current engineering practices, including erosion control measures. All private access roads, driveways, turn-around and bridges are the responsibility of the owner(s) of record and shall be maintained to ensure the fire department safe and expedient passage at all times.

===== UPDATED ON OCTOBER 24, 2007 BY ERIN K STOW =====

DEPARTMENT NAME: Aptos/La Selva Fire Dept. APPROVED

All Fire Department building requirements and fees will be addressed in the Building Permit phase.

Plan check is based upon plans submitted to this office. Any changes or alterations shall be re-submitted for review prior to construction.

Aptos-La Selva Beach Fire Prot Dist Miscellaneous

LATEST COMMENTS HAVE **NOT YET** BEEN SENT TO PLANNER FOR THIS AGENCY

Discr onary Comments - Continued

Project Planner: Randall Adams
Application No.: 07-0112
APN: 041-481-04

Date: August 13, 2009
Time: 09:55:12
Page: 11

===== REVIEW ON APRIL 16, 2007 BY ERIN K STOW =====
NO COMMENT

===== UPDATED ON OCTOBER 24, 2007 BY ERIN K STOW =====
NO COMMENT



Board of Directors
Dr. Thomas R. LaHue, *President*
Bruce Daniels, *Vice President*
Dr. Don Hoernschemeyer
Dr. Bruce Jaffe
Daniel F. Kriege

Laura D. Brown, *General Manager*

September 2, 2009

Mr. Owen Lawlor
612 Spring Street
Santa Cruz, CA 95060

**SUBJECT: Conditional Water Service Application - Richard Anderson,
End of Wallace Avenue, Aptos, APN 041-481-04**

Dear Mr. Lawlor:

In response to the subject application, the Board of Directors of the Soquel Creek Water District at their regular meeting of September 1, 2009 voted to grant you a Conditional Will Serve Letter for your proposed minor land division consisting of three new single-family dwellings located in Aptos, so that you may proceed through the appropriate planning entity. An Unconditional Will Serve Letter cannot be granted until such time as you are granted a Final Discretionary Permit on your project. At that time, an Unconditional Will Serve Letter will be granted subject to your meeting the requirements of the District's Water Demand Offset Program and any additional conservation requirements of the District prior to obtaining the actual connection to the District facilities subject to the provisions set forth below.

Possible Infrastructure Check List

	yes	no
1. LAFCO Annexation required		X
2. Water Main Extension required off-site	X	
3. On-site water system required	X	
4. New water storage tank required		X
5. Booster Pump Station required		X
6. Adequate pressure <i>pressure water required</i>		X
7. Adequate flow		X
8. Frontage on a water main		X
9. Other requirements that may be added as a result of policy changes.	X	

This present indication to serve is valid for a two-year period from the date of this letter; however, it should not be taken as a guarantee that service will be available to the project in the future or that additional conditions, not otherwise listed in this letter, will not be imposed by the District prior to granting water service. Instead, this present indication to serve is intended to acknowledge that, under existing conditions, water service would be available on condition that the developer agrees to provide the following items without cost to the District:

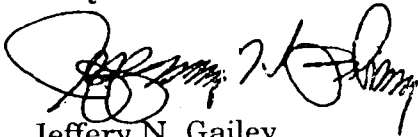
- 1) Destroys any wells on the property in accordance with State Bulletin No. 74;
- 2) Satisfies all conditions imposed by the District to assure necessary water pressure, flow and quality;
- 3) Satisfies all conditions of Resolution No. 03-31 Establishing a Water Demand Offset Policy for New Development, which states that all applicants for new water service shall be required to offset expected water use of their respective development by a 1.2 to 1 ratio by retrofitting existing developed property within the Soquel Creek Water District service area so that any new development has a “zero impact” on the District’s groundwater supply. Applicants for new service shall bear those costs associated with the retrofit as deemed appropriate by the District up to a maximum set by the District and pay any associated fees set by the District to reimburse administrative and inspection costs in accordance with District procedures for implementing this program;
- 4) Satisfies all conditions for water conservation required by the District at the time of application for service, including the following:
 - a) Plans for a water efficient landscape and irrigation system shall be submitted to District Conservation Staff for approval. Current Water Use Efficiency Requirements are enclosed with this letter, and are subject to change;
 - b) All interior plumbing fixtures shall be low-flow and all Applicant-installed water-using appliances (e.g. dishwashers, clothes washers, etc.) shall have the EPA Energy Star label plus new clothes washers also shall have a water use factor of 8.5 or less;
 - c) District Staff shall inspect the completed project for compliance with all conservation requirements prior to commencing domestic water service;
- 5) Completes LAFCO annexation requirements, if applicable;
- 6) All units shall be individually metered with a minimum size of 5/8-inch by 3/4-inch standard domestic water meters;
- 7) A memorandum of the terms of this letter shall be recorded with the County Recorder of the County of Santa Cruz to insure that any future property owners are notified of the conditions set forth herein.

Future conditions which negatively affect the District's ability to serve the proposed development include, but are not limited to, a determination by the District that existing and anticipated water supplies are insufficient to continue adequate and reliable service to existing customers while extending new service to your development. In that case, service may be denied.

You are hereby put on notice that the Board of Directors of the Soquel Creek Water District is considering adopting additional policies to mitigate the impact of new

development on the local groundwater basins, which are currently the District's only source of supply. Such actions are being considered because of concerns about existing conditions that threaten the groundwater basins and the lack of a supplemental supply source that would restore and maintain healthy aquifers. The Board may adopt additional mandatory mitigation measures to further address the impact of development on existing water supplies, such as the impact of impervious construction on groundwater recharge. Possible new conditions of service that may be considered include designing and installing facilities or fixtures on-site or at a specified location as prescribed and approved by the District which would restore groundwater recharge potential as determined by the District. The proposed project would be subject to this and any other conditions of service that the District may adopt prior to granting water service. As policies are developed, the information will be made available at the District Office.

Sincerely,
SOQUEL CREEK WATER DISTRICT



Jeffery N. Gailey.
Engineering Manager/Chief Engineer

*Enclosures: Water Use Efficiency Requirements & Sample
Unconditional Water Service Application*



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www.iflandengineers.com

Job 03115 Richard Anderson

Calculated by GHI

Sheet 1 of 11

Date Revised

PRELIMINARY STORM DRAINAGE CALCULATIONS
(For Tentative Map Only)

Pre-Development

Runoff Coefficient	= 0.30	Rural Sloping Wooded
P60 Value	= 1.5	
T.C.	= 10 Min	
Rainfall Intensity	10 Year Storm	= 2.10 in./hr.
	100 Year Storm	= 3.15 in./hr.
Site Area	= 3.56 Acres	= 155,074 Sq. Ft.

(See Preliminary Drainage Map)

Pre-Development Run-off

$$Q_{10} = (0.30)(2.10)(3.56)$$

$$= \underline{2.24 \text{ C.F.S.}}$$

$$Q_{100} = (2.24)(1.5)(1.25)$$

$$= \underline{4.2 \text{ C.F.S.}}$$

Proposed Impervious Surfaces

House Roofs	=	9,396 Sq. Ft.
Driveways and Parking	=	10,150 Sq. Ft.
Private Drive	=	11,284 Sq. Ft.
Misc: Patios, Walks etc.	=	3,254 Sq. Ft.
Total	=	34,084 Sq. Ft.



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Sheet 2 of 11

Date Revised

Post-Development Run-off

$$\begin{aligned}Q_{10} &= (0.30)(2.10)(2.78) + (0.90)(2.10)(0.78) \\&= (1.75) + (1.47) \\&= \underline{3.22 \text{ C.F.S.}}\end{aligned}$$

$$\begin{aligned}Q_{100} &= (3.22)(1.5)(1.25) \\&= \underline{6.05 \text{ C.F.S.}}\end{aligned}$$

Detention Storage

$$\begin{aligned}\text{Per Fig. SWM - 15C} \\&= (0.78)(1,100) \text{ Cu. Ft.} \\&= \underline{858 \text{ Cu. Ft.}}\end{aligned}$$

The Geotechnical Engineer has recommended using a "cultic recharge 330HD chamber" on each lot to handle the runoff from the house roofs, patios and parking areas. This would leave the driveways and private road runoff to be detained in storage pipes at the lowest corner of the site.

$$\begin{aligned}17,500 \text{ Sq. Ft. (0.40 Ac)} \\(0.40)(1100) = \underline{440 \text{ Cu. Ft.}}\end{aligned}$$

Use 100 L.F. 30" diameter pipe.

$$4.909 \text{ Cu. Ft./L.F.}$$

$$\text{Storage Volume} = \underline{490 \text{ Cubic Feet}}$$

The site storm runoff collects into a natural channel at the end of Wallace Avenue where an existing catch basin picks up the flow. The total area upslope from this catch basin is 5.10 acres. There is a narrow paved road and two existing houses within the area. (See attached topo map). The storm runoff from this area is:

$$\begin{aligned}Q_{10} &= (0.35)(2.10)(5.10) \\&= \underline{3.75 \text{ Cubic Feet per Second (C.F.S.)}}\end{aligned}$$



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Sheet	3	of 11
Date	Revised	

The pipe leaving the catch basin at the end of Wallace Avenue is a 12" diameter corrugated polyethylene pipe at a slope of 4.96%. The maximum flow capacity of this pipe is 5.75% C.F.S.

From the end of Wallace Avenue to the intersection with Lyle Court, 650 feet, there are 6 driveway culverts through which the runoff is channeled connected by an asphalt-paved ditch. These driveway culverts vary from 12" in diameter to 1.5' x 2.3' rectangular boxes. All the culverts slope at over 5%.

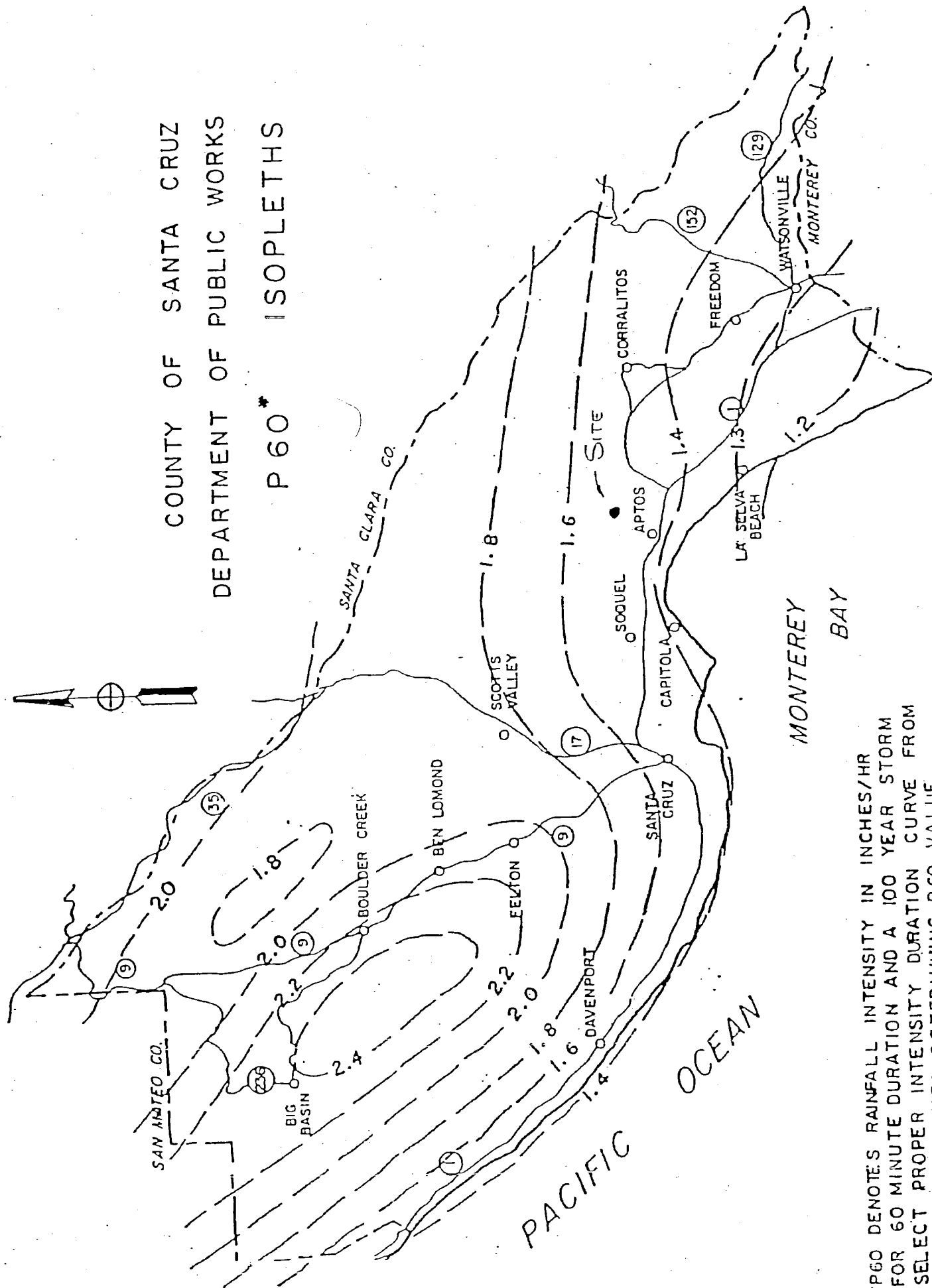
At Lyle Court intersection there is an 18" diameter reinforced concrete pipe (part of the original subdivision improvements and assumed to be a part of County Drainage Zone 6 system). This pipe slopes at 5.26% with a flow capacity of 20.26 C.F.S. The total area collecting at the location is about 20 acres. This area is partially built out with single-family residences on large lots. The remaining area is open land. The runoff is:

$$Q_{10} = (0.40)(2.10)(20)$$

$$= \underline{\underline{16.80 \text{ Cubic Feet per Second (C.F.S.)}}}$$

The system of driveway culverts and asphalt concrete paved ditches continues until it reaches a catch basin at Bowen Avenue. Here there is a pipe system all the way to Huntington Drive and continues until it reaches Valencia Creek.

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
P 60* ISOPLETHS



*P60 DENOTES RAINFALL INTENSITY IN INCHES/HR FOR 60 MINUTE DURATION AND A 100 YEAR STORM
SELECT PROPER INTENSITY DURATION CURVE FROM FIGURE SWM-3 AFTER DETERMINING P60 VALUE.

<u>TYPE OF AREA</u>	<u>10- YEAR RUNOFF COEFFICIENTS</u>
Rural, park, forested, agricultural	0.10 - 0.30
Low residential (Single family dwellings)	0.45 - 0.60
High residential (Multiple family dwellings)	0.65 - 0.75
Business and commercial	0.80
Industrial	0.70
Impervious	0.90

REQUIRED ANTECEDENT MOISTURE FACTORS
(Ca) FOR THE RATIONAL METHOD*

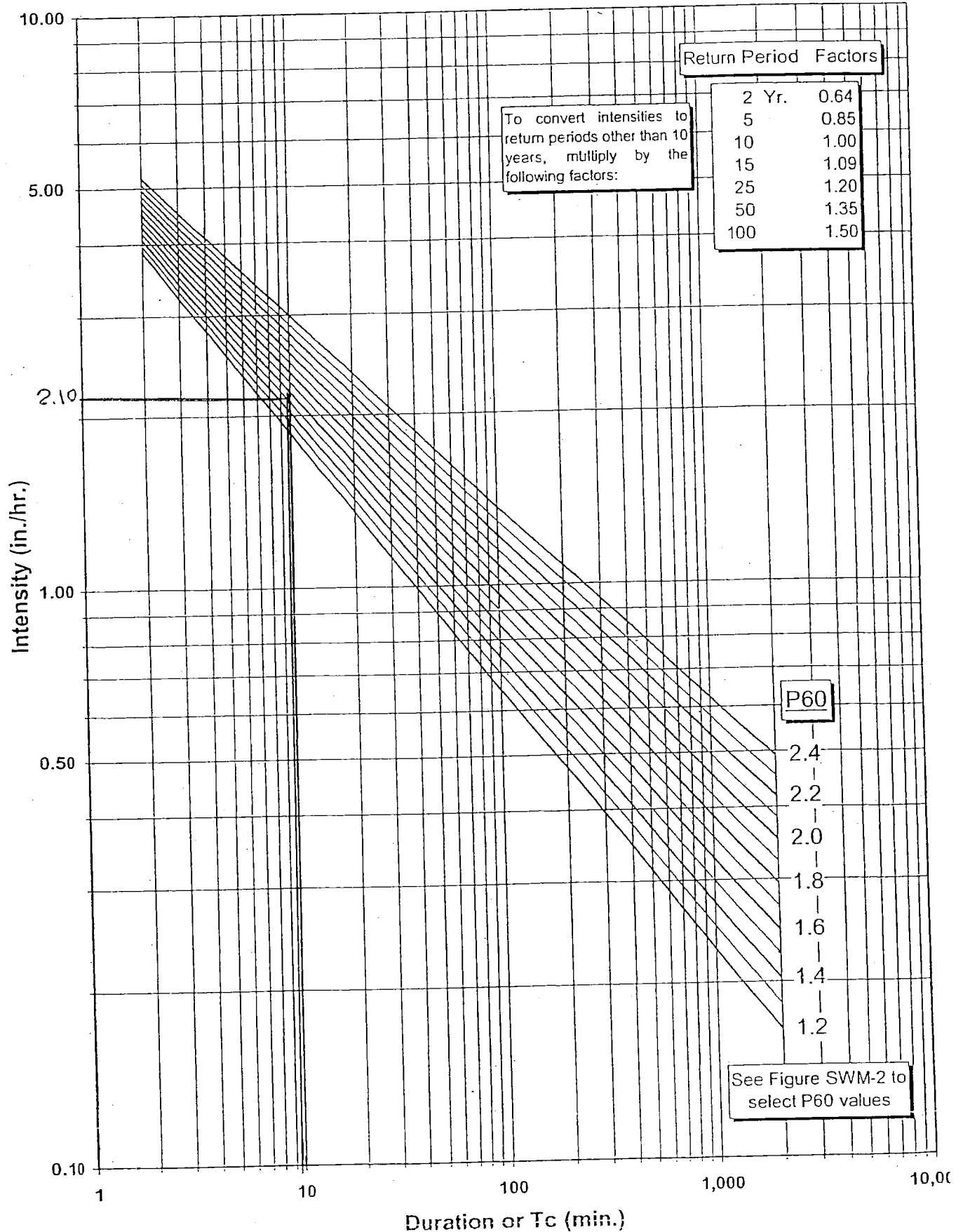
Recurrence Interval (Years)	Ca
2 to 10	1.0
25	1.1
50	1.2
100	1.25

Note: Application of antecedent moisture factors (Ca) should not result in an adjusted runoff coefficient (C) exceeding a value of 1.00

*APWA Publication "Practices in Detention of Stormwater Runoff"

rainfall Intensity - Duration Curves 10 Yr. Return Period

$$((4.29112)^*(1.1952)^{P60_VALUE})/(DURATION^{((0.60924)^*(0.78522)^{P60_VALUE}))}$$

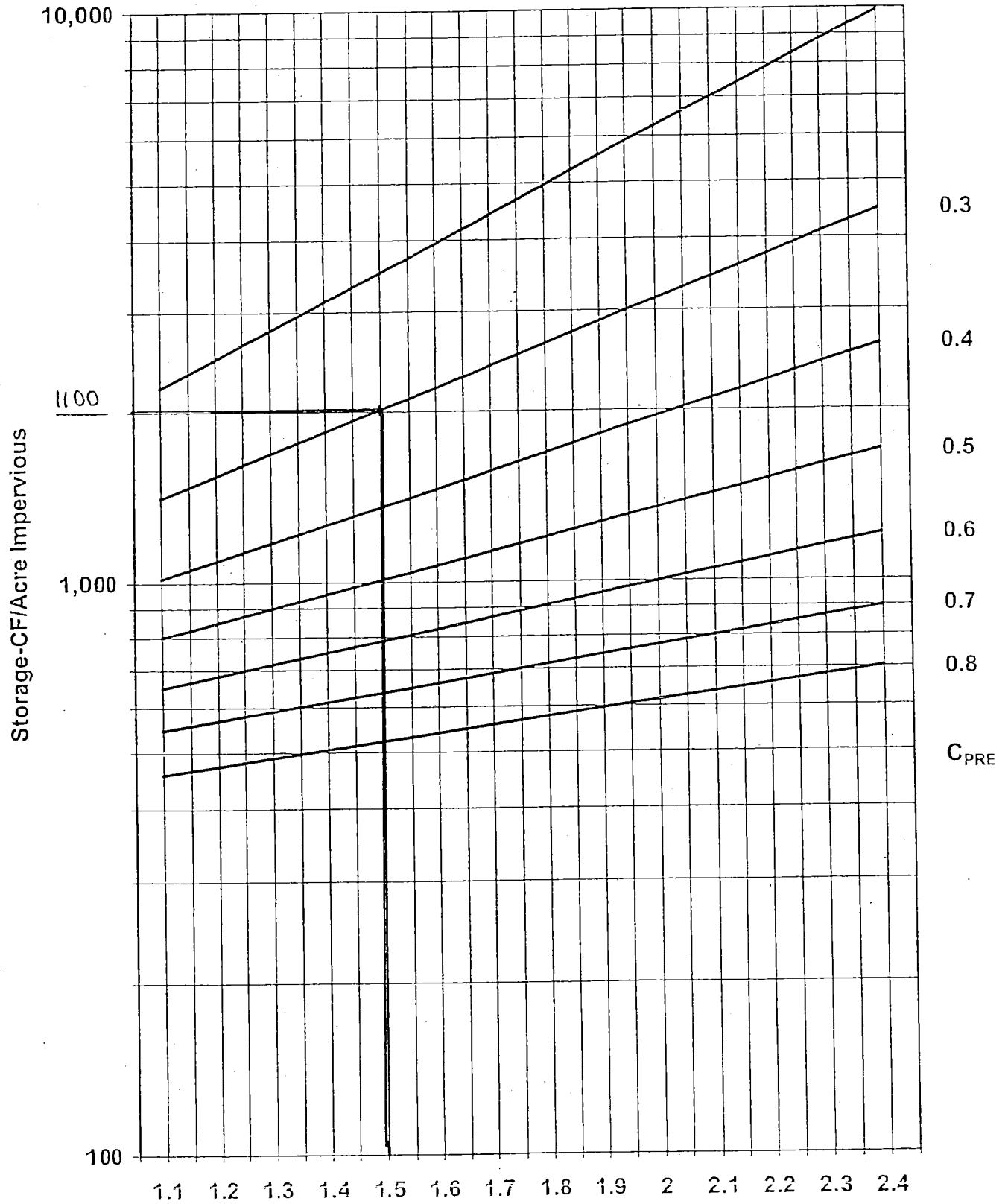


Detention Storage Volume (CF/Acre)

5-Year Pre-Development Allowable Release @ 15 Minute Tc

10-Year Post-Development Storage Volume to be Area Adjusted, $C_{POST} = 0.9$

Chart Based on the Modified Rational Method with 1.25 Safety Factor



<u>TYPE OF CONDUIT OR CHANNEL</u>	<u>ROUGHNESS COEFFICIENT</u>
Plastic (PVC, ABS, or HDPE)	0.010 to 0.012
Concrete gutters	0.015
Corrugated metal (annular corrugations)	0.024
Reinforced concrete pipe 300 to 525mm (12 to 21 in)	0.015
Reinforced concrete pipe 600 to 825mm (24 to 33 in)	0.013
Reinforced concrete pipe 900 mm (36 in) and larger	0.011
Lined channels	
Concrete	0.014
Air blown mortar	0.016
Bituminous	0.018
Sacked concrete	0.025

To determine roughness coefficients for natural channels, refer to "Handbook of Hydraulics," King & Brater; "Open-Channel Hydraulics," V.T. Chow; or "Street and Highway Drainage," Institute of Transportation, University of California.

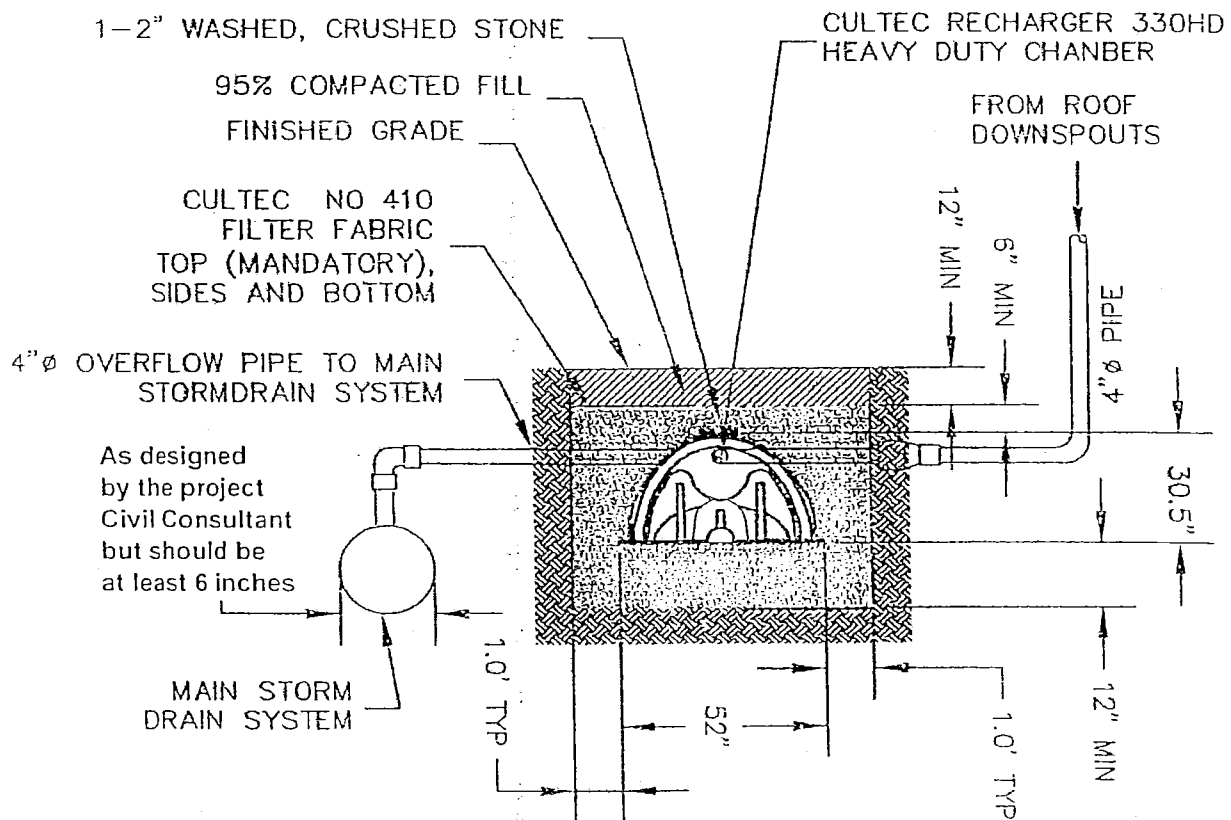
TABLE 7

CIRCULAR PIPE FLOW CAPACITY
Full Flow (cubic feet per second)

Mannings "n" = 0.015

Dia. *Conv. (in.)	Factor	% Slope (feet per 100 feet)															
		0.02	0.05	0.10	0.20	0.35	0.50	0.75	1.00	1.25	1.50	1.75	2.0	2.5	5.0	10.0	20.0
(c.f.g.)																	
3	0.766	0.011	0.017	0.024	0.034	0.045	0.054	0.066	0.077	0.086	0.09	0.10	0.11	0.12	0.17	0.24	0.34
4	1.649	0.023	0.037	0.052	0.074	0.098	0.117	0.143	0.165	0.184	0.20	0.22	0.23	0.26	0.37	0.52	0.74
5	2.991	0.042	0.067	0.095	0.134	0.177	0.211	0.259	0.299	0.334	0.37	0.40	0.42	0.47	0.67	0.95	1.34
6	4.863	0.069	0.109	0.154	0.217	0.288	0.344	0.421	0.486	0.544	0.60	0.64	0.69	0.77	1.09	1.54	2.17
8	10.473	0.148	0.234	0.331	0.468	0.620	0.741	0.907	1.047	1.171	1.28	1.39	1.48	1.66	2.34	3.31	4.68
10	18.99	0.27	0.42	0.60	0.85	1.12	1.34	1.64	1.90	2.12	2.33	2.51	2.69	3.00	4.25	6.00	8.49
12	30.88	0.44	0.69	0.98	1.38	1.83	2.18	2.67	3.09	3.45	3.78	4.08	4.37	4.88	6.90	9.76	13.81
15	55.98	0.79	1.25	1.77	2.50	3.31	3.96	4.85	5.60	6.26	6.86	7.41	7.92	8.85	12.52	17.70	25.04
18	91.04	1.29	2.04	2.88	4.07	5.39	6.44	7.88	9.10	10.18	11.15	12.04	12.87	14.39	20.36	28.79	40.71
21	137.32	1.94	3.07	4.34	6.14	8.12	9.71	11.89	13.73	15.35	16.82	18.17	19.42	21.71	30.71	43.43	61.44
24	196.06	2.77	4.38	6.20	8.77	11.60	13.86	16.98	19.61	21.92	24.01	25.94	27.73	31.00	43.84	62.00	87
27	268.41	3.80	6.00	8.49	12.00	15.88	18.98	23.24	26.84	30.01	32.87	35.51	37.96	42.44	60.0	84.9	120.0
30	355.48	5.03	7.95	11.24	15.90	21.03	25.14	30.79	35.55	39.74	43.54	47.03	50.27	56.21	79.5	112.4	159.0
36	578.05	8.17	12.93	18.28	25.85	34.20	40.87	50.06	57.81	64.63	70.80	76.47	81.75	91.40	129.3	182.8	258.5
42	872.0	12.33	19.50	27.57	38.99	51.6	61.7	75.5	87.2	97.5	106.8	115.3	123.3	137.9	195.0	275.7	389.9
48	1244.9	17.61	27.84	39.37	55.67	73.6	88.0	107.8	124.5	139.2	152.5	164.7	176.1	196.8	278.4	393.7	556.7

* Conveyance Factor = $(1.486 \times R^{2/3} \times A) / n$



The chamber's capacity should be designed by the project Civil Engineer based upon anticipated storm water.

AMSO CONSULTING
ENGINEERS

AUGUST 2007

STORM WATER RETENTION CHAMBER
DETAIL

ANDERSON PROPERTY
WALLACE AVENUE
APTOS, SANTA CRUZ COUNTY, CALIFORNIA

FIGURE
1

PROJECT
3362

DRAINAGE AREAS



**TREE RESOURCE EVALUATION
WALLACE AVENUE
APN 041-481-04**

**Prepared for
Owen Lawlor
Land Use Planner**

February 21, 2007

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ASSIGNMENT/SCOPE OF SERVICES

A minor land division and eventual residential development is planned for a 6.88-acre site off Wallace Avenue in Aptos. Large areas of the property are densely forested with trees that could be affected by the eventual development. Owen Lawlor, the property owners representative retained me to complete an analysis of overall tree condition and evaluate the suitability of the trees for incorporation into the development. To complete the assessment I have performed the following:

- Locate, number and map 69 individual trees and large groupings of trees growing adjacent to the proposed building envelopes.
- Identify trees as to species and document trunk diameter at 4.5 above grade.
- Visually inspect each tree to evaluate health status, structural integrity and suitability for incorporation into the project.
- Provide preliminary recommendations for tree removal based on tree condition

This type of assessment is used to determine the suitability of individual trees and tree groups for incorporation into a developed site. It can be used by the design team and property owners to determine the most appropriate locations for site improvements, while retaining trees that will be an asset to the site, rather than a liability.

The impacts to trees related to the construction of the site are not included in this report. Once plans are finalized a separate report will be prepared that assesses impacts and outlines tree preservation specifications.

SUMMARY

At least 400 trees are growing on the undeveloped 6.88-acre property on Wallace Avenue. I have inventoried 69 individual trees and large groups of trees that are of the same species with similar characteristics. Tree health and structural integrity have been evaluated to determine suitability for incorporation into a developed site.

Eucalyptus growth dominates the site. The trees range from young saplings to large mature trees. They tend to develop in groves where space is limited for proper growth. A number of the interior trees display structural defects that include lack of taper in the lower trunk that is needed for stability. At least two of the large eucalyptus display significant structural weaknesses that could lead to failure.

Interior live oaks are also present within the forest on the site. They are multi-trunked trees that have developed as clusters. The dense forest over story has suppressed the development of the oaks. They are generally in fair to poor condition with sparse canopy development.

Monterey pines are also represented on the property. The area proposed for lot #1 has the highest concentration of this species. The mature specimens are in various stages of decline. A number of trees are under attack by bark beetles, several are standing dead. In general they are in decline, a situation that is common in our area due to Pine Pitch Canker.

BACKGROUND

To complete the inventory and assessment I visited the site in February of this year. For purposes of identification numbered metal tags have been affixed to tree trunks and the corresponding locations documented on an attached site map.

Both individual trees and larger groves were included in the inventory. Group evaluations were completed in areas where more than five trees of one species were present. And structural form and overall health were similar. If individual trees within the group were found to have characteristics that were inconsistent with the other trees they were evaluated as individuals. This procedure allowed structurally dangerous trees or those in severe decline to be identified separately as a potential risk.

The attached inventory documents tree species and trunk diameter at 54 inches above natural grade. Ratings for tree health and structural integrity are also included. Ratings are determined following the completion of a visual tree inspection. This type of evaluation is based on methods developed by Claus Mattheck and documented in The Body Language of Trees. It involves an analysis of the biology and mechanics of each tree, which are then rated as "good", "fair" or "poor".

Suitability for incorporation into a developed site, tolerances to site changes and construction impacts are based on overall tree condition and industry data on species characteristics and tolerances.

The biological assessment determines health status and includes an evaluation of the following:

- Vitality of the leaves, bark and twigs
- Presence of fungi or decay
- Percentage and size of dead branching
- Status of old wounds or cavities

Healthy trees in "good" condition display dense full canopies with dark green foliage. Dead branching is limited to small twigs and branches less than one inch in diameter. No evidence of disease, decay or insect activity is visible.

Trees in "fair" health have 10-30% foliar dieback, minor dieback of branches greater than one-inch diameter and minor evidence of disease, decay or insect activity.

Trees in “poor” health display greater than 30% foliar dieback, dead branches greater than two inches in diameter and/or areas of decay, disease or insect activity.

The mechanical assessment determines the structural integrity of the tree and includes and evaluation of the following:

- Integrity of the framework of the tree (supporting trunk and major branches)
- External symptoms (bulges, ribs or cracks) that can indicate internal defects
- Lean of main trunk and canopy configuration
- Development of root buttress

Trees with “good” structure are well rooted with visible taper in the lower trunk, leading to buttress root development. These qualities indicate that the tree is solidly rooted in its growing site. No significant structural defects such as codominant stems (two stems of similar size that emerge from the same point on the trunk), weakly attached branches, cavities or decay are present.

Trees with “fair” structural integrity may have defects such as poor taper in the trunk, inadequate root development or growing site limitations. They may have multiple trunks, included bark (where bark turns inward at an attachment point), or suppressed canopies. Small areas of decay or evidence of small limb loss may be present in these trees. Trees in this condition can be improved using common maintenance procedures.

Poorly structured trees display one or more serious structural defects that may lead to the failure of branches, trunk or the whole tree due to uprooting. Trees in this condition may have had root loss due to decay or site conditions. The supporting trunk or large stems could be compromised by decay or structural defect (large codominant stems with included bark). Trees in this condition present a risk. In some situations maintenance can reduce, but not eliminate the potential hazard.

OBSERVATIONS

Site Description

The property is a sloping site that is densely forested with trees. The areas proposed as lot #1 and lot #2 contain large open spaces that are surrounded with dense tree growth.

The areas where lot #3 and #4 are proposed are more densely forested, with areas of complete canopy coverage.

Tree Description

The large property is a diverse variety of tree species that is dominated by eucalyptus (*Eucalyptus globulus*). Other tree species populate the site, including two oak species, coast live oak (*Quercus agrifolia*) and interior live oak (*Quercus wislizenii*), Monterey pine (*Pinus radiata*) and acacia.

The forest is well represented by all generations of trees and a variety of structural forms. The eucalyptus are found in very large groves that are primarily located on the portion of the property projected as lot #1 and #2.

Tree growth within the eucalyptus groves include as many as 30 trees with trunk diameters that range from 2" saplings to 40 inches. Tree height reaches upwards of 80 feet on some of the larger specimens. Most of the trees growing within the groves display suppressed lower growth along with dead and decayed branching. The trunks of the younger trees are tall and absent of lower lateral branching due to the suppressed nature of the site.

Trees #8, #20 and #22 are examples of larger diameter eucalyptus growing within or adjacent to the groves that display serious structural weaknesses that could lead to whole tree failure.

The mature pines on the western portion of the site (proposed for lot #1) are generally in poor condition. The grove of pines in this area are either dead or in the last stages of their lives. The trees have been infested with Red Turpentine beetles, an insect pest. This insect bores into the trees vascular system laying eggs. The larvae feed within the cambial layer; the part of the tree that is responsible for transporting moisture and nutrients. Infestations of this insect can kill a tree that may already be in decline for other reasons. As with the eucalyptus, pine growth is mainly found on lot #1 and #2.

The two species of oak are growing on lots #3 and #4. They are in fair to poor condition due to the suppressed growing environment. The trees near the building envelope for lot #4 are good examples of this condition. Several coast live oaks growing along the eastern property boundary are in the best condition of the oak species

Acacia trees growing along the southern property boundary are in poor condition. Most of the trees have uprooted or are at risk of uprooting. This aggressive, non-native species is not appropriate for incorporation into the development.

DISCUSSION

Preliminary Construction Impacts

The land division and eventual residential development of this large property will include tree removal. Each of the proposed lots is forested with trees that constrain the development areas. The goal development should be to retain the more suitable trees and removal of those that are in poor health or weakly structured.

The forest on this property is dominated by non-native invasive species that are generally in poor condition. The native oaks have been suppressed by the dense over story and consequently are in low vigor with poor structure.

Lot #1 is forested with groves of eucalyptus and pines. The removal of pines that represent a risk of failure should be viewed as a priority. Eucalyptus tree removal will also be necessary to provide development space on the site.

At least 10 trees will need to be removed to develop this lot. Tree removal within the groves should be evaluated after the preliminary project approvals. Fragmentation of groves can lead to structural failure of the trees that remain as the new edge. If necessary entire groups of trees can be removed to eliminate the risk of failure.

Lot #2 has the largest area of development space and tree removal will be the minimum necessary to construct the site. It may only require the removal of two or three eucalyptus and the acacia.

Lot #3 is densely forested in some areas. Most of the trees are poorly structured; the suppressed growing environment does not allow the trees to develop proper taper or lower branching, components necessary for structural stability. Upwards of 10 trees will require removal to develop this lot.

Lot #4 contains the largest number of native oak trees. They are generally in fair to poor condition. Several oaks in fair to good condition growing along the driveway access should be retained, as they are the best examples of their species on the property. At least 15 trees will require removal to develop this lot.

CONCLUSION

The trees on this site are generally in fair to poor condition and are not suitable for incorporation into the development project. Although tree removal will be a necessary component of the project, the preliminary removal, approximately 40 trees, is not a significant impact when compared with the overall density of the forest within the undisturbed areas.

The removal of trees on this property should be mitigated with a re-planting plan that includes native trees and under story plants that are appropriate for the site and have been suppressed by the eucalyptus and acacia growth.

Please call my office with any questions or concerns about the trees on this project site.

Respectfully submitted,

Maureen Hamb-WCISA Certified Arborist #2280



Tree #	Species	Diameter @ 4.5	Health	Structure	Suitability	Comments/Recommendations
1	acacia	10 clusters 8-20"	fair	poor	poor	Poorly structured clusters of trees growing along the southern property boundary. A number of trees have uprooted and are laying on the ground. A driveway access is proposed in this area/Unsuitable species due to propensity for failure. Removal & replacement for screening purposes is recommended.
2	eucalyptus	32.5	fair	fair	fair	Growing on lot #1, large tree with long lateral branching/May require safety pruning to shorten branching.
3	eucalyptus	41	fair	poor	poor	Codominant stems divided at 10' above grade, area of included bark. Long lateral branching/May require safety pruning and cabling if located near use area.
4	eucalyptus	20.3	fair	fair	fair	Young tree
5	eucalyptus	34.4	fair	poor	poor	Codominant attachment at 20' above grade, long lateral branching/Adjacent to development area of lot #1, unsuitable for retention due to severe structural weakness. Removal may be required if less than 20 feet from structure or other use areas.
6	eucalyptus	grove 15 trees	fair	fair/poor	poor	Grove of trees growing between Wallace Avenue and the building envelope for lot #1. Tall trees with suppressed lower growth/A portion of this group may require removal to develop lot #1. Avoid fragmentation of group.



Tree #	Species	Diameter @ 4.5	Health	Structure	Suitability	Comments/Recommendations
7	Monterey pine	20	fair/poor	poor	poor	Growing near center of lot #1. Large diameter dead lower branching. Infested with Red Turpentine beetles/Removal will be required due to declining condition and safety.
8	Monterey pine	29	poor	poor	poor	Growing on lot #1, only 10% live foliage, infested with Red Turpentine beetles. At risk of falling/Recommend removal due to risk.
9	Monterey pine	29.3	poor	poor	poor	Growing with other pines in the northern portion of lot #1. As with #8 infested with beetles and in significant decline/Removal will be necessary if proposed residence or other use areas are within 50'
10	Monterey pine	35.7	fair/poor	fair/poor	fair/poor	Growing with other pines in the northern portion of lot #1. As with #8 infested with beetles and in significant decline/Removal will be necessary if proposed residence or other use areas are within 50'
11	Monterey pine	29.4	fair/poor	poor	poor	Growing with other pines in the northern portion of lot #1. As with #8 infested with beetles and in significant decline/Removal will be necessary if proposed residence or other use areas are within 50'
12	Monterey pine	33	fair	fair/poor	fair/poor	Growing with other pines in the northern portion of lot #1. As with #8 infested with beetles and in significant decline/Removal will be necessary if proposed residence or other use areas are within 50'



Tree #	Species	Diameter @ 4.5	Health	Structure	Suitability	Comments/Recommendations
13	Monterey pine	33.8	fair	fair/poor	fair/poor	Growing with other pines in the northern portion of lot #1. As with #8 infested with beetles and in significant decline/Removal will be necessary if proposed residence or other use areas are within 50'
14	Monterey pine	26	fair/poor	fair/poor	poor	Growing with other pines in the northeast portion of lot #1. Trunk is leaning downhill, lower canopy is suppressed, foliage concentrated in tree top/Removal will be necessary if residence or other use areas are within 50'
15	Monterey pine	32.2	fair	fair/poor	fair/poor	Growing with other pines in the northeast portion of lot #1. Healthier than adjacent trees.
16	Monterey pine	28	fair	fair/poor	fair/poor	Growing adjacent to other pines in the northeast portion of lot #1. Healthier than adjacent trees. Growth is suppressed on one side, larger diameter dead branching/May require safety pruning of use area is located within 50'.
17	Monterey pine	35	fair	fair/poor	fair/poor	Growing adjacent to other pines in the northeast portion of lot #1. Healthier than adjacent trees. Large diameter dead branching/May require safety pruning of use area is located within 50'.
18	Monterey pine	23	poor	poor	poor	Smaller tree with codominant stems that divide at 5' above grade. In decline, foliage thinning/Removal may be required if use area is within 50'.



Tree #	Species	Diameter @ 4.5	Health	Structure	Suitability	Comments/Recommendations
19	Monterey pine	33.4	poor	poor	poor	Infested with Red Turpentine beetles, area of decay at base. Foliage thinning and concentrated at top of tree. Leaning trunk/Removal may be required if use area is within 50'
20	eucalyptus	18.7	fair	poor	poor	Growing on the southeastern portion of lot #1. Area of damage on lower trunk, internal decay possible/Removal will be necessary due to risk.
21	eucalyptus	grove 25 trees 10-24"	fair	fair/poor	fair/poor	Large grove, suppressed lower branch development. Structural stability can be compromised if fragmented by partial tree removal. Actual impacts will be assessed once building footprints are approved and defined.
22	eucalyptus	38	fair	poor	poor	Area of decay at base and within structural roots/Not suitable for retention on a developed site due to potential risk.
23	eucalyptus	3 trees	fair	fair	fair	Growing on lot #2, dense canopies with long lateral branching/Retain as a group
24	eucalyptus	23 trees 4- 45"	fair	fair	fair	Group of trees growing between lots #1 and #2. Lower growth is suppressed/Group may benefit from minor thinning and safety pruning.



Tree #	Species	Diameter @ 4.5	Health	Structure	Suitability	Comments/Recommendations
25	eucalyptus	triple	fair	poor	poor	Three codominant stems, weakly attached/Tree represents risk unsuitable for developed site, recommend removal
26	acacia	clump of stems	fair	poor	poor	Partially uprooted/Unsuitable for retention
27	acacia	clump	fair	poor	poor	Partially uprooted/Unsuitable for retention
28	acacia	clump	fair	poor	poor	Partially uprooted/Unsuitable for retention
29	eucalyptus	3 trees	fair	fair/poor	fair/poor	Growing near center of lot #2, tall without proper taper in the lower portions/May not be suitable for retention.
30	eucalyptus	11 trees 12- 30"	fair	fair/poor	fair/poor	Group of trees growing on the southern portion of lot #2. Tall trees without proper taper, suppressed growth/May not be suitable for retention due to weak structure, prone to failure when grove is fragmented.



Tree #	Species	Diameter @ 4.5	Health	Structure	Suitability	Comments/Recommendations
31	eucalyptus	double 50	fair	poor	poor	Large tree with codominant attachment near base/Removal may be required if within 50' of use area.
32	eucalyptus	double 60	fair	poor	poor	Large tree with codominant attachment near base/Removal may be required if within 50' of use area.
33	oak	11 stems	fair	fair	fair	Growing on the northeast portion of lot #2, multi-stemmed cluster 2-8" in diameter
34	oak	3 stems	fair	fair	fair	Growing on the northeast portion of lot #2
35	oak	6 stems	fair	fair	fair	Growing on the northeast portion of lot #2
36	Monterey pine	12	fair	fair	fair	Suppressed lower growth, foliage is healthy



Tree #	Species	Diameter @ 4.5	Health	Structure	Suitability	Comments/Recommendations
37	oak	16.2	fair/poor	fair/poor	fair/poor	Growing near center of lot #3. Suppressed lower growth, broken and decayed branching/May not be suitable for retention.
38	oak	7 stems	fair	fair	fair	Growing near the center of lot #3/Requires at least 20' of undisturbed area of retained.
39	Monterey pine	14	fair	fair	fair	Growing near center of lot #3. Suppressed lower growth/May not be suitable for retention.
40	eucalyptus	12.4	fair	fair/poor	fair/poor	Growing in dense brushy area adjacent to #38 and #39/May not be suitable for retention after clearing.
41	eucalyptus	49	fair	fair	fair	Larger tree with well spaced branching, located adjacent to overhead power lines.
42	eucalyptus	12 trees 8" - 40"	fair	fair/poor	fair/poor	Grove of trees near the western boundary of lot #3. Trunks have not developed proper taper needed for stability or lower branching due to suppression. Not suitable for retention if fragmented by tree removal.



Tree #	Species	Diameter @ 4.5	Health	Structure	Suitability	Comments/Recommendations
43	eucalyptus	15 trees 2"- 24"	fair	fair/poor	fair/poor	Grove of trees near the boundary of lots #2 and lot #3. Trunks have not developed proper taper needed for stability or lower branching due to suppression. Not suitable for retention if fragmented by tree removal.
44	Monterey pine	26	fair/poor	poor	poor	Trunk leans downhill, roots are exposed, tree top is gone/Not suitable for retention on developed site.
45	oak	8 stems 5"- 11"	fair	fair/poor	fair/poor	Growing in densely forested portion of southern lot #3, suppressed growth, no lower branching or foliage.
46	pine	12.4	poor	poor	poor	10% live foliage/Remove if within 30' of use area
47	coast live oak	12.6	fair/poor	fair/poor	poor	Decayed main stem, suppressed foliar development/Not suitable for retention.
48	pine	14.7	poor	poor	poor	10% live foliage, pitch exudation along trunk/Not suitable for retention.



Tree #	Species	Diameter @ 4.5	Health	Structure	Suitability	Comments/Recommendations
49	oak	double	fair	fair	fair	Minor dead branching and dieback, suppressed interior and lower. Growing in densely forested area at southern portion of lot #3/Attempt to retain.
50	oak	multi 8 stems	fair	fair	fair	Multiple stems, suppressed lower growth. Growing in densely forested area at southern portion of lot #3/Attempt to retain.
51	Monterey pine	16.7	fair	fair	fair	Young tree with suppressed lower development. Growing in densely forested area at southern portion of lot #3.
52	Monterey pine	14.9	fair	fair	fair	Young tree with suppressed lower development. Growing in densely forested area at southern portion of lot #3.
53	Monterey pine	12.6	fair	poor	fair/poor	Leaning trunk, large diameter dead branching, suppressed lower growth.
54	coast live oak	22	fair/good	fair	fair/good	Growing along eastern property boundary, entry to lot #4. Tall with healthy canopy/Attempt to retain and provide 15' of undisturbed area



Tree #	Species	Diameter @ 4.5	Health	Structure	Suitability	Comments/Recommendations
55	coast live oak	15 & 14.7 & 15.4	fair	fair	fair	Growing along eastern property boundary. entry to lot #4. Suppressed lower growth, foliage is healthy/Attempt to retain and provide 15' of undisturbed area
56	oak	5 stems	poor	poor	poor	Growing along eastern property boundary. 2 failed stems remainder at risk of falling/Remove due to risk.
57	oak	32.7	fair	fair/poor	fair/poor	Growing along eastern property boundary. Codominant stems. area of decay at base/May not be suitable for retention, further evaluation of impacts needed
58	eucalyptus	10 trees 2"-14"	fair	fair/poor	fair/poor	Suppressed growth and lack of taper. Growing near eastern property boundary at entry to lot #4/Removal of trees within group may be necessary.
59	eucalyptus	group of 4 10-24"	fair	fair	fair	Suppressed growth and lack of taper. Growing near eastern property boundary at entry to lot #4/Removal of trees within group may be necessary
60	oak	8 stems	fair/poor	fair/poor	fair/poor	Cluster of small diameter stems/May require removal for development of lot #4



Tree #	Species	Diameter @ 4.5	Health	Structure	Suitability	Comments/Recommendations
61	Monterey pine	20.2	fair	fair	fair	Suppressed lower growth/May require removal for development of lot #4
62	oak	9 stems	fair/poor	fair/poor	fair/poor	Cluster of small stems with suppressed and thinning foliar development/Will require removal for development of lot #4
63	Monterey pine	25.3	fair/poor	fair/poor	fair/poor	Pitch exudation along trunk, suppressed and dead lower growth/Will require removal for development of lot #4
64	coast live oak	11	fair/poor	fair/poor	fair/poor	Suppressed development, foliage only produced at top of tree/Will require removal for development of lot #4
65	oak	12 stems	poor	poor	poor	Suppressed development, significant dead and dying branching/Will require removal for development of lot #4
66	oak	3 stems	poor	poor	poor	Suppressed, decayed and dead branching/Will require removal for development of lot #4



Tree #	Species	Diameter @ 4.5	Health	Structure	Suitability	Comments/Recommendations
67	oak	9 stems	poor	poor	poor	Suppressed, decayed and dead branching/Will require removal for development of lot #4
68	oak	11.7	fair/poor	fair/poor	fair/poor	Dead lower branching, suppressed foliar development/Will require removal for development of lot #4
69	oak	4 stems	fair/poor	fair/poor	fair/poor	Suppressed, decayed and dead branching/Will require removal for development of lot #4

*Maureen Hamb-WCISA Certified Arborist #2280
Professional Consulting Services*



August 27, 2007

Owen Lawlor
Lawlor Land Use
612 Spring Street
Santa Cruz, CA 95060

Project: Wallace Avenue/APN 041-481-04

As you requested I have reviewed the most recent plans (SSA Landscape Architects dated 7/26/07) for the Wallace Avenue project.

I previously prepared an analysis of 69 individual trees or large tree groups growing on the property (Tree Resource Evaluation dated 2/21/07). The purpose of the analysis was to determine the overall condition of the trees and suitability for incorporation into the project.

The site is forested with eucalyptus, pine, oak, and acacia species. The eucalyptus tend to be located in larger dense groups with suppressed lower development. The Monterey pines are in poor condition. They have been affected by infestations of bark beetles and pitch canker disease. The oak woodland development has been limited by the surrounding eucalyptus growth.

Lot 1

The forest development on this lot is dominated by eucalyptus and Monterey pine trees. The pines are in severe decline; large diameter dead branching and decay will lead to both branch and trunk failure. The eucalyptus grove near the southeast property boundary (1.07 on SSA Tree Removal Plan) contains 25 trees with trunk diameters ranging from 10 to 24 inches. A group of weakly structured acacia trees are located along the southern property boundary. These trees are weakly structured and evidence of uprooting is visible throughout the group.

Most trees on this parcel will require removal to construct the site as proposed. The pines and acacia are not suitable for retention due to the risk of failure. The main portion of the eucalyptus group is within the proposed driveway/parking area. The structural integrity of the trees outside the driveway construction may be compromised by the fragmentation of the grove.

Lot #2

This parcel is also forested with eucalyptus groups, acacia and pines. Several multi-stemmed coast live oaks are also growing on the site. The footprint of the proposed residence is in the most open portion of the property. As with the trees on lot #1, most are weakly structured with suppressed development.

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The eucalyptus grove near the southern property boundary (#2.02 on the SSA Tree Removal Plan) is adjacent to the proposed driveway access. It contains 23 trees that range from 4 to 45 inches in trunk diameter. Natural open areas occur within this grove that will allow for selected tree retention. The natural openings allow for this type of selective removal without the problems typically associated with the fragmentation of dense tree growth. Any eucalyptus trees retained will require maintenance pruning to improve structure.

Several coast live oaks are growing in the northern and eastern portion of the property (#2.11, 2.17 and 2.18 on the SSA Tree Removal Plan). Although they display suppressed development, they are outside the proposed development area and should be retained. Maintenance pruning, along with the removal of the oppressive, dense overstory can improve tree condition.

Lot #3

This parcel is covered in dense tree growth that creates a continuous canopy. As with the other lots, it is forested with eucalyptus, pine and native oak trees. A number of trees will require removal to construct the proposed residence and driveway access.

Several of the oaks (#3.19, 3.26, 3.27, 3.28 on the SSA Tree Removal Plan) can be considered for retention. They are outside the development envelope and condition could be improved with maintenance pruning and removal of the oppressive, dense overstory.

A group of eucalyptus (# 3.24 on the SSA Tree Removal Plan) is also located outside the development envelope and can be considered for retention. As with the other eucalyptus, maintenance pruning to improve structure will be required.

Conclusion

Tree removal will be a necessary component of this development project. The Monterey pines and acacia are not suitable for retention due to declining condition and the risk associated with falling branches and whole tree failure. A tree re-planting plan that utilizes appropriate species and placement will be implemented during the landscape phase of the project.

The retention of selected eucalyptus and coast live oaks will preserve the natural appearance of the site and maintain screening. The specific impacts to the retained trees along with a specific tree protection plan will be prepared after plans are finalized.

Respectfully,

Maureen Hamb-WCISA Certified Arborist #2280



Discretionary Application Comments 101031

APN 041-481-04

Your plans have been sent to several agencies for review. The comments that were received are printed below. Please read each comment, noting who the reviewer is and which of the three categories (Completeness, Policy Considerations/Compliance, and Permit Conditions/Additional Information) the comment is in.

Completeness: A comment in this section indicates that your application is lacking certain information that is necessary for your plans to be reviewed and your project to proceed.

Policy Considerations/Compliance: Comments in this section indicate that there are conflicts or possible conflicts between your project and the County General Plan, County Code, and/or Design Criteria. We recommend that you address these issues with the project planner and the reviewer before investing in revising your plans in any particular direction.

Permit Conditions/Additional Information: These comments are for your information. No action is required at this time. You may contact the project planner or the reviewer for clarification if needed.

Environmental Planning

Routing No: 1 | Review Date: 08/09/2010

KENT EDLER (KEDLER) : Complete

Completeness Comments

None

Compliance Comments

Submit a plan review letter from the engineering geologist.

Conditions of Approval

Prior to approval of the improvement plans, a plan review letter from the soils engineer and engineering geologist will be required. If the soils report and engineering geology report are greater than 3 years old at the time of approval of the improvement plans, updates to the reports will be required.

Improvement plans and subsequent building plans shall show tree protection measures for all mature trees to be retained. These plans shall be approved by the project arborist.

Any changes to the plant palette shall be subject to review and approval/denial by Environmental Planning.

A preconstruction meeting shall be scheduled by the project applicant and held onsite prior to the beginning of improvement construction. The soils engineer, grading contractor, Department of Public Works inspector, applicant, project arborist, and Environmental Planning staff shall attend the meeting.

A minimum of three oak trees shall be planted for each oak tree removed.

A mitigation and monitoring plan shall be required for the new oaks prior to improvement plan approval.

Fire Review

Routing No: 2 | Review Date: 11/12/2010



County of Santa Cruz, PLANNING DEPARTMENT

Discretionary Application Comments 101031

APN 041-481-04

Fire Review

ERIN COLLINS (ECOLLINS) : Complete

Surveyor Review

Routing No: 3 | Review Date: 02/16/2011

KATE CASSERA (KCASSERA) : Complete