Staff Report to the Planning Commission

Application Number: 05-0277

Applicant: Stephen Graves and Associates
Owner: Malcolm MacNaughton
APN: 103-071-50

Agenda Date: May 23,2007
Agenda Item #: 10
Time: After 9:00 a.m.

Project Description: Proposal to divide a 42.5 acre parcel into three parcels of 6.82 acres, 28.28 acres, and 7.4 acres.

Location: The property is located on the west side of Soquel San Jose Road about 4 miles north of Soquel Drive on Sundance Hill Road. No situs.

Supervisoral District: 1st District (District Supervisor: Jan Beautz)

Permits Required: Minor Land Division

Staff Recommendation:

- Certification of the Mitigated Negative Declaration per the requirements of the California Environmental Quality Act.
- Approval of Application 05-0277, based on the attached findings and conditions.

Exhibits

A.	Project plans	E.	Updated Building Envelope Review
B.	Findings	F.	Agreement to Realign ROW
C.	Conditions	G.	Comments & Correspondence
D.	Mitigated Negative Declaration (CEQA Determination) with the Following attached documents:		

(Attachment 2): Assessor's parcel map
(Attachment 3): Zoning map
(Attachment **4):** General Plan map

Parcel Information

Parcel Size:	42.51 acres
Existing Land Use - Parcel:	Vacant
Existing Land Use - Surrounding:	Single Family Residences

Project Access:	Sundance Hill Road
Planning Area:	Summit
Land Use Designation:	R-M & R-R (Mountain Residential & Rural Residential)
Zone District:	SU (Special Use) / RA (Residential Agriculture)
Coastal Zone:	__ Inside X Outside
Appealable to Calif. Coastal Comm.	__ Yes X No

Environmental Information

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

Services Information

Urban/Rural Services Line:	__ Inside X Outside
Water Supply:	Private
Sewage Disposal:	Septic
Fire District:	Central Fire Protection District
Drainage District:	None

History of Property

In 2004, a discretionary application (04-0284) was submitted by Stephen Graves and Associates to combine the subject parcel with parcel 103-071-51 and to then re-divide the total area into 4 single family residential lots and one remainder lot. This application was abandoned on March 9, 2005 after the applicant failed to submit the completeness materials as requested in a letter dated July 15,2004.

Minor Land Division

The applicant proposes to divide the subject parcel into three parcels of 6.82 gross acres (Parcel 1), 28.28 gross acres (Parcel 2) and 7.40 gross acres (Parcel **3)** for the purpose of constructing three single family dwellings. There is an area of about 19 acres on Parcel 2 which is currently designated as Mountain Residential in the General Plan and will remain undeveloped. Parcel 1 will be accessed from Sundance Hill Road, while Parcels **2** and 3 will be accessed by a private driveway that will dead-end at Parcel 3.

The proposed new driveway will run about 500 feet north of the existing driveway to access Parcels 2 and 3 and will be 15-feet wide from curb to shoulder with a 12-foot paving width and a 40-foot right of way. The majority of the grading proposed on the new private driveway will occur outside of the proposed right of way; therefore, as a condition of approval, all site improvements must be installed before sale of any of the three lots in order to ensure the improvements are completed.

Due to the steep slopes on the parcels, the proposed building envelope and development envelope locations were reviewed by Nolan Associates Engineering Firm and accepted by the County Geologist.

Project Setting

The parcel is approximately 42 acres and fronts on Soquel San Jose Road, a public road with a 60-foot right of way. The only access through the parcel is Sundance Hill Road which is a dead-end private road with a 40-foot right that takes access off of Soquel San Jose Road.

The topography of the parcel is made up of steep upwards slopes to the west. Surrounding parcels to the north, west, south and east across Soquel San Jose Road are zoned Special Use and Residential Agriculture and are developed with single family dwellings at rural densities.

There are three existing clearings where the proposed building sites are located, one located east of the existing portion of Sundance Hill Road and two located further north that will be accessed by a private driveway off of Sundance Hill Road. The parcel is an *oak* woodland habitat that will be preserved through mitigation measures.

Zoning & General Plan Consistency

The subject property is a 42.5 acre lot, located in the SU (Special Use), or RA (Residential Agriculture) zone district, a designation which allows residential uses. Single family residences are permitted uses within the zone district and the project is consistent with the site's (R-M & R-R) Mountain Residential & Rural Residential General Plan designation. The allowed density for the division of land on parcels with a (R-R) Rural Residential General Plan designation is determined by the Rural Density Matrix.

Rural Density Matrix

The site is proposed to be at the maximum density possible given the limitations of the site and the density allowed in the rural matrix. A rural matrix determined a minimum parcel size of 5 net developable acres (Exhibit D). A maximum of three lots is all that may be achieved at this site. The proposed three lot subdivision is consistent with the site's R-R (Rural Residential) and R-M (Mountain Residential) General Plan designations in that the Rural Residential area will be developed with single family residences and the Mountain Residential area will be left undeveloped.

Critical Fire Hazard Area

The parcel is partially located within the mapped Critical Fire Hazard Area which, according to General Plan Policy 6.5.4(d), deems the parcel as undividable. Biotic Assessments submitted by the applicant and Ecosystems West, a biotic consultant, determined that no chaparral indicator species or habitat exists on the subject parcel; therefore, in accordance with the General Plan Definition for "Critical Fire Hazard Area", the parcel is not a Critical Fire Hazard Area and may therefore be divided (Exhibit D).

Timber Resources

The northern portion of the parcel is partially located within the mapped Timber Resource overlay area. **A** Focused Forestry Assessment was performed at the site by the Stephen R. Straub

Forester and Environmental Consultant group (Exhibit D). The report evaluated approximately 1.5 acres of timber resource overlay area, which is located on steep slopes (>80%) and near a watercourse. The report determined that due to timber falling constraints, Forest Practice Regulations restricting harvesting near watercourses and steep terrain, public health and safety concerns when dealing with public roads, and bonding and associated difficulties when operating from or near improved private drives, the site is not commercially viable timberland.

Project Access/Roadway Improvements

The proposed building site, Parcel 1, will be accessed by the existing Sundance Hill Road and proposed Parcels 2 and 3 will be accessed via a proposed private driveway that will branch off of an existing private driveway.

The applicant is proposing several roadway improvements to improve the existing visibility and roadway safety on Sundance Hill Road including:

1) Widening the Sundance Hill Road- Soquel San Jose Road intersection to 60-feet and removing an existing 24" *oak* tree;
2) Widening the first 55-feet of Sundance Hill Road to 24-feet;
3) Widening Sundance Hill Road to the intersection with the existing private driveway to 18-feet;
4) Widening about the first 13-feet of the existing 12-foot private driveway to 18-feet.

As a condition of approval, all road widenings shall be in compliance with Department of Public Works design criteria. In addition, roadway improvements along Soquel San Jose Road include trimming the existing vegetation north of Sundance Hill Road, removal of small trees less than 6-inches in diameter, removing shrubs and trees within 15-feet of the roadway, and funding additional signage on Soquel San Jose Road. The proposed improvements are in accordance with recommendations provided in a Sight Distance Study conducted on site by C2G/Civil Consultants Groups, Inc. (Exhibit D).

The property owner has received all required approvals from the surrounding property owners for improvements and access outside of the right of way, including a signed agreement with the property owner **of** parcel 103-071-48 to grant a 20-foot right to the subject property owner to allow access from the realigned 40-foot right of way (private driveway) to the proposed Parcels 2 and **3** (Exhibits F *& G)*.

Drainage and Erosion

A preliminary Grading and Drainage Plan was submitted (Exhibit **A)** that includes drainage improvements to address runoff from the existing and proposed improvements. Rebecca Dees of Dees & Associates Geotechnical Engineers, reviewed the proposed Geotechnical Plans and found that they are in general accordance with their recommendations for disposal of collected surface runoff (Exhibit D).

As a part of the road improvements, the existing failing retaining wall, located along the inside edge of the private driveway where it splits from Sundance Hill Road, will be replaced by a keystone wall and backfilled with permeable materials and a perforated pipe that will improve

the drainage and stability of the hill when it is widened.

The proposed plans indicate that existing drainage patterns will be maintained along the existing paved roads. A water bar will be constructed on Sundance Hill Road about 12-feet west of the intersection with Soquel San Jose Road. The water bar will divert runoff from Soquel San Jose Road by directing water through a rip rap lined path from Sundance Hill Road to the existing drainage channel.

The proposed paved private driveway to access parcels 2 and 3 will utilize catch basins that will collect the surface runoff and disperse it through three 20-foot long, widely spaced dispersion trenches located on the sloping hill below the driveway. A silt fence will protect the catch basin located in an existing eroded gully from sediment build-up.

Geotechnical Investigation

Haro, Kasunich & Associates, Inc. has prepared a soils report for this site (Exhibit D). Subsurface conditions were explored with three exploratory test pits excavated to depths of 12.5 – 14 feet and one test boring was excavated in each building site. No groundwater was encountered. The general soil conditions at the site consist of "a thin soil horizon over dense Purisima Sandstone."

Some landslide deposits were observed within the drainage ravines that pass through the site; however no signs of recent landsliding were found. Setbacks for future home construction are recommended to mitigate landslide hazards.

The Geotechnical Engineer has included recommendations for: Site Grading; Pier and Grade Beam Foundation on Parcel 1; Spread Footing Foundations on Parcels 2 & 3; Retaining Walls and Lateral Pressures; Slabs-on-Grade; Site Drainage; and Plan Review, Construction, Observation, and Testing. The report was reviewed and accepted by the Environmental Planning Division.

Geologic Investigation

A Geologic Investigation was prepared for this site by Nolan, Zinn, & Associates (Exhibit D). The Geologist determined that the "principal geologic hazard posed to the proposed homesites is strong seismic shaking due to an earthquake in the study area"; however, no active or potentially active faults have been recognized on or near the subject property. The proposed building envelopes have been reviewed and approved by the Geologist for human habitation. The report recommends that all drainage from improved surfaces are collected and dispersed on site to maintain existing runoff patterns and amounts and also that a drainage scheme is designed and constructed on Parcel 2 to capture runoff from above slopes and direct it away from areas proposed for development. The Geologic Investigation was reviewed and accepted by the Environmental Planning Division.

Environmental Review

Environmental review has been required for the proposed project per the requirements of the

California Environmental Quality Act (CEQA). The project was reviewed by the County's Environmental Coordinator on February 21, 2007. A preliminary determination to issue a Negative Declaration with Mitigations (Exhibit D) was made on December 13, 2006. The mandatory public comment period expired on January I 1,2007 with no comments received.

The environmental review process focused on the potential impacts of the project in the areas of geology, hydrology, biology, and transportation. The environmental review process generated mitigation measures that will reduce potential impacts from the proposed development and adequately address these issues.

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 **05-0277,** 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

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Report Reviewed By: Mark Deming

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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 this project creates three parcels with a minimum of 5 net developable acres per parcel and is located in the Rural Residential (R-R) General Plan land use designation. The division of land on parcels with a Rural Residential (R-R) General Plan designation is allowed at densities determined by the Rural Density Matrix. This proposal complies with the requirements of the Rural Density Matrix, which authorizes a density of development of one dwelling unit per 5 acres of net developable land area, in that sufficient net developable land area exists for the proposed division.

A portion of proposed Parcel 2 is a designated R-M (Mountain Residential) area in the General Plan and the proposed project is consistent with this designation in that the area designated as R-M will remain undeveloped.

The project is consistent with the General Plan in that the necessary infrastructure is available to the site including private water, septic waste treatment, and nearby recreational opportunities. The land division is located off of private right of way from a public street that provides satisfactory access. The proposed land division is similar to the pattern and density of the surrounding rural residential development in the project vicinity.

The proposed land division is not located in a hazardous or environmentally sensitive area and protects natural resources by expanding in an area designated for residential development at the proposed density.

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 which is an allowed use in the RA (Residential Agriculture) zone district, where the project is located. The proposed parcel configuration meets the minimum dimensional standards and setbacks for the 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 the building and development envelopes have been created using geotechnical and geological reports to avoid any challenging topography that would affect

the building sites and to result in sites that are suitable for residential development and that are properly configured to allow development in compliance with the required site standards. No environmental constraints exist which would be adversely impacted by the proposed development.

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 impede development of the site and the project has received a mitigated Negative Declaration pursuant to the California Environmental Quality Act and the County Environmental Review Guidelines.

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

This finding can be made, in that private wells and on site septic systems are available to serve the 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 development will be located at a safe distance **from** existing vehicular easements and the access roadways will be improved to accommodate the proposed development.

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 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 proposed minor land division is not subject to the design review ordinance.

Conditions of Approval

Land Division: 05-0277

Applicant: Stephen Graves & Associates

Property Owner(s): Malcom MacNaughton

Assessor's Parcel No.: 103-071-50

Property Location and Address: Property is located on the west side of Soquel San Jose Road on Sundance Hill Road.

Planning Area: Summit

Exhibits:

A. Project Plans including Tentative Map & Preliminary Improvement Plans by C2G/Civil Consultants Group, Inc., dated 2/26/07.

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, and

B. Pay a Negative Declaration De Minimis fee of $1800 plus a $50 filing fee to the Clerk of the Board of the County of Santa Cruz as required by the California Department of Fish and Game mitigation fees program. If you have received a "letter of no effect" from the Department of Fish and Game, you may submit this letter in lieu of the $1800 fee, however the $50 filing fee is still required. You must submit either a "letter of no effect" or $1800 with your $50 filing fee.

II. **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.

EXHIBIT C

B. This land division shall result in no more than three **(3)** residential parcels total. **A** statement shall be added to clearly state that all structures must be located within the designated building envelopes.

C. This land division includes road improvements that are located outside of the rights of way. A statement shall be added to clearly state that all improvements as shown on the plans shall be completed prior to sale of any of the three parcels.

D. The minimum amount of parcel area per dwelling unit shall be 5 acres of net developable land.

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

1. Building envelopes located according to the approved Tentative Map. The building envelopes for the perimeter of the project shall meet the minimum setbacks for the RA (Residential Agriculture) zone district of 40 for the front yard, 20 feet for the side yards, and 20 feet for the rear yard.

2. Show the net developable land area of each lot to nearest square foot and to the nearest hundredth of an acre.

3. A statement shall be added to clearly state that all structures must be located within the designated building envelopes and all site disturbances shall be located within the designated development envelopes.

4. A statement shall be added to clearly state that all improvements as shown on the plans shall be completed prior to sale of any of the three parcels.

5. A statement shall be added to clearly state that additional Affordable Housing In-Lieu Fees may be required should any additional land division occur in the future.

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

1. Any existing or proposed wells shall be reviewed by the County Department of Environmental Health Services.

2. The access roads and driveways shall be resurfaced with all-weather materials and shall meet the following requirements:

a. All shared access roads must be widened per the requirements of the Department of Public Works Road Engineering.

1 In addition to the above requirement, roads shall be

EXHIBIT C

widened to a minimum of 18 feet in width for any shared access roadway that serves more than one parcel.

3. Prior to the issuance of a building permit, the applicant/owner shall record a notice against the title of all existing and new parcels that additional Affordable Housing In-Lieu Fees may be required should any additional land division occur in the future.

4. Show all public utility easements as required by SBC.

5. The proposed septic system(s), serving the new parcel(s), shall be reviewed by the County Department of Environmental Health Services.

6. 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.

7. Prior to issuance of building or grading permits the applicant shall submit an exterior lighting plan for review and approval. The plan shall feature low rise, shield, and directed lighting.

8. The project shall comply with all mitigations as recommended by C2G/Civil Engineers Group, Inc. Sight Distance Study, August 31, 2005, including:

a. Trimming the existing vegetation north of Sundance Hill Road and the removal of small trees and shrubs less **than** 6-inches in diameter within 15-feet of the roadway; and

b. The addition of a "Cross Street Ahead" sign (Caltran W2-2) along the southbound side of Soquel San Jose Road in advance of Sundance Hill Road, to be installed by the County of Santa Cruz Department of Public Works at the applicants expense.

9. ***Any*** changes between the Parcel Map and the approved Tentative Map must be submitted for review and approval by the Planning Department.

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

A. The owner shall sign and record a Declaration of Restriction to protect biotic resources on Parcel 2. The Declaration shall require preservation of the following four trees, which are within the development envelope, outside of the building envelope: numbers 56, 60, 61, and 8A (36 inch Bay). If **8A** will be removed to protect tree number **6** ***(36*** inch Coast Live Oak) then it shall not be included in the easement.

B. The owner shall record a Declaration of Restriction to protect biotic resources on Parcel **3.** The Declaration shall require preservation of the following ten trees which are within the development envelopment, outside of the building envelope: numbers 46-55.

C. The applicant shall revise the driveway plan to narrow the disturbance width by using an alternative to a berm on the uphill side for drainage control and by decreasing the extent of the fill wedge of the outboard side. The road plan shall be developed with input from the project arborist, and accompanied by a letter from the arborist specifying recommendations for how the road can be sited and designed to minimize impact on trees.

D. The applicant shall submit a report by an arborist for review and approval. The report shall verify that the following trees that are shown on the plans as being protected will be preserved in the long term: 1 and 2, 3 or 5 (whichever is preserved), 4, 8A, 9 or 10 (whichever is preserved), 12 and 12A, 15 and 15A, 22 and 23, 29, 39. The report shall include specific recommendations to protect each tree and minimize disturbance in the root zone.

E. The applicantlowner shall submit a mitigation plan, prepared by a botanist **or** Landscape Architect, for review and approval. The plan shall specify 3:1 replacement of *oaks* and other native trees that will be removed for road work or which are in building envelopes. Trees shall be replaced with Coast Live *Oak,* in the places most advantageous to wildlife, such as adjacent to and within existing woodland edges. The plans shall include maintenance and monitoring for a period of five years.

F. The applicantlowner shall submit a detailed erosion control plan for review and approval by Environmental Planning staff. The plan shall include the following elements: a clearing and grading schedule, clearly marked disturbance envelope, silt fence, specifications for revegetation of bare areas (both temporary cover during construction and permanent planting), and details of temporary drainage control.

G. In order to reduce the potential for geotechnical hazards to a less than significant level, prior to recording the tentative map, the applicant/owner shall submit letters of plan check from the project geologist (Nolan, Zinn, & Associates) and the project geotechnical engineer (Dees and Associates) approving the building location, septic location, and drainage improvements, for review and approval **by** Planning engineering staff.

a. Submit 3 copies of a plan review letter prepared and stamped by a licensed geologist.

b. Submit 3 copies of a plan review letter prepared and stamped by a licensed geotechnical engineer.

H. Submit a letter of certification from the Tax Collector's Office that there are no outstanding tax liabilities affecting the subject parcels.

I. Meet all requirements of the Santa Cruz County Department of Public Works, Drainage section.

J. 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. Plans shall also comply with applicable provisions of the Americans With Disabilities Act and/or Title **24** of the State Building Code.

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.

K. All requirements of the Central Fire Protection District shall be met.

L. Park dedication in-lieu fees shall be paid for 9 bedrooms in the three new dwelling units **(3** bedrooms per dwelling unit). These fees are currently $578 per bedroom, but are subject to change.

M. Child Care Development fees shall be paid for 9 bedrooms in the three new dwelling units **(3** bedrooms per dwelling unit). These fees are currently $109 per bedroom, but are subject to change.

N. Enter into a Certification and Participation Agreement with the County of Santa Cruz to meet the Affordable Housing Requirements specified by Chapter 17.10 of the County Code. The developer shall pay in-lieu fees for the third parcel in accordance with the regulations and formulas as specified by Chapter 17.10 of the County Code. These fees are currently $15,000 per unit, but are subject to change.

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

A. Pre-Construction Meeting: Prior to any disturbance on the property the applicant shall convene a pre-construction meeting on the site. The following parties shall attend: applicant/owner, grading contractor supervisor, Santa Cruz County

resource planning staff, and project arborist. The temporary construction fencing demarcating the disturbance envelope, tree protection fencing, and silt fencing will be inspected at that time.

B. 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 indicated on the approved improvement plans.

C. No land disturbance shall take place prior to issuance of building permits (except 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. Construction of improvements shall comply with the requirements of the geologic report. The geologist shall inspect the completed project and certify in writing that the improvements have been constructed in conformance with the geologic report.

F. Construction of improvements shall comply with the requirements of the geotechnical report. The geotechnical engineer shall inspect the completed project and certify in writing that the improvements have been constructed in conformance with the geotechnical report.

G. All required land division improvements shall be installed and inspected prior to sale of any of the three parcels.

V. 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.

VI. 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, fi-om and against any claim (including attorneys' fees), against the COUNTY, it 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.

VII. Mitigation Monitoring Program

The mitigation measures listed under this heading have been incorporated in 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 the above mitigation is hereby adopted **as** a condition 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: Pre-Construction Meeting (Condition IV.A)

Monitoring Program: In order to ensure that mitigation measures B-D (below) are communicated to the various parties responsible for constructing the project, prior to any disturbance on the property the applicantlowner shall convene a pre-construction meeting on the site. The following parties shall attend: applicantlowner, grading contractor supervisor, Santa Cruz County Resource Planning Staff, and Project Arborist. The temporary construction fencing demarcating the disturbance envelope, tree protection fencing, and silt fencing will be inspected at that time.

B. Mitigation Measure: *Oak* Woodland Resources (Conditions III.A & B)

Monitoring Program: Prior to approval of the parcel map, the Project Planner will verify that the required Declarations of Restriction have been recorded with the County of Santa Cruz to protect the identified biotic resources on parcels 2 and 3.

C. Mitigation Measure: Driveway Plan (Condition III.C)

Monitoring Program: Prior to approval of the parcel map, Environmental Planning Staff will be responsible to review the revised driveway plan and to ensure that the plans are in conformance with written recommendations from the project arborist specifying how the road can be sited and designed to minimize impact on trees.

D. Mitigation Measure: Arborist Report (Condition III.D)

Monitoring Program: Prior to approval of the parcel map, Environmental Planning Staff will review the Arborist Report and verify that all trees sited for long term protection are identified and that the Arborist has provided recommendations to protect each tree and minimize disturbance in the root zone. Environmental Planning Staff will be responsible for ensuring that the recommendations for tree protection are referenced on the parcel map. Inspections will be conducted to verify that **all** arborist recommendations are being implemented correctly.

E. Mitigation Measure: Mitination Plan (Condition III.E)

Monitoring Program: Prior to approval of the parcel map, Environmental Planning Staff will be responsible for reviewing the Mitigation Plan to verify that it was prepared by a Botanist or Landscape Architect and that it specifies a **3**:1 replacement of *oaks* and other native trees that will be removed for road work or which are in building envelopes. Environmental Planning Staff will ensure that the plan includes a five year maintenance and monitoring program. Inspections will be conduction to verify that all required mitigation plantings are completed.

F. Mitigation Measure: Erosion and Sediment Control (Condition III.F)

Monitoring Program: Prior to issuance of a Grading permit, detailed erosion control and grading plans will be reviewed and accepted by the Environmental Planning Section of the Planning Department. Inspections will be conducted to verify all erosion control measure are being used correctly. Correction notices will be issued in the event of noncompliance by the Environmental Planning Section's grading staff.

G. Mitigation Measure: Geologic Hazards (Condition III.G)

Monitoring Program: Prior to approval of the parcel map, plan review letters from the Project Geologist and Geotechnical Engineer will be reviewed and accepted by the Environmental Planning Section of the Planning Department to approve building location, septic location and drainage improvements. Prior to building permit issuance, Environmental Planning Staff will ensure that all proposed building is in conformance with the recommendations in the approved technical reports and plan review letters.

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 Parcel 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: _____

Mark Deming	Samantha Haschert
Assistant Planning Director	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.

EXHIBIT C

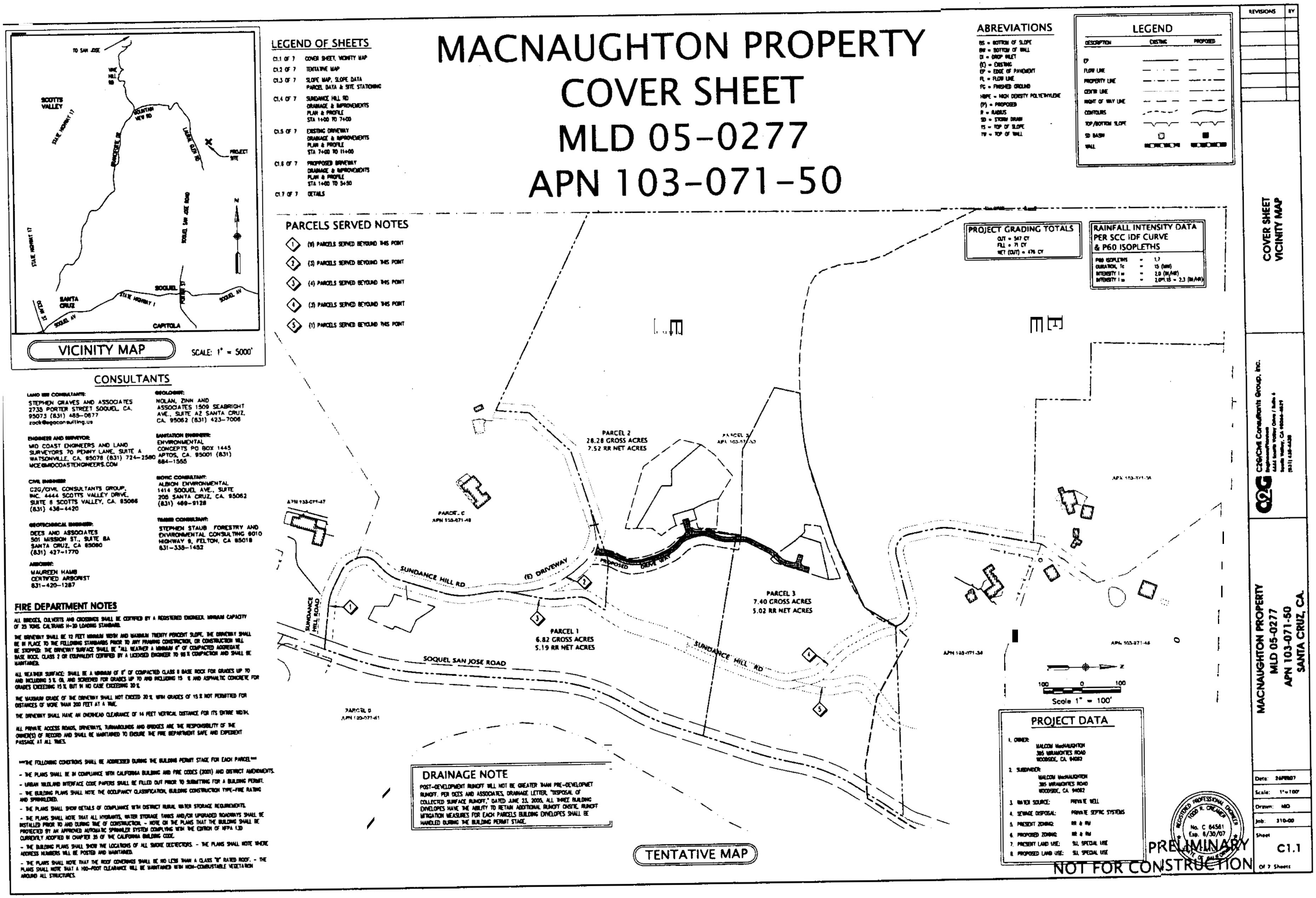
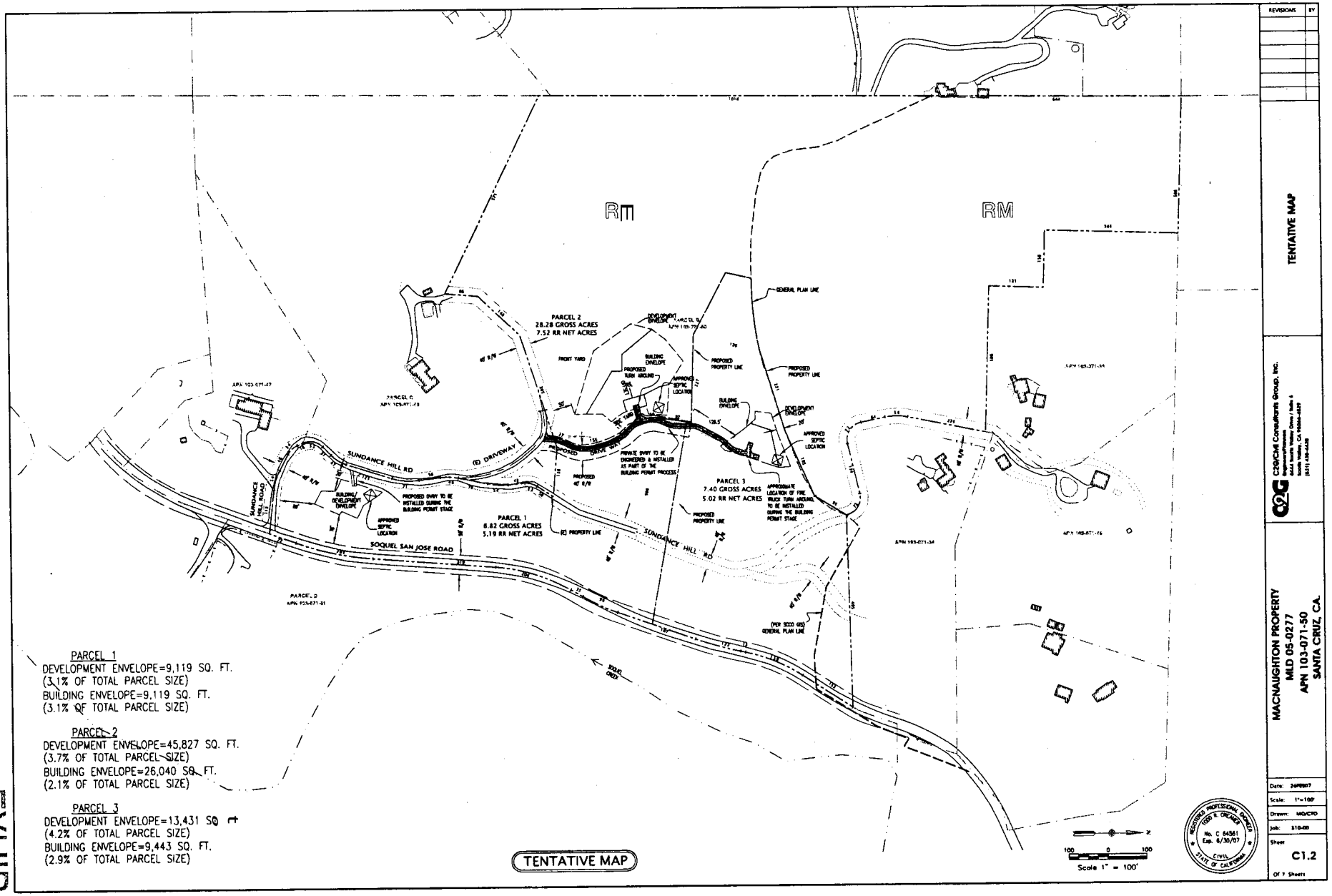

MACNAUGHTON PROPERTY
COVER SHEET
MLD 05-0277
APN 103-071-50
LEGEND OF SHEETS
ABBREVIATIONS
LEGEND
PARCELS SERVED NOTES
VICINITY MAP
SCALE: 1" = 5000'
SCOTTS VALLEY
SANTA CRUZ
SOQUEL
CAPITOLA
PROJECT SITE
CONSULTANTS
FIRE DEPARTMENT NOTES
PROJECT GRADING TOTALS
RAINFALL INTENSITY DATA
PER SCC IDF CURVE
& P60 ISOPLETHS
PARCEL 1
6.82 GROSS ACRES
5.19 RR NET ACRES
PARCEL 2
28.28 GROSS ACRES
7.52 RR NET ACRES
PARCEL 3
7.40 GROSS ACRES
5.02 RR NET ACRES
SUNDANCE HILL RD
SOQUEL SAN JOSE ROAD
(E) DRIVEWAY
PROPOSED DRIVEWAY
Scale 1" = 100'
DRAINAGE NOTE
TENTATIVE MAP
PROJECT DATA
COVER SHEET
VICINITY MAP
C2G/Civil Consultants Group, Inc.
MACNAUGHTON PROPERTY
MLD 05-0277
APN 103-071-50
SANTA CRUZ, CA.
PRELIMINARY
NOT FOR CONSTRUCTION
C1.1

EXHIBIT A



PARCEL 1
DEVELOPMENT ENVELOPE=9,119 SQ. FT.
(3.1% OF TOTAL PARCEL SIZE)
BUILDING ENVELOPE=9,119 SQ. FT.
(3.1% OF TOTAL PARCEL SIZE)

PARCEL 2
DEVELOPMENT ENVELOPE=45,827 SQ. FT.
(3.7% OF TOTAL PARCEL SIZE)
BUILDING ENVELOPE=26,040 SQ. FT.
(2.1% OF TOTAL PARCEL SIZE)

PARCEL 3
DEVELOPMENT ENVELOPE=13,431 SQ. FT.
(4.2% OF TOTAL PARCEL SIZE)
BUILDING ENVELOPE=9,443 SQ. FT.
(2.9% OF TOTAL PARCEL SIZE)

TENTATIVE MAP

REVISIONS | BY

TENTATIVE MAP

C2G/Civil Consultants Group, Inc.
[illegible]

MACNAUGHTON PROPERTY
MLD 05-0277
APN 103-071-50
SANTA CRUZ, CA.

Date: 24APR07
Scale: 1"=100'
Drawn: MD/CTD
Job: 510-00
Sheet C1.2
Of 7 Sheets

REGISTERED PROFESSIONAL ENGINEER
TODD R. CREMER
No. C 64361
Exp. 6/30/07
CIVIL
STATE OF CALIFORNIA

EXHIBIT A

MACNAUGHTON PROPERTY
MLD 05-0277
APN 103-071-50
SANTA CRUZ, CA.
Date: 2/28/07
Scale: 1"=100'
Drawn: MD/CTD
Job: 310-00
Sheet C1.3
of 7 Sheets
CREATIVE Consultants Group, Inc.
SLOPE MAP
SLOPE DATA
PARCEL DATA
SITE STATIONING
REVISIONS
SLOPE MAP
Scale 1" = 100'
SLOPE SHADING RANGE
PARCEL DATA
SLOPE DATA
EXHIBIT A

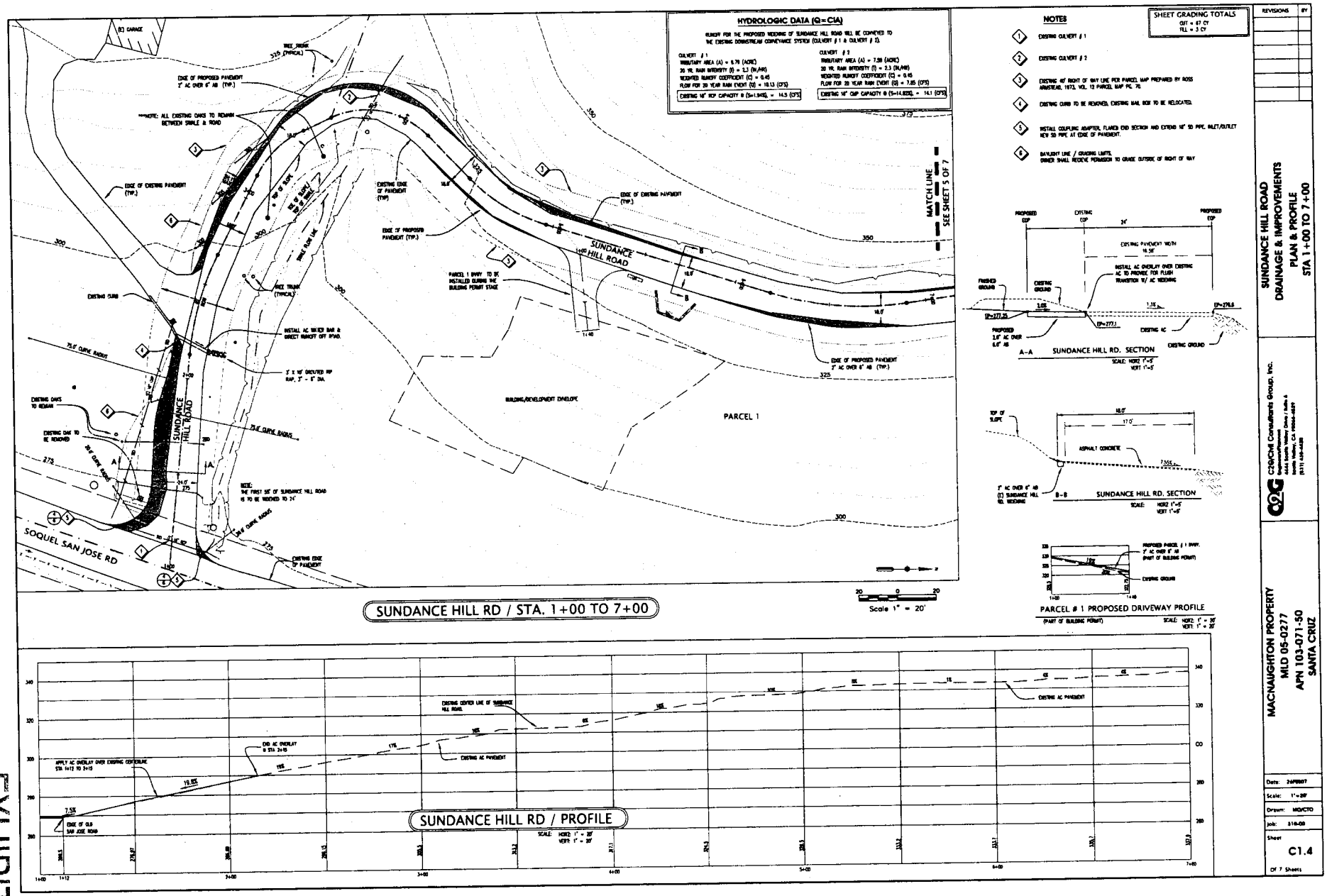
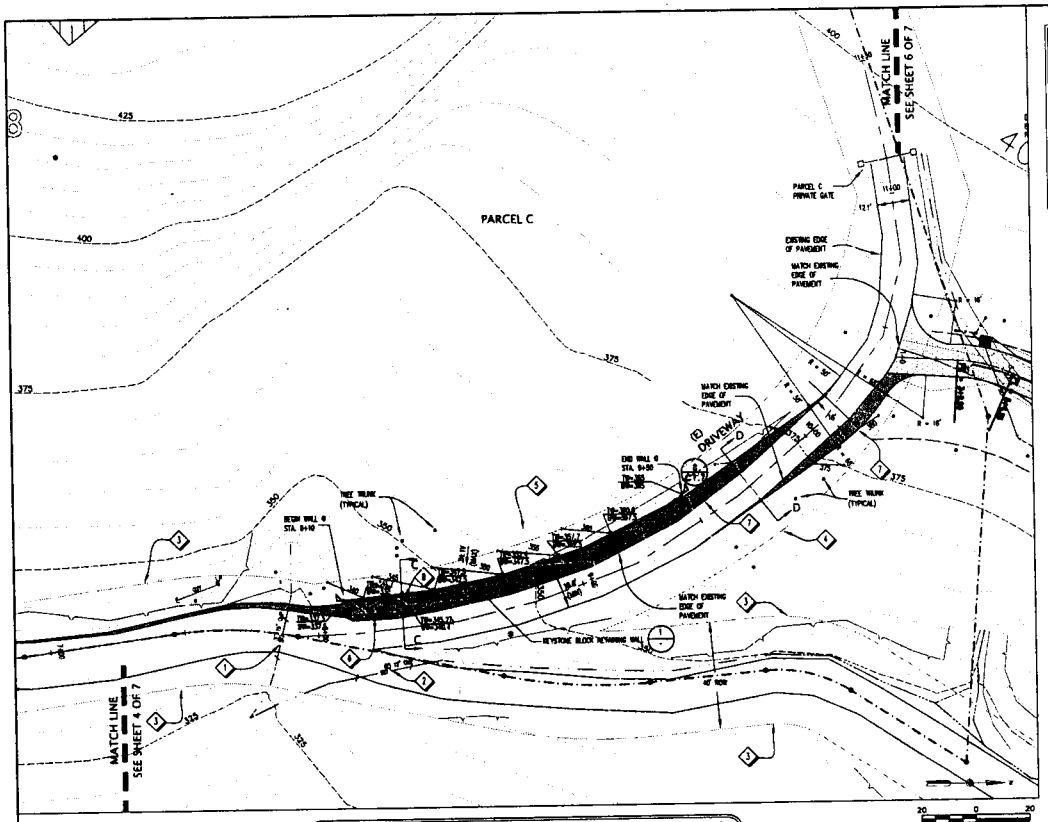

HYDROLOGIC DATA (Q=CIA)
RUNOFF FOR THE PROPOSED WIDENING OF SUNDANCE HILL ROAD WILL BE CONVEYED TO THE EXISTING DOWNSTREAM CONVEYANCE SYSTEM (CULVERT # 1 & CULVERT # 2).
CULVERT # 1
TRIBUTARY AREA (A) = 6.79 (ACRE)
20 YR. RAIN INTENSITY (I) = 1.3 (IN/HR)
WEIGHTED RUNOFF COEFFICIENT (C) = 0.45
FLOW FOR 20 YEAR RAIN EVENT (Q) = 10.13 (CFS)
EXISTING 18" RCP CAPACITY @ (S=1.94%) = 14.5 (CFS)
CULVERT # 2
TRIBUTARY AREA (A) = 7.28 (ACRE)
20 YR. RAIN INTENSITY (I) = 2.3 (IN/HR)
WEIGHTED RUNOFF COEFFICIENT (C) = 0.45
FLOW FOR 20 YEAR RAIN EVENT (Q) = 7.85 (CFS)
EXISTING 18" CMP CAPACITY @ (S=14.82%) = 14.1 (CFS)
NOTES
1 EXISTING CULVERT # 1
2 EXISTING CULVERT # 2
3 EXISTING 40' RIGHT OF WAY LINE PER PARCEL MAP PREPARED BY ROSS ARMSTRONG, 1973, VOL. 12 PARCEL MAP PG. 70.
4 EXISTING CURB TO BE REMOVED, EXISTING MAIL BOX TO BE RELOCATED.
5 INSTALL COUPLING ADAPTER, FLARED END SECTION AND EXTEND 18" SD PIPE. INLET/OUTLET NEW SD PIPE AT EDGE OF PAVEMENT.
6 DAYLIGHT LINE / GRADING LIMITS. OWNER SHALL RECEIVE PERMISSION TO GRADE OUTSIDE OF RIGHT OF WAY
SHEET GRADING TOTALS
CUT = 67 CY
FILL = 3 CY
SUNDANCE HILL ROAD
PARCEL 1
BUILDING/DEVELOPMENT ENVELOPE
SOQUEL SAN JOSE RD
MATCH LINE SEE SHEET 5 OF 7
A-A SUNDANCE HILL RD. SECTION
B-B SUNDANCE HILL RD. SECTION
PARCEL # 1 PROPOSED DRIVEWAY PROFILE
SUNDANCE HILL RD / STA. 1+00 TO 7+00
SUNDANCE HILL RD / PROFILE
Scale 1" = 20'
REVISIONS
BY
SUNDANCE HILL ROAD
DRAINAGE & IMPROVEMENTS
PLAN & PROFILE
STA 1+00 TO 7+00
C2G/Civil Consultants Group, Inc.
MACNAUGHTON PROPERTY
MLD 05-0277
APN 103-071-50
SANTA CRUZ
Date: 2/6/2007
Scale: 1"=20'
Drawn: MG/CTO
Job: 510-03
Sheet
C1.4
Of 7 Sheets

EXHIBIT A



EXISITNG DRIVEWAY / STA. 7+00 TO 11+00

HYDROLOGIC DATA (Q=CIA)

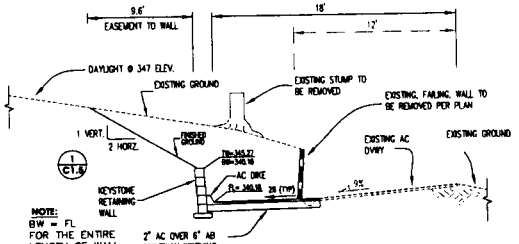
CULVERT # 3
TRIBUTARY AREA (A) = 4.64 (ACRE)
20 YR. RAIN INTENSITY (I) = 2.3 (IN/HR)
WEIGHTED RUNOFF COEFFICIENT (C) = 0.45
FLOW FOR 20 YEAR RAIN EVENT (Q) = 4.8 (CFS)
EXISTING 15" CMP CAPACITY @ (S=19.8%) = 15.0 (CFS)

CULVERT # 4
TRIBUTARY AREA (A) = 6.8 (ACRE)
20 YR. RAIN INTENSITY (I) = 2.3 (IN/HR)
WEIGHTED RUNOFF COEFFICIENT (C) = 0.45
FLOW FOR 20 YEAR RAIN EVENT (Q) = 7.04 (CFS)
EXISTING 12" CMP CAPACITY @ (S=7.83%) = 7.3 (CFS)

SHEET GRADING TOTALS
CUT = 123 CY
FILL = 11 CY

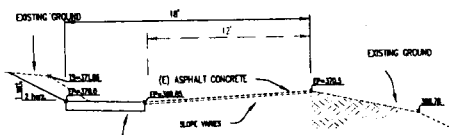
NOTES

1. EXISTING CULVERT # 3
2. EXISTING CULVERT # 4
3. EXISTING 60' RIGHT OF WAY LINE PER PARCEL MAP PREPARED BY ROSS ARMSTEAD, 1973, VOL. 12 PARCEL MAP PG. 70
4. 60' RIGHT OF WAY LINE TO BE OBTAINED BY PROPERTY OWNERS
5. DAYLIGHT LINE / GRADING LIMITS OWNER SHALL RECEIVE PERMISSION TO GRADE OUTSIDE OF RIGHT OF WAY
6. REMOVE (E) FAILING WALL AND GRADE OUT TO DAYLIGHT LINE
7. WIDEN EXISTING DRIVEWAY TO 18.0' (MIN). END AC WIDENING AT STA 10+38. CONTRACTOR TO INSTALL 2.0" AC OVER 8.0" AB.
8. (E) STUMP TO BE REMOVED

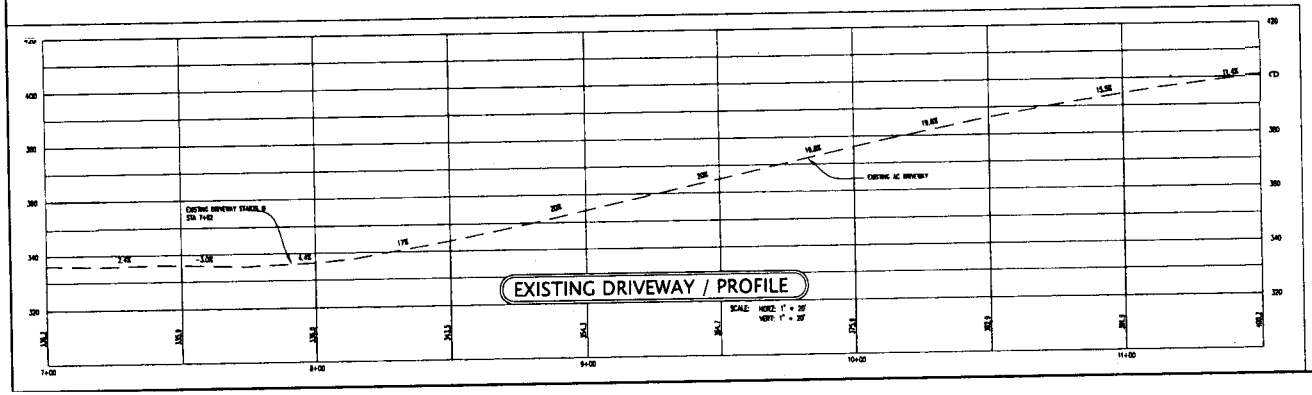


NOTE:
BW = FL
FOR THE ENTIRE LENGTH OF WALL

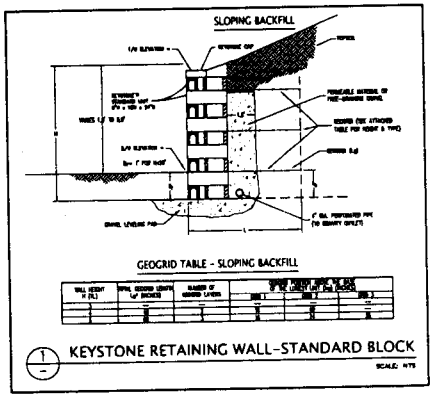
C-C GRADING CROSS SECTION SCALE: HORZ 1"=4' VERT 1"=4'



D-D EXISTING DRIVEWAY CROSS SECTION SCALE: HORZ 1"=4' VERT 1"=4'



EXISTING DRIVEWAY / PROFILE
SCALE: HORZ: 1" = 20' VERT: 1" = 20'



KEYSTONE RETAINING WALL-STANDARD BLOCK
SCALE: N.T.S.

REVISIONS	BY
NEW DRIVEWAY DESIGN PER OWNER	CTO

EXISTING DRIVEWAY
DRAINAGE & IMPROVEMENTS
PLAN & PROFILE
STA 7+00 TO 11+00

C2G/CIVIL Consultants Group, Inc.
Engineering/Planning/Surveying
Scotts Valley, CA 95066-4029
(831) 438-2400

MACNAUGHTON PROPERTY
MLD 05-0277
APN 103-071-50
SANTA CRUZ

Date: 26FEB07
Scale: 1"=20'
Drawn: MO/CTO
Job: 310-00
Sheet C1.5
Of 7 Sheets

EXHIBIT A

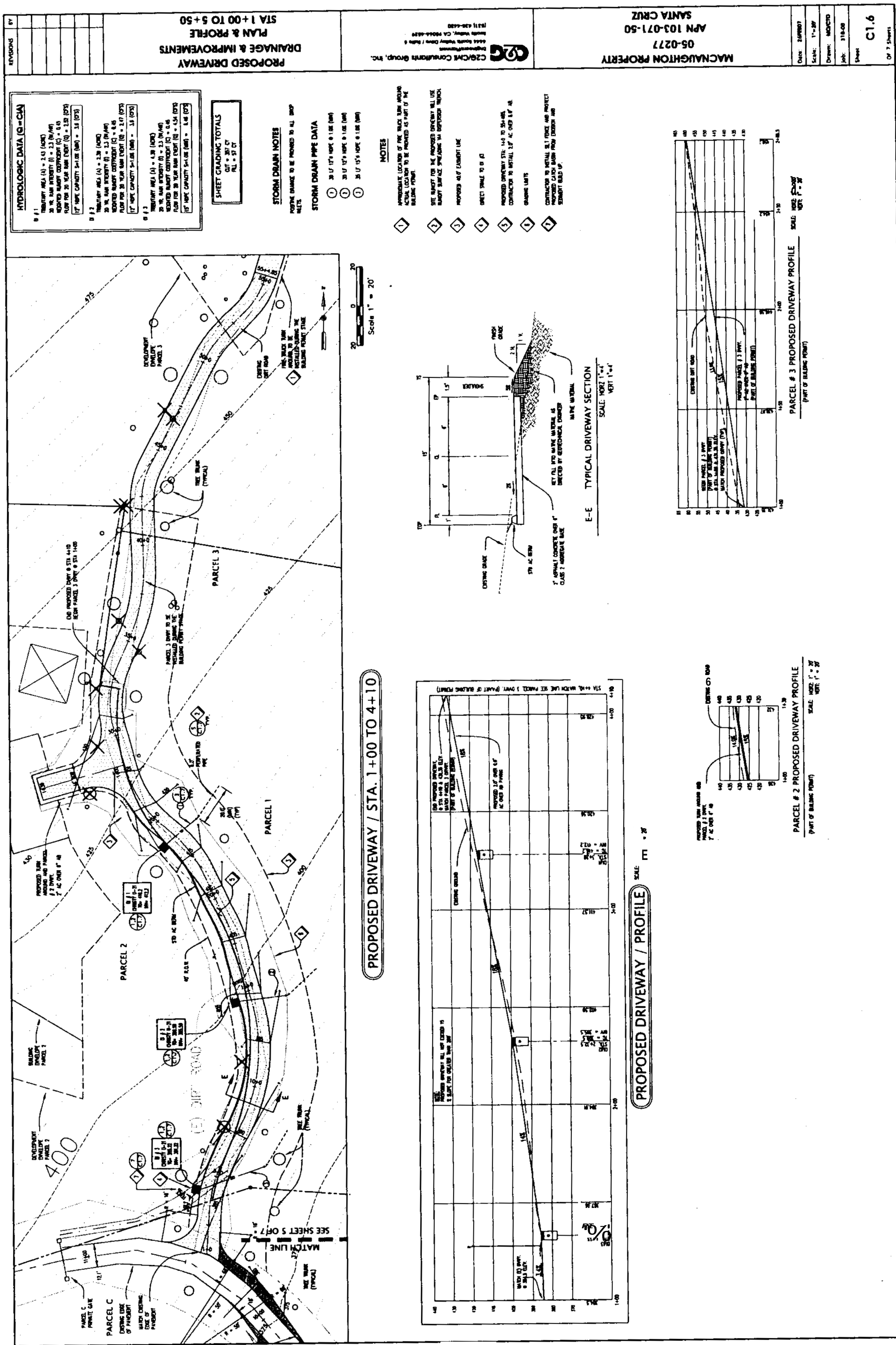

PROPOSED DRIVEWAY
DRAINAGE & IMPROVEMENTS
PLAN & PROFILE
STA 1+00 TO 5+50
C2G/Civil Consultants Group, Inc.
MACNAUGHTON PROPERTY
05-0277
APN 103-071-50
SANTA CRUZ
C1.6
HYDROLOGIC DATA (Q=CIA)
SHEET GRADING TOTALS
STORM DRAIN NOTES
STORM DRAIN PIPE DATA
NOTES
E-E TYPICAL DRIVEWAY SECTION
PARCEL # 3 PROPOSED DRIVEWAY PROFILE
PARCEL # 2 PROPOSED DRIVEWAY PROFILE
PROPOSED DRIVEWAY / STA. 1+00 TO 4+10
PROPOSED DRIVEWAY / PROFILE
PARCEL 1
PARCEL 2
PARCEL 3
PARCEL C
MATCH LINE
SEE SHEET 5 OF 7

EXHIBIT A

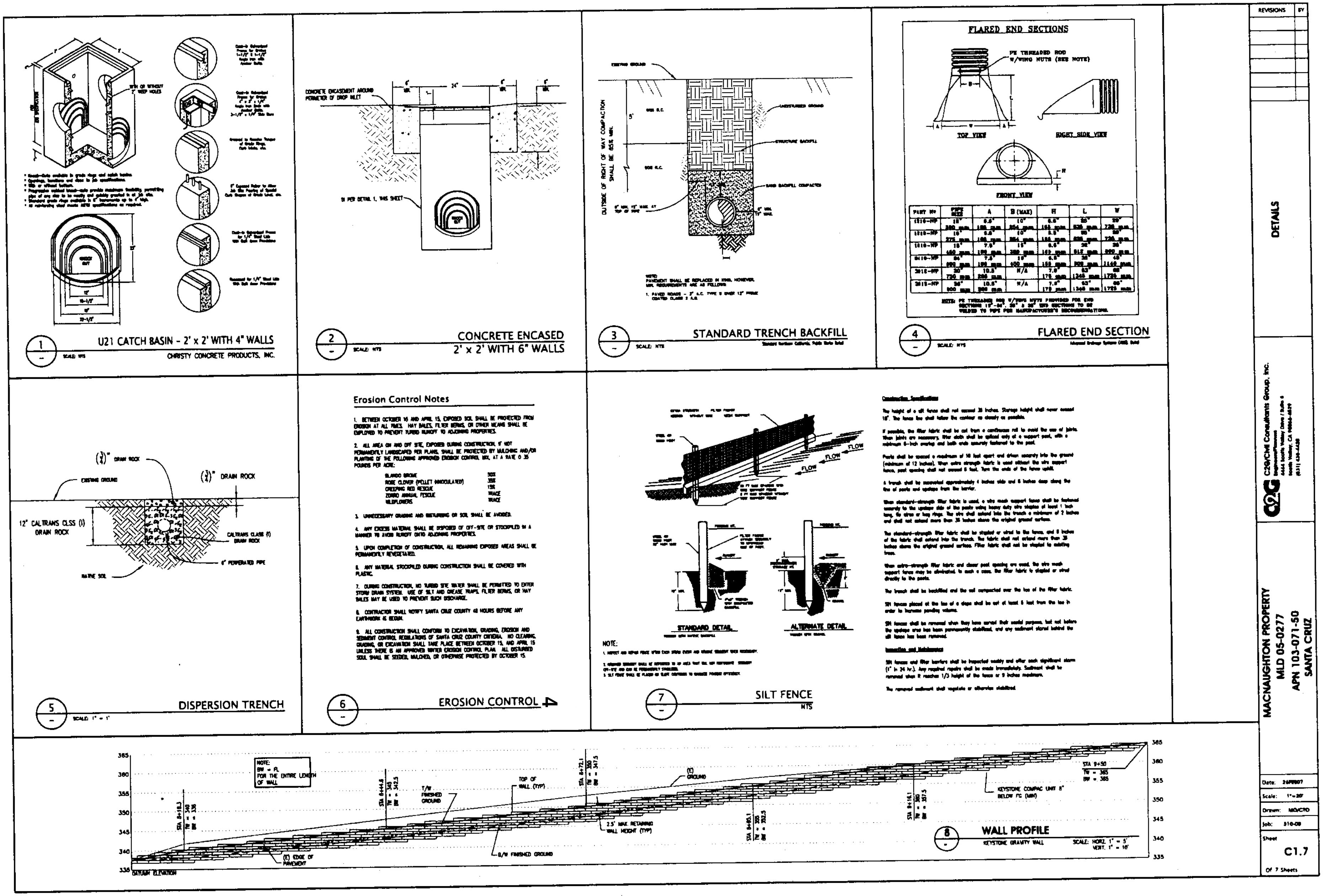

REVISIONS
BY
DETAILS
C2G Civil Consultants Group, Inc.
MACNAUGHTON PROPERTY
MLD 05-0277
APN 103-071-50
SANTA CRUZ
Sheet
C1.7
Of 7 Sheets
1
U21 CATCH BASIN - 2' x 2' WITH 4" WALLS
CHRISTY CONCRETE PRODUCTS, INC.
2
CONCRETE ENCASED
2' x 2' WITH 6" WALLS
SCALE: NTS
CONCRETE ENCASEMENT AROUND PERIMETER OF DROP INLET
3
STANDARD TRENCH BACKFILL
OUTSIDE OF RIGHT OF WAY COMPACTION SHALL BE 85% MIN.
4
FLARED END SECTION
FLARED END SECTIONS
TOP VIEW
RIGHT SIDE VIEW
FRONT VIEW
5
DISPERSION TRENCH
SCALE: 1" = 1'
12" CALTRANS CLSS (I) DRAIN ROCK
NATIVE SOIL
6" PERFORATED PIPE
6
EROSION CONTROL
Erosion Control Notes
1. BETWEEN OCTOBER 16 AND APRIL 15, EXPOSED SOIL SHALL BE PROTECTED FROM EROSION AT ALL TIMES. HAY BALES, FILTER BERMS, OR OTHER MEANS SHALL BE EMPLOYED TO PREVENT TURBID RUNOFF TO ADJOINING PROPERTIES.
2. ALL AREA ON AND OFF SITE, EXPOSED DURING CONSTRUCTION, IF NOT PERMANENTLY LANDSCAPED PER PLANS, SHALL BE PROTECTED BY MULCHING AND/OR PLANTING OF THE FOLLOWING APPROVED EROSION CONTROL MIX, AT A RATE O 35 POUNDS PER ACRE:
BLANDO BROME 50%
ROSE CLOVER (PELLET INNOCULATED) 35%
CREEPING RED FESCUE 15%
ZORRO ANNUAL FESCUE TRACE
WILDFLOWERS TRACE
3. UNNECESSARY GRADING AND DISTURBING OF SOIL SHALL BE AVOIDED.
4. ANY EXCESS MATERIAL SHALL BE DISPOSED OF OFF-SITE OR STOCKPILED IN A MANNER TO AVOID RUNOFF ONTO ADJOINING PROPERTIES.
5. UPON COMPLETION OF CONSTRUCTION, ALL REMAINING EXPOSED AREAS SHALL BE PERMANENTLY REVEGETATED.
6. ANY MATERIAL STOCKPILED DURING CONSTRUCTION SHALL BE COVERED WITH PLASTIC.
7. DURING CONSTRUCTION, NO TURBID SITE WATER SHALL BE PERMITTED TO ENTER STORM DRAIN SYSTEM. USE OF SILT AND GREASE TRAPS, FILTER BERMS, OR HAY BALES MAY BE USED TO PREVENT SUCH DISCHARGE.
8. CONTRACTOR SHALL NOTIFY SANTA CRUZ COUNTY 48 HOURS BEFORE ANY EARTHWORK IS BEGUN.
9. ALL CONSTRUCTION SHALL CONFORM TO EXCAVATION, GRADING, EROSION AND SEDIMENT CONTROL REGULATIONS OF SANTA CRUZ COUNTY CRITERIA. NO CLEARING, GRADING, OR EXCAVATION SHALL TAKE PLACE BETWEEN OCTOBER 15, AND APRIL 15 UNLESS THERE IS AN APPROVED WINTER EROSION CONTROL PLAN. ALL DISTURBED SOUL SHALL BE SEEDED, MULCHED, OR OTHERWISE PROTECTED BY OCTOBER 15.
7
SILT FENCE
NTS
FLOW
STANDARD DETAIL
ALTERNATE DETAIL
NOTE:
8
WALL PROFILE
KEYSTONE GRAVITY WALL
KEYSTONE COMPAC UNIT 8" BELOW FG (MIN)
2.5' MAX RETAINING WALL HEIGHT (TYP)
B/W FINISHED GROUND
TOP OF WALL (TYP)
(E) GROUND
(E) EDGE OF PAVEMENT
DATUM ELEVATION
NOTE: BW = FL FOR THE ENTIRE LENGTH OF WALL

EXHIBIT A

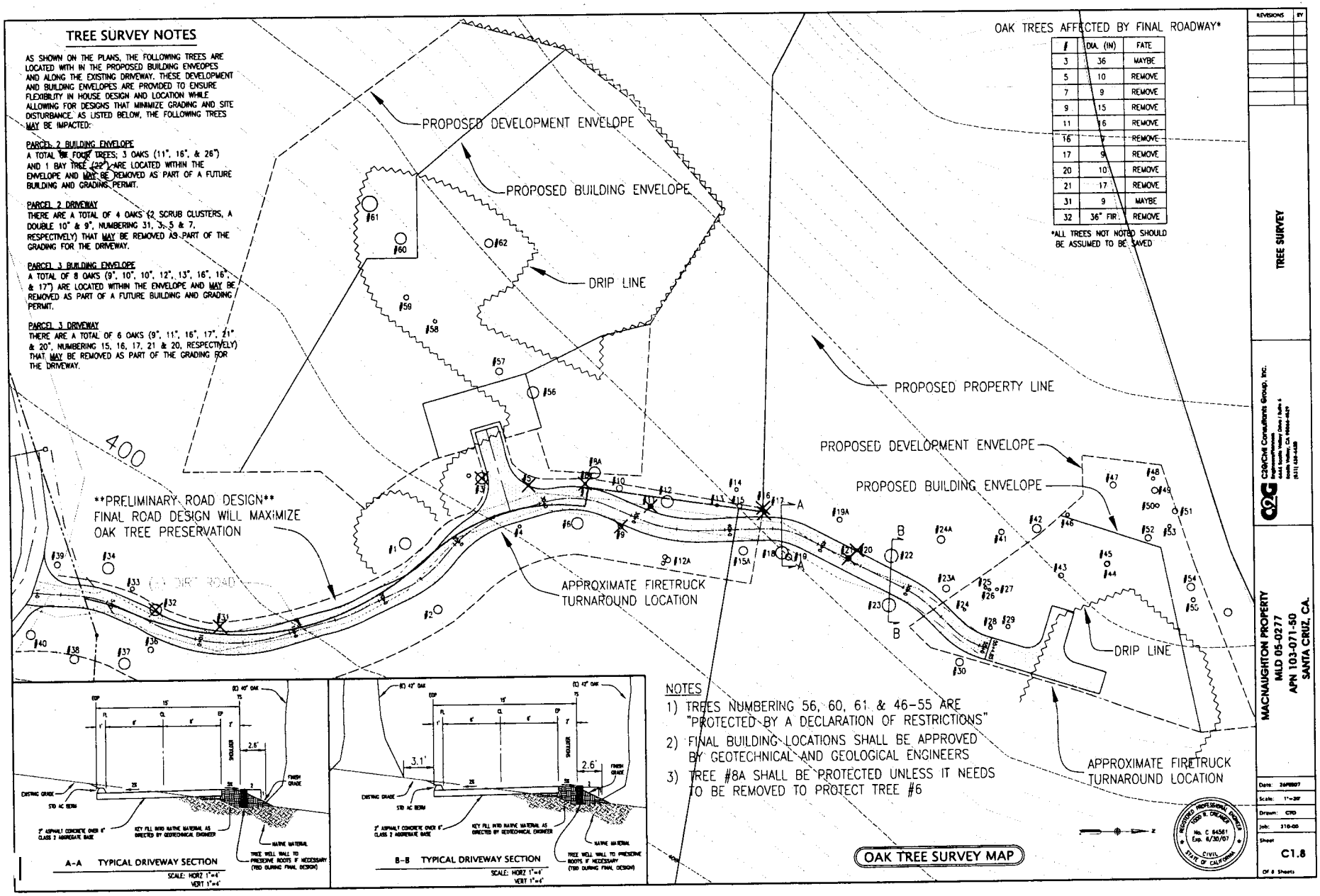

TREE SURVEY NOTES
AS SHOWN ON THE PLANS, THE FOLLOWING TREES ARE LOCATED WITH IN THE PROPOSED BUILDING ENVELOPES AND ALONG THE EXISTING DRIVEWAY. THESE DEVELOPMENT AND BUILDING ENVELOPES ARE PROVIDED TO ENSURE FLEXIBILITY IN HOUSE DESIGN AND LOCATION WHILE ALLOWING FOR DESIGNS THAT MINIMIZE GRADING AND SITE DISTURBANCE. AS LISTED BELOW, THE FOLLOWING TREES MAY BE IMPACTED:
PARCEL 2 BUILDING ENVELOPE
A TOTAL OF FOUR TREES; 3 OAKS (11", 16", & 26") AND 1 BAY TREE (22") ARE LOCATED WITHIN THE ENVELOPE AND MAY BE REMOVED AS PART OF A FUTURE BUILDING AND GRADING PERMIT.
PARCEL 2 DRIVEWAY
THERE ARE A TOTAL OF 4 OAKS (2 SCRUB CLUSTERS, A DOUBLE 10" & 9", NUMBERING 31, 3, 5 & 7, RESPECTIVELY) THAT MAY BE REMOVED AS PART OF THE GRADING FOR THE DRIVEWAY.
PARCEL 3 BUILDING ENVELOPE
A TOTAL OF 8 OAKS (9", 10", 10", 12", 13", 16", 16", & 17") ARE LOCATED WITHIN THE ENVELOPE AND MAY BE REMOVED AS PART OF A FUTURE BUILDING AND GRADING PERMIT.
PARCEL 3 DRIVEWAY
THERE ARE A TOTAL OF 6 OAKS (9", 11", 16", 17", 21" & 20", NUMBERING 15, 16, 17, 21 & 20, RESPECTIVELY) THAT MAY BE REMOVED AS PART OF THE GRADING FOR THE DRIVEWAY.
OAK TREES AFFECTED BY FINAL ROADWAY*
| DIA. (IN) | FATE
3 | 36 | MAYBE
5 | 10 | REMOVE
7 | 9 | REMOVE
9 | 15 | REMOVE
11 | 16 | REMOVE
16 | 9 | REMOVE
17 | 9 | REMOVE
20 | 10 | REMOVE
21 | 17 | REMOVE
31 | 9 | MAYBE
32 | 36" FIR. | REMOVE
*ALL TREES NOT NOTED SHOULD BE ASSUMED TO BE SAVED
PROPOSED DEVELOPMENT ENVELOPE
PROPOSED BUILDING ENVELOPE
DRIP LINE
PROPOSED PROPERTY LINE
400
PRELIMINARY ROAD DESIGN
FINAL ROAD DESIGN WILL MAXIMIZE OAK TREE PRESERVATION
APPROXIMATE FIRETRUCK TURNAROUND LOCATION
NOTES
1) TREES NUMBERING 56, 60, 61 & 46-55 ARE "PROTECTED BY A DECLARATION OF RESTRICTIONS"
2) FINAL BUILDING LOCATIONS SHALL BE APPROVED BY GEOTECHNICAL AND GEOLOGICAL ENGINEERS
3) TREE #8A SHALL BE PROTECTED UNLESS IT NEEDS TO BE REMOVED TO PROTECT TREE #6
A-A TYPICAL DRIVEWAY SECTION
SCALE: HORZ 1"=4' VERT 1"=4'
B-B TYPICAL DRIVEWAY SECTION
SCALE: HORZ 1"=4' VERT 1"=4'
OAK TREE SURVEY MAP
REVISIONS BY
TREE SURVEY
C2G/CM Consultants Group, Inc.
MACNAUGHTON PROPERTY
MLD 05-0277
APN 103-071-50
SANTA CRUZ, CA.
Date: 2/6/2007
Scale: 1"=20'
Drawn: CTD
Job: 310-00
Sheet C1.8
OF 6 Sheets

EXHIBIT A

Mitigated Negative Declaration
(CEQA Determination)

Planning Commission Meeting
5/23/07

Exhibit D

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

Dear Project Applicant:

The enclosed document is your copy of the Negative Declaration issued by the Environmental Coordinator for your project. Any conditions attached to the Negative Declaration will be incorporated into any Development Permit approved for your project. The primary purpose of this letter, however, is to notify you about a state law, Section 711.4(c)(3) of the Fish and Game Code, which requires the County Clerk of the Board of Supervisors to collect a Negative Declaration filing fee for the California Department of Fish and Game. The fee, which supports the work of that state agency, is forwarded to the California Department of Fish and Game by the Clerk.

The law requires project applicants to pay a fee of $ 1,800.00 at the time the Environmental Notice of Determination is filed with the Clerk of the Board of Supervisors (directly after your project is approved). If the Department of Fish and Game has determined that your project will have "no effect" on wildlife resources and you have received a "letter of no effect" from the Department of Fish and Game, the Clerk will accept that letter in lieu of the $1800.00 fee. However, in all cases a $ 50.00 County document-filing fee is still required.

To apply to the Department of Fish and Game for a "letter of no effect" you may contact them directly at the Yountville office at (707) 944-5500. According to the State law, permits and projects are not vested, final or operative until the appropriate fee is paid. In addition, the Clerk of the Board is required to report the posting of ALL Environmental Notices of Determination to the California Department of Fish & Game and to notify them that the required fee has been paid.

it *is* the applicant's responsibility to pay the fee to the Clerk of the Board, who then forwards the fee to the State, or to present your "letter of no effect" to the Clerk. Your filing fee should be paid **AFTER PROJECT APPROVAL** at the Clerk of the Board of Supervisors in Room 500 of the County Governmental Center, 701 Ocean Street, Santa Cruz, CA 95060. Checks should be made payable to the County of Santa Cruz. **PAYMENT PRIOR TO PROJECT APPROVAL CANNOT BE ACCEPTED BY THE CLERK OF THE BOARD. IN ADDITION, IF YOU ARE PAYING ONLY THE LOCAL FILING FEE OF $ 50.00, PAYMENT CAN ONLY BE ACCEPTED WHEN ACCOMPANIED BY A "LETTER OF NO EFFECT" FROM THE DEPARTMENT OF FISH AND GAME.**

If you have any questions about the payment of this required fee, please contact the Clerk of the Board at (831) 454-2323.

Sincerely yours,

CLAUDIA SLATER
Environmental Coordinator

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

Application Number: 05-0277 **Zack Dahl/Stephen Graves & Associates Land Use Consulting, for Vanessa Henderson/Malcolm MacNaughton**

Proposal to create three parcels of 6.47, 28.52 and 7.52 acres from a 42.51-acre parcel. Requires a Minor Land Division. The property is located on the west side of Soquel/San Jose Road on Sundance Hill Road, about one mile north from Laurel Glen Road, Soquel, California.

APN: 103-071-50 **Joan Van der Hoeven, Staff Planner**

Zone District: Special Use (SU)

ACTION: Negative Declaration with Mitigations

REVIEW PERIOD ENDS: January 8,2007

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__January 11, 2007

Date Approved By Environmental Coordinator__February 21, 2007

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.

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

Date completed notice filed with Clerk of the Board:_____

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT
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TOM BURNS, PLANNING DIRECTOR

NOTICE OF ENVIRONMENTAL REVIEW PERIOD

SANTA CRUZ COUNTY

APPLICANT: **Zack Dahl/Stephen Graves & Associates Land Use Consulting, for Vanessa Henderson/Malcolm MacNaughton**

APPLICATION NO.: **05-0277**

APN: **103-071-50**

The Environmental Coordinator has reviewed the Initial Study for your application and made the following preliminary determination:

XX Negative Declaration
(Your project will not have a significant impact on the environment.)

XX Mitigations will be attached to the Negative Declaration.

_____ No mitigations will be attached.

_____ Environmental Impact Report
(Your project may have a significant effect on the environment. An EIR must be prepared to address the potential impacts.)

As part of the environmental review process required by the California Environmental Quality Act (CEQA), this is your opportunity to respond to the preliminary determination before it is finalized. Please contact Paia Levine, Environmental Coordinator at (831) 454-3178, if you wish to comment on the preliminary determination. Written comments will be received until 5:00 p.m. on the last day of the review period.

Review Period Ends: **January 8,2007**

Joan Van der Hoeven
Staff Planner

Phone: **454-5174**

Date: **December 13,2006**

Environmental Review
Initial Study

Application Number: 05-0277

Date: December **14,** 2006
Staff Planner: Joan Van der Hoeven

I. OVERVIEW AND ENVIRONMENTAL DETERMINATION

APPLICANT: Zack Dahl/Stephen Graves & Associates Land Use Consulting

APN: 103-071-50

OWNER: Vanessa Henderson/Malcolm MacNaughton

SUPERVISORAL DISTRICT: First

LOCATION: Property located on the west side of Soquel/San Jose Road on Sundance Hill Road, about one mile north from Laurel Glen Road, Soquel.

SUMMARY PROJECT DESCRIPTION: Proposal to create three parcels **of** 6.47, 28.52 and 7.52 acres from a 42.51-acre parcel. Requires a Minor Land Division.

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.

X	Geology/Soils	____	Noise
X	Hydrology/Water Supply/Water Quality	____	Air Quality
X	Biological Resources	____	Public Services & Utilities
____	Energy & Natural Resources	____	Land Use, Population & Housing
____	Visual Resources & Aesthetics	____	Cumulative Impacts
____	Cultural Resources	____	Growth Inducement
____	Hazards & Hazardous Materials	____	Mandatory Findings of Significance
X	Transportation/Traffic		

DISCRETIONARY APPROVALS BEING CONSIDERED

____	General Plan Amendment	X	Grading Permit
X	Land Division	____	Riparian Exception
____	Rezoning	____	Other:
____	Development Permit	____	
____		____	

NON-LOCAL APPROVALS
Other agencies that must issue permits or authorizations:
None.

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.

X 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.

P C Levine — 12/18/06

Paia Levine — Date

For: Ken Hart
Environmental Coordinator

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable

II. BACKGROUND INFORMATION

EXISTING SITE CONDITIONS
Parcel Size: 42.51 acres
Existing Land Use: Vacant parcel
Vegetation: Mixed oak series and native shrubs. Proposed development envelopes are on non-native grasslands.
Slope in area affected by project: 35 0 - 30% 65 31 – 100%
Nearby Watercourse: West branch of Soquel Creek
Distance To: 204 feet

ENVIRONMENTAL RESOURCES AND CONSTRAINTS
Groundwater Supply: Adequate quantity, good quality, private well
Water Supply Watershed: Septic systems in areas without known problem, outside water supply watershed areas
Groundwater Recharge: Outside mapped groundwater recharge area
Timber or Mineral: 1.5 acres timber in NE corner of parcel
Agricultural Resource: N/A
Biologically Sensitive Habitat: Mapped – no special status plants or animals identified. (Biotic Report Attachments 12 & 13)
Fire Hazard: Mapped critical fire hazard
Floodplain: N/A
Erosion: Erosion control plan required
Landslide: Purisirna – 0-15% slopes, no slides documented in the development areas

Liquefaction: No potential for liquefaction
Fault Zone: Not in a mapped fault zone
Scenic Corridor: N/A
Historic: N/A
Archaeology: No resources on site (Attachment 15)
Noise Constraint: N/A
Electric Power Lines: N/A
Solar Access: Adequate
Solar Orientation: Adequate
Hazardous Materials: N/A

SERVICES
Fire Protection: Central Fire Service Area
School District: MTESD, SCHSD
Sewage Disposal: CSA#12

Drainage District: Out of Zone
Project Access: Soquel/San Jose Road
Water Supply: Private well

PLANNING POLICIES
Zone District: Special Use (SU)
General Plan: Rural Residential (R-R) & Mountain Residential (R-M)

Special Designation: N/A

Urban Services Line:	___ Inside	_X_ Outside
Coastal Zone:	___ Inside	_X_ Outside

PROJECT SETTING AND BACKGROUND: The proposal is to divide a vacant 42.3-acre parcel into three parcels of 6.47, 28.52 and 7.52 acres and to construct an access driveway. The project is located on gentle to moderate slopes on the upslope side of Soquel/San Jose Road, about a mile north from the intersection with Laurel Glen Road in Soquel. The three proposed development envelopes will gain access with new driveways constructed from the existing paved access road, Sundance Hill Road. Approximately 547 cubic yards of cut and 71 cubic yards of fill are proposed. The project will entail removal of ten to thirteen mature oak trees for roadway improvements, including three trees which are 36 inches in diameter. Thirteen trees will be removed from within building envelopes, including two which

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are over twenty feet in diameter. An additional fourteen large native oaks are within the development envelopes and could be removed in the future, including two which are 35 inches in diameter.,

The parcel is designated Rural Residential (R-R) and Mountain Residential (R-M) in the Santa Cruz County General Plan. There are 26.3 acres in R-R and 16 acres in R-M. All development is proposed within the R-R mapped portion of the property. A Rural Matrix was completed for the parcel (Attachment 18), which concluded a minimum 5-acre per parcel is required.

The building sites have been evaluated for septic feasibility. Preliminary testing results have been reviewed and accepted by the County Environmental Health Service. No specific well sites have been designated, although adjacent parcels have been issued individual water system permits (Attachment 11).

A geotechnical investigation was completed for the site and determined that the three proposed development envelopes and access driveway are feasible (Attachment 6). Specific habitable building envelopes have been designated by the geological investigation (Attachment 8).

A focused forestry assessment of the timber resource present on the site was completed for the proposed project (Attachment 14), which determined that the resource is not commercially viable timberland. Approximately 1.5 acres of timber in the property's northeast corner was mapped. Field review determined that harvesting the resource is not feasible as it is located on slopes greater than 80 percent.

The project site is mapped critical fire hazard and required assessment of chaparral habitat. The vegetative survey and report (Attachment 13) determined the site to be California annual grassland and mixed oak. No chaparral indicator species or habitat was observed anywhere on the portion of the parcel demarcated for the building sites, access driveways and septic systems. No special-status plants or animals were observed during the course of the reconnaissance level surveys. However, the parcel is a fine example of an oak woodland, an important wildlife and natural resource in California, which is specifically singled out for protection by the CEQA legislation.

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?		X	

No mapped faults on or near the subject property. The closest mapped fault is the Zayante Fault, approximately two miles distant (Attachment 8, Geologic Investigation, Nolan Associates, 11-01-04).

	B. Seismic ground shaking?		X	

The subject property will likely be subjected to strong seismic shaking from one of the local fault systems during the life of the proposed structures. All structures shall be designed for resistance to seismic shaking according to the most current version of the California Building Code at a minimum. Site

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specific design for residential purposes should consider the probabilistic ground motion with a 10 percent probability of exceedence in 50 years. For the proposed site, this value is 0.55g (See Attachment ***8).***

C. Seismic-related ground failure, including liquefaction? ____ ____ X ____

Three proposed development envelopes are situated on moderate slopes in areas free of visible land sliding. **No** active or potentially active faults have been recognized on or near the subject property.

D. Landslides? ____ ____ X ____

A geologic investigation for the project was prepared by Nolan, Zinn, Associates, dated November 1, 2004 (Attachment 8), and a geotechnical investigation was prepared by Haro, Kasunich. dated April 2004 (Attachment 9). These reports have been reviewed and accepted by the Environmental Planning Section of the Planning Department (Attachment 7). The reports conclude that fault rupture will not be a potential threat to the proposed development, and that seismic shaking can be managed by constructing with conventional spread footings or pier and grade beam foundation systems and by following the recommendations in the geologic and geotechnical reports referenced above. No impacts from ground failure or liquefaction were indicated. Risk from landslides is minimal as long as development occurs within the envelopes designated by the geologic report.

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 ____ ____

The report cited above (Attachment 8, Geologic Investigation by Nolan Associates 11-01-04), concluded there is a potential risk from landslides. The recommendations contained in the geotechnical report, require limitation of construction to specific development envelopes to mitigate for this potential hazard. The plans do not indicate any habitable development outside the areas approved the County Engineering Geologist on 1-27-05 (Attachment 7).

3. Develop land with a slope exceeding 30%? ____ ____ X

There are slopes that exceed 30% on the property. However, no improvements are proposed on slopes in excess of 30%.

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

Some potential for erosion exists during the construction phase 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. Export fill must be either taken to the landfill or the receiving site shall have an approved grading permit.

5. Be located on expansive soil, as defined in Table 18-1-8 of the Uniform Building Code(1994), creating substantial risks to property? ____ X ____ ____

According to the geotechnical report for the project there are indications of expansive soils. The

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recommendations contained in the geological report, including restriction of structures intended for human habitation to geologically suitable building envelopes which are shown on the tentative map, will reduce any impacts to a less than significant level.

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		

The proposed project will use an onsite sewage disposal system, and County Environmental Health Services has determined that site conditions are appropriate to support such a system.

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 April 15, 1986, 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 April 15, 1986, 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 will rely on a private well for water supply. Maps on file at the Planning department indicate that groundwater supply is adequate in this area (Attachment 18). The project is not located in a mapped groundwater recharge area.

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

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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 stream or river, and will 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	

Department of Public Works Drainage staff has reviewed the project and have determined that existing storm water facilities are adequate to handle the increase in drainage associated with the project. Refer to response B-5 for discussion of urban contaminants and/or other polluting runoff.

9. Contribute to flood levels or erosion in natural water courses by discharges of newly collected runoff?			X	

A new driveway, roadway improvements, and three future residences will all add to impervious surfaces. Existing drainage patterns will be maintained along the existing paved roads and a water bar will be constructed to direct runoff into an existing drainage channel. Surface runoff will not contribute to flooding. (See Attachment 10, Drainage review letter by Dees & Associates, 11-21-05).

10. Otherwise substantially degrade water supply or quality?			X	

A silt and grease trap on drainage from a roadway, and a plan for maintenance, will be required to minimize the effects of 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	

A Biotic Report was prepared for this project by Albion Environmental, Inc., dated June 24, 2004 (Attachment 13). This report has been reviewed by Ecosystems West, letter of Bill Davilla, (Attachment 12), dated June 16, 2005 and accepted by the Planning Department Environmental Section. No special status species have been identified on the subject property in either the Biotic Report or in site visits by

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Planning Department staff.				
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 or designated special status species or communities on or adjacent to the project site. However, the property consists of mature oak woodland with cleared areas that are mostly annual grassland. The oak woodland is a resource that should be preserved by careful site planning. In this case, the total number of trees that will be removed by development is projected to be between 23 and 26. This includes several very large specimen Quercus agrifolia (Coast live oaks), up to 36 inches in diameter, laurel and fir (Attachment 5). In addition, there are fourteen mature and specimen trees, mostly Quercus agrifolia, inside the designated development envelopes which could be removed unless they are specifically protected by project conditions and easements or deed restriction.
The impact of the loss is of the oak woodland is cumulative, in that this very productive native habitat is disappearing in the state and in the County. Oak woodland is the subject of specific CEQA provisions that encourage preservation.
The impact can be mitigated if particular specimen trees are preserved, the overall loss is limited, and replacement planting is undertaken. The replacement planting plan should include at a minimum, replacement at a ratio of 3:1 with a plan for long term maintenance and monitoring.

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.

4. Produce nighttime lighting that will illuminate animal habitats?			X	

The three proposed development envelopes will create residential night lighting within the woodland. However, this is an incremental increase and there are no special status animals expected on site, therefore the impact will be less than significant.

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

Refer to 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**		

It is projected that the initial roadwork for the project and the development of the building envelopes will cause the removal of between 23 and 26 large native trees, mostly Quercus agrifolia. These trees include individuals up to **36** inches in diameter. In addition, there are **14** more large individuals in the

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development envelopes outside of designated building areas.
If the road is very carefully laid out to avoid trees, if it is designed according to input from an arborist, if it is made minimum width (including minimal or no shoulders and side fills), and if it includes protections for trees that will have roots cut, loss of trees will have been minimized and this policy will be met. These characteristics will all be required as project conditions and mitigations.
Building envelopes have been designed to reduce loss of large trees, and if the trees outside the envelopes are required to be protected, here, too, loss of oak woodland will have been minimized.

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

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		

The project is adjacent to land designated as Timber Resource. **A** timber study concluded that approximately 15 acres of timber are located in the property's northeast corner. The timber is located on extremely steep terrain and is not commercially viable (See Attachment 14).

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 will 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				X

	Significant Or Potentially Significant Impart	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
shed area including, but not limited to, trees, rock outcroppings, and historic buildings?				

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

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

The project will create an incremental increase in night lighting. However, this increase will be small, and will 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

No structures exist on the 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 (Attachment 15, Archaeological Reconnaissance Survey dated 7-26-04). 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 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

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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 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
4.	Expose people to electro-magnetic fields associated with electrical transmission lines?				X
5.	Create a potential fire hazard?				X

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

H. Transportation/Traffic

Does the project have the potential to:

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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	

The project will create a small incremental increase in traffic on nearby roads and intersections. However, given the small number of new trips created by the project (thirty trips per day for three new single-family dwellings) this increase is less than significant. Further, the increase will 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	

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	

The proposed project will comply with current road requirements to prevent potential hazards to motorists, bicyclists, and/or pedestrians. Sight distance improvements allowing a 250-foot sight distance, including a 100-foot length road widening from 16 feet to 24 feet at the intersection of Sundance Hill Road and Soquel/San Jose Road will improve safety (Attachment 17).

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

According to the traffic study performed by C2G Engineers (Attachment 17), the proposed project is anticipated to add 30 trips (10 trips per day, 3 new building sites) to the intersection of Sundance Hill Road and Soquel/San Jose Road. This will not reduce intersection operations to a level of service below D.

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 will create an incremental increase in the existing noise environment. However, this increase will be small, and will 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

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

Noise generated during construction will increase the ambient noise levels for adjoining areas. Construction will 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?			X	

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 [NOx]), and dust.
Given the modest amount of new traffic that will be generated by the project there is no indication that new emissions of VOCs or NOx will exceed Monterey Bay Unified Air Pollution Control District (MBUAPCD) thresholds for these pollutants and therefore there will not be a significant contribution to an existing air quality violation.
Project construction may result in a short-term, localized decrease in air quality due to generation of dust. However, standard dust control best management practices, such as periodic watering, will be implemented during construction to reduce impacts to a less than significant level.

2. Conflict with or obstruct implementation of an adopted air quality plan?		X		

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

3. Expose sensitive receptors to substantial pollutant concentrations?				X
4. Create objectionable odors affecting a substantial number of people?				X

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

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services:				
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 will be minimal. Moreover, the project meets all of the standards and requirements identified by Central Fire Protection District, and school, park, and transportation fees to be 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	

Drainage analysis of the project by Dees & Associates, dated 6-23-05, concluded that runoff from new impervious surfaces can be retained on site. Runoff from the new home sites is to be discharged into gravel filled trench dissipaters located away from steep slopes. 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 (Attachments 10 & 16).

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

The project will rely on an individual well for water supply. Public water delivery facilities will not have to be expanded.
The project will be served by an on-site sewage disposal system, which will be adequate to accommodate the relatively light demands of the project.

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

The project's wastewater flows will 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

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The water mains serving the project site provide adequate flows and pressure for fire suppression. Additionally, Central 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 meets County standards and has been approved by Central Fire Agency.

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

The project will make an incremental contribution to the reduced capacity of regional landfills. However, this contribution will be relatively small and will 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

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		

The proposed project potentially conflicts with General Plan policy which requires that trees greater than six inches in diameter be preserved through site design and avoidance, wherever feasible. The project, as submitted, may cause removal of up to 26 mature oak trees that are part **of** the extensive oak woodland, plus possible removal of 14 additional trees that will be within the designated development envelopes. Some of this loss can be avoided with site design modifications. Mitigation measures will be added to require the preservation of particular oak trees, to limit the overall number removed, and to modify the road design to include arborist recommendations and a slightly narrower disturbance width. Mature native trees that remain in the development envelopes will be required to be preserved either by being placed in conservation easements or by being included in a deed Declaration of Restriction. The project does not include details of homes and other structures that may be built in the future on the lots, nor does it include details of access. The project will be conditioned to specify that future development be designed to minimize grading by prohibiting circular driveways, requiring stepped foundation on the hillside, and designs to minimize change of grade, all as required by ordinance and policies.

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

See discussion above (Section L.1)

3. Physically divide an established community?				X

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

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Imparl	Not Applicable
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 project does not involve extensions of utilities (e.g., water, sewer, or new road systems) into areas previously not served. Consequently, it 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 will 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

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 Yes ____ No X

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
entered the Environmental Review stage)?				
4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		Yes		No X

Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable

TECHNICAL REVIEW CHECKLIST

	REQUIRED	COMPLETED*	N/A
Agricultural Policy Advisory Commission (APAC) Review			X
Archaeological Review	X	7-26-04	
Biotic Report/Assessment	X	6-24-04	
Geologic Hazards Assessment (GHA)			X
Geologic Report	X	3-26-06	
Geotechnical (Soils) Report	X	11-21-05	
Riparian Pre-Site			X
Septic Lot Check	X	3-03-05	
Other			
Timber Resource Evaluation	X	3-07-05	
Sight Distance Study	X	8-31-05	

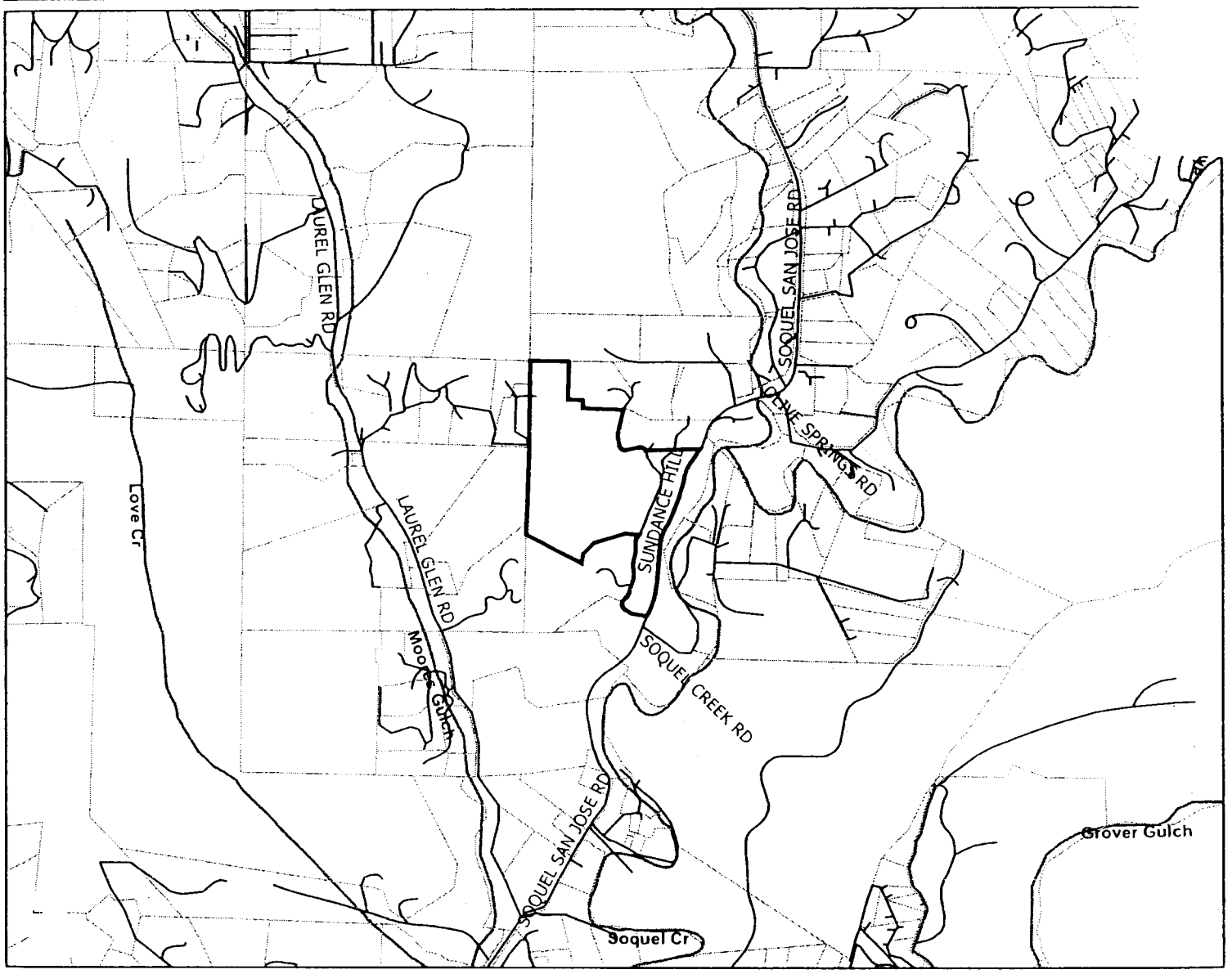
Attachments:

1. Vicinity Map
2. Map of Zoning Districts
3. Map of General Plan Designations
4. Assessors Parcel Map
5. Tentative Map & Preliminary Improvement Plans prepared by C2G, Civil Consultants Group Inc., dated 3-16-2006, Oak Tree Survey Map dated 10-23-06
6. Geotechnical Review Letter prepared by Dees & Assoc., dated 8-31-05, 11-21-05.
7. Geologic Review Letter, prepared by Joe Hanna, County geologist, dated January 27, 2005
8. Geologic Investigation (Report Summary, Conclusions, Recommendations, Map & Cross Sections) prepared by Nolan Associates dated 11-01-04, update letters 11-28-05, 3-24-06
9. Geotechnical Investigation (Conclusions/Recommendations) prepared by Haro, Kasunich, April 2004
10. Drainage review prepared by Dees 8 Associates, dated 6-23-05
11. Septic Lot Check prepared by Environmental Health Services, dated 5-25-05
12. Biotic Report Review Letter prepared by Bill Davilla, dated 6-16-05
13. Biotic Report prepared by Albion Environmental Inc., dated 6-24-04
14. Timber Resource Assessment by Stephen Staub, dated 3-07-05
15. Archaeological Reconnaissance Survey by Santa Cruz Archaeological Society dated 7-26-04
16. Discretionary Application Comments, dated 9-13-06
17. Traffic Study (Conclusions and Recommendations) prepared by C2G Engineers, dated 8-31-05
18. Rural Residential Matrix Determination
19. Annotated Sheet C1.8, "Tree Survey", dated December, 2006, indicating revised numbering system for individual trees.
20. Comments Recd during public review period

Aerial Map of APN 103-071-50

Environmental Review Inital Study
ATTACHMENT 1, 1 of 2
APPLICATION 05-0277

Location Map



0 1250 2,500 5,000 7,500 10,000 Feet

Legend

APN 103-071-*50*

Assessors Parcels

Streets

PERENNIAL STREAM

N

W E

S

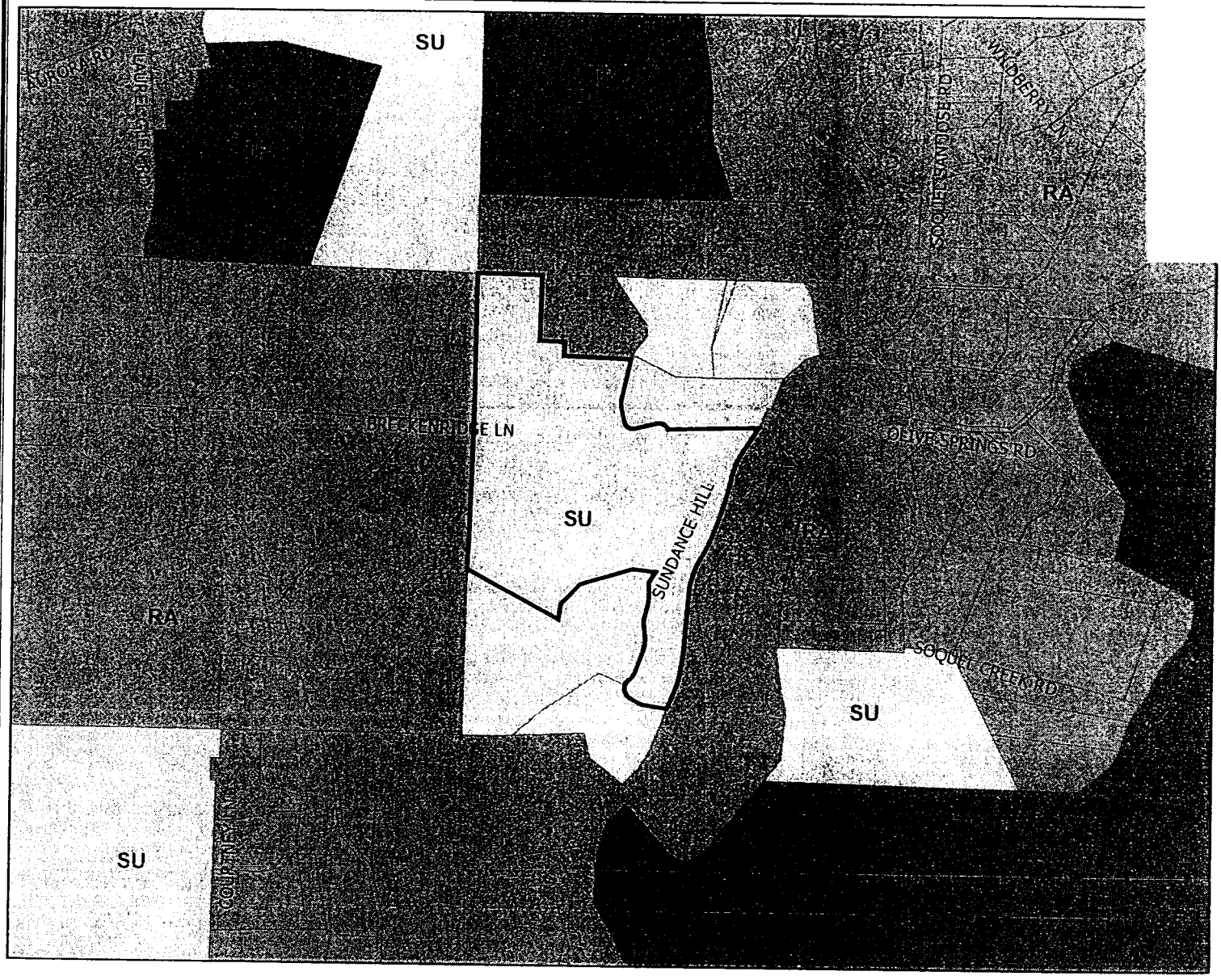
Environmental Review Inital Study

ATTACHMENT 1, 2 of 2

APPLICATION 05-0277

Map Created by
County of Santa Cruz
Planning Department
May 2005

Zoning Map



Legend

- APN 103-071-50
- Assessors Parcels
- Streets
- AGRICULTURE RESIDENTIAL (RA)
- SPECIAL USE (SU)
- TIMBER PRODUCTION (TP)

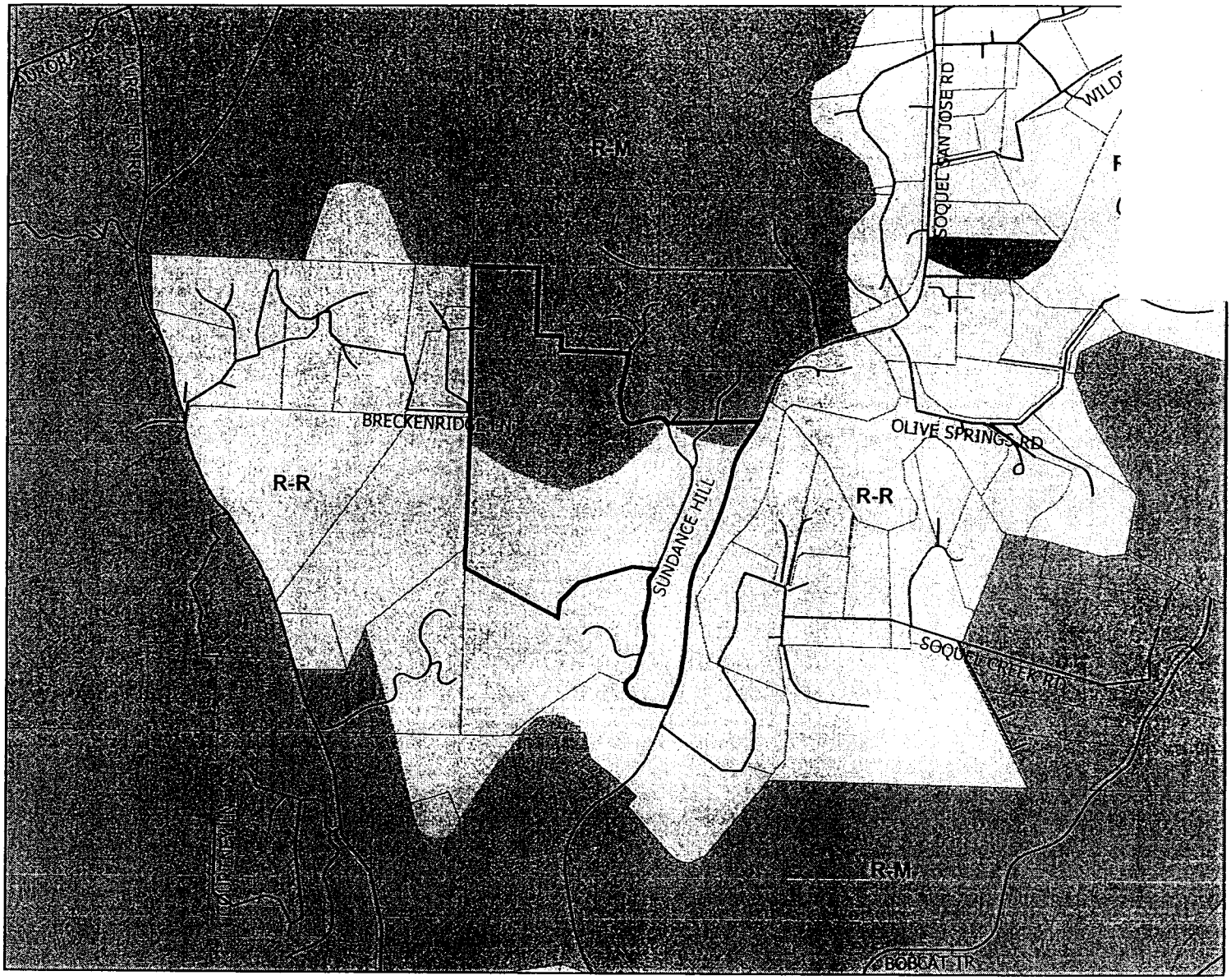
N
W E
S

Environmental Review Inital Study

ATTACHMENT 2
APPLICATION 05-0277

Map Created by
County of Santa Cruz
Planning Department
May *2005*

General Plan Designation Map



Legend

- APN 103-071-50
- Assessors Parcels
- Streets
- Public Facilites (P)
- Residential-Mountain (R-M)
- Residential-Rural (R-R)

N
W E
S

Environmental Review Inital Study

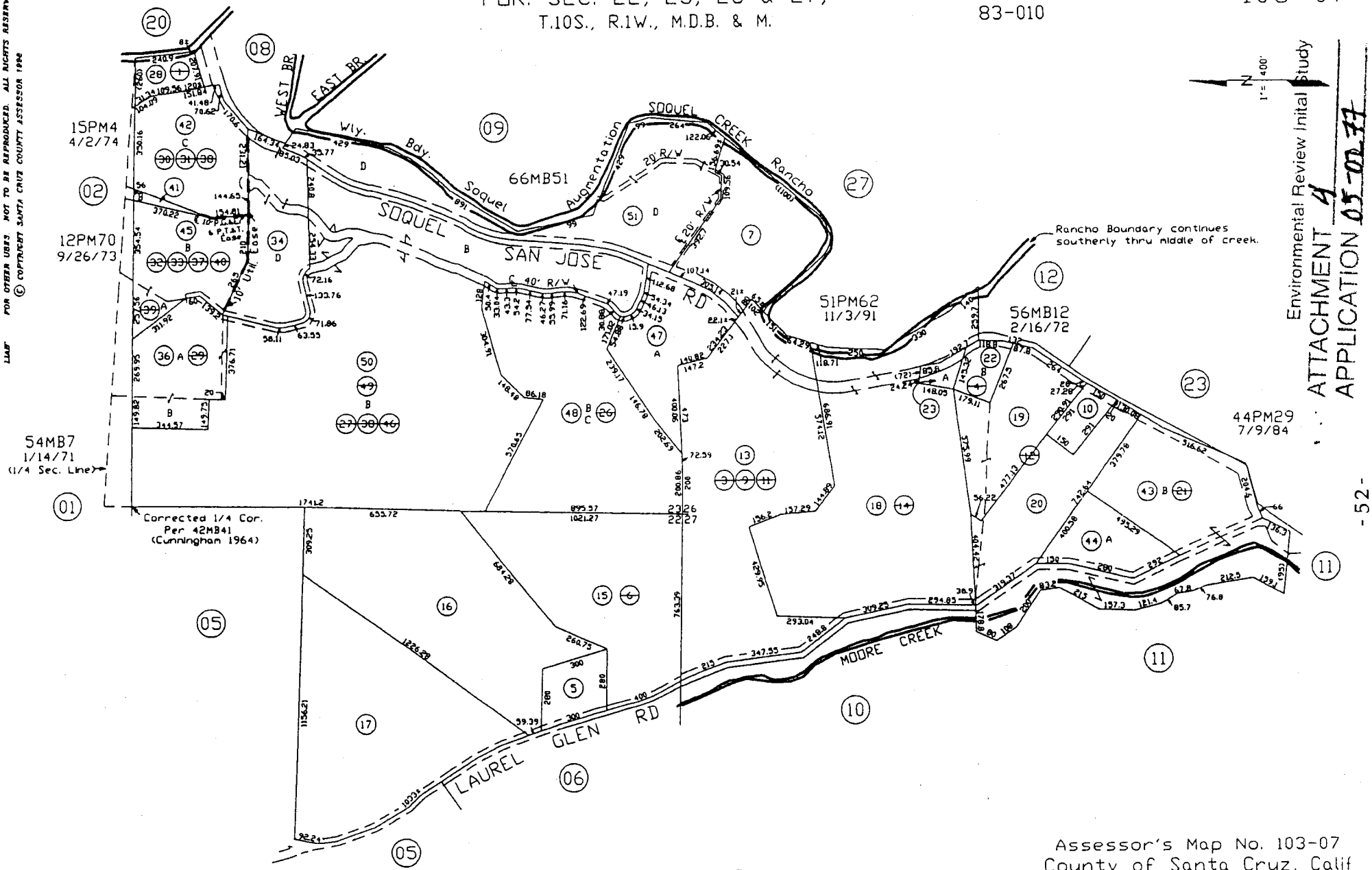
ATTACHMENT 3
APPLICATION 05-0277

Map Created by
County of Santa Cruz
Planning Department
May 2005

POR. SEC. 22, 23, 26 & 27, T.10S., R.1W., M.D.B. & M.

Tax Area Code 83-010

103-07

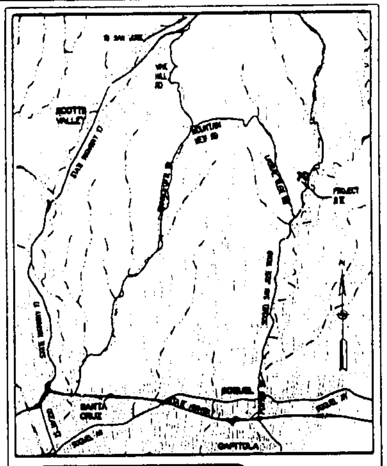


Note - Assessor's Parcel & Block Numbers Shown in Circles

Assessor's Map No. 103-07
County of Santa Cruz, Calif
Aug. 1998

Environmental Review Initial Study
ATTACHMENT 4
APPLICATION 05-0177

MACNAUGHTON PROPERTY
COVER SHEET
MLD 05-0227
APN 103-071-50



VICINITY MAP SCALE: 1" = 5000'

CONSULTANTS

LAND USE CONSULTANTS: STEPHEN GRAVES AND ASSOCIATES 2735 PORTER STREET SOQUEL, CA 95073

ENGINEER AND SURVEYOR: MID COAST ENGINEERS AND LAND SURVEYORS 70 PENNY LANE, SUITE A WATSONVILLE, CA 95076

CIVIL ENGINEER: C2G/CIVIL CONSULTANTS GROUP, INC. 4444 SCOTTS VALLEY DRIVE, SUITE 6 SCOTTS VALLEY, CA 95066

GEOTECHNICAL ENGINEER: HARO KASUNICH AND ASSOCIATES 116 EAST LAKE AVE. WATSONVILLE, CA 95076

GEOLOGIST: NOLAN, ZINN AND ASSOCIATES 1509 SEABRIGHT AVE., SUITE A2 SANTA CRUZ, CA 95062

SANITATION ENGINEER: ENVIRONMENTAL CONCEPTS

BIOTIC CONSULTANT: ALBION ENVIRONMENTAL 1414 SOQUEL AVE., SUITE 205 SANTA CRUZ, CA 95062

TIMBER CONSULTANT: STEPHEN STAUB FORESTRY AND ENVIRONMENTAL CONSULTING 5010 HIGHWAY 9, FELTON, CA 95018

FIRE DEPARTMENT NOTES

LEGEND OF SHEETS

C1 OF 7	COVER SHEET, VICINITY MAP
C2 OF 7	TENTATIVE MAP
C3 OF 7	SLOPE MAP, SLOPE DATA PARCEL DATA & SITE STATIONING
C4 OF 7	SUNDANCE HILL RD DRAINAGE & IMPROVEMENTS PLAN & PROFILE STA 1+00 TO 7+00
C5 OF 7	EXISTING DRIVEWAY DRAINAGE & IMPROVEMENTS PLAN & PROFILE STA 7+00 TO 11+00
C6 OF 7	PROPOSED DRIVEWAY DRAINAGE & IMPROVEMENTS PLAN & PROFILE STA 1+00 TO 3+00
C7 OF 7	DETAILS

PARCELS SERVED NOTES

1. (9) PARCELS SERVED BEYOND THIS POINT
2. (3) PARCELS SERVED BEYOND THIS POINT
3. (4) PARCELS SERVED BEYOND THIS POINT
4. (2) PARCELS SERVED BEYOND THIS POINT
5. (1) PARCELS SERVED BEYOND THIS POINT

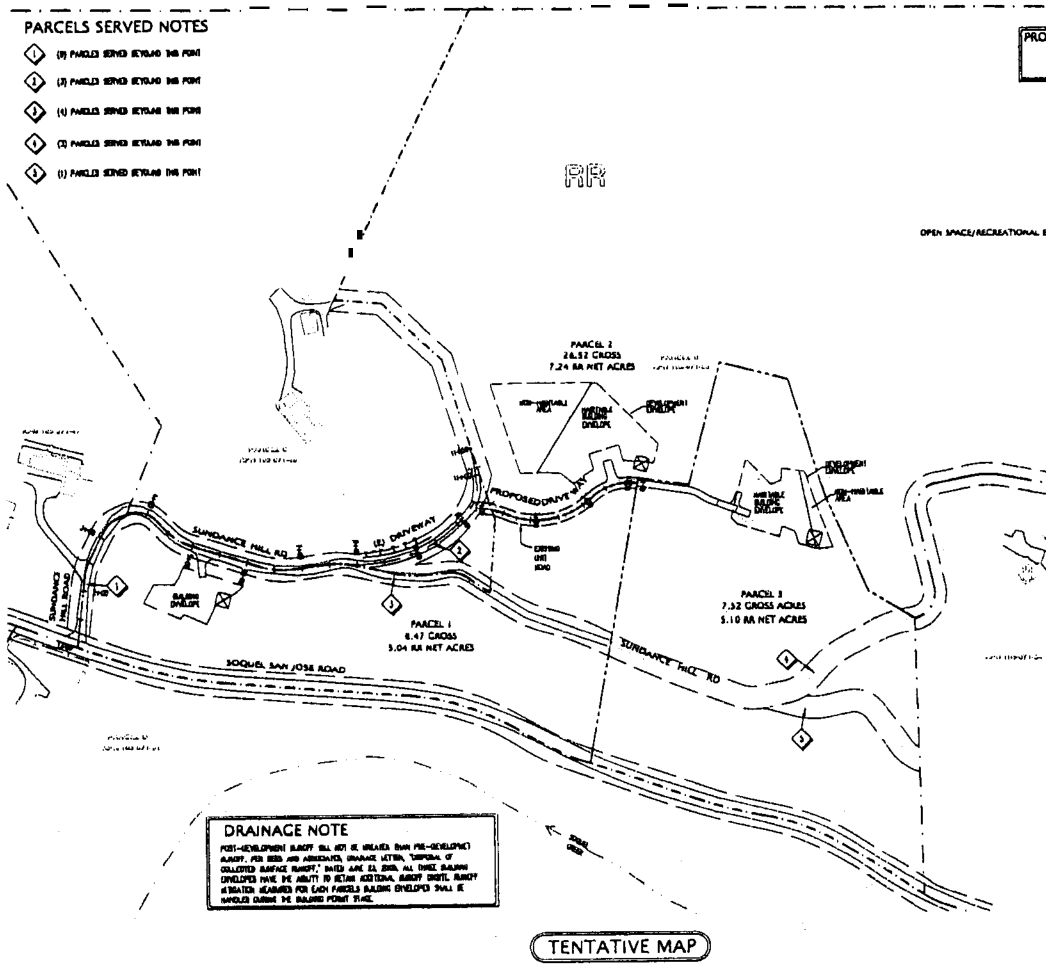
ABREVIATIONS

LEGEND

DESCRIPTION	EXISTING	PROPOSED

PROJECT GRADING TOTALS

RAINFALL INTENSITY DATA PER SCC IDF CURVE & P60 ISOPLETHS



Scale 1" = 100'

DRAINAGE NOTE

TENTATIVE MAP

PROJECT DATA

Environmental Review Inital Study
ATTACHMENT 5 of 8
APPLICATION 05-0277

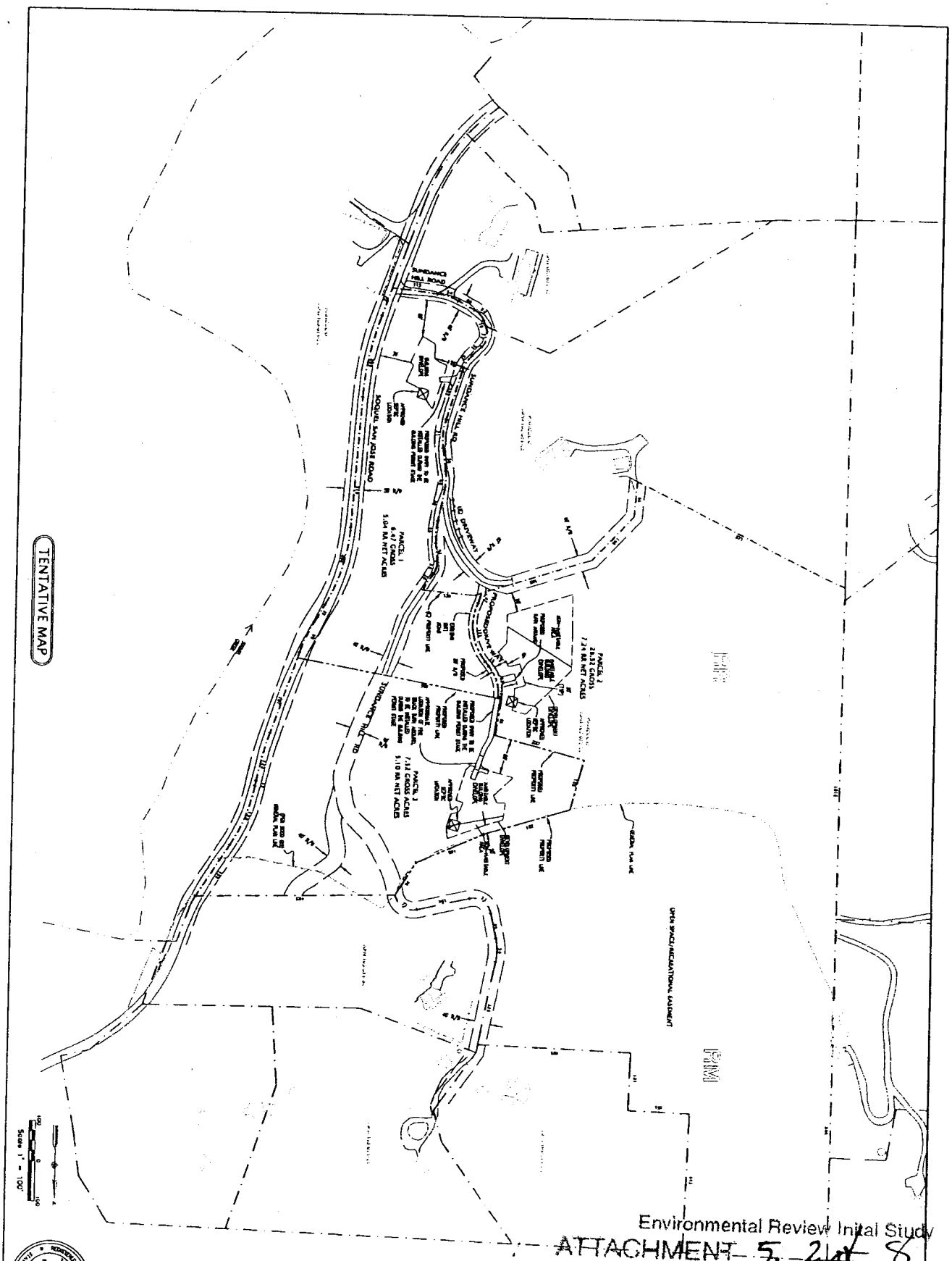
PRELIMINARY
NOT FOR CONSTRUCTION

MACNAUGHTON PROPERTY
MLD 05-0227
APN 103-071-50
SANTA CRUZ, CA

C2G/Civil Consultants Group, Inc.

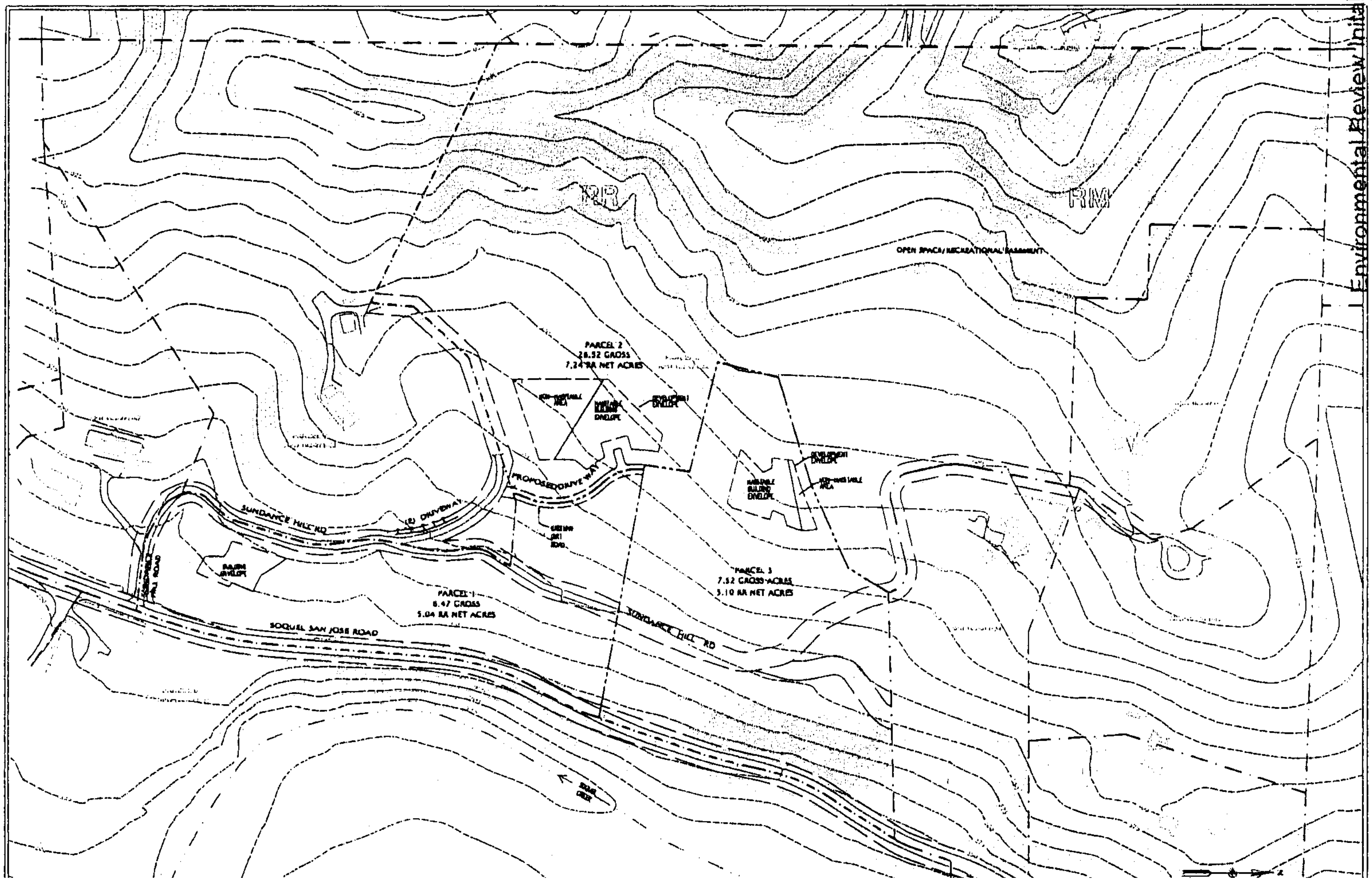
COVER SHEET
VICINITY MAP

Date: 3-10-08
Scale: 1"=100'
Drawn: MD
Job: 3 310-000
Sheet: C1



Environmental Review Initial Study
ATTACHMENT 5, 2 of 8
APPLICATION 05-0277

C1.2	MACNAUGHTON PROPERTY MLD 05-0227 APN 103-071-50 SANTA CRUZ, CA.	C2G/Civil Consultants Group, Inc. Engineering/Planning - 54 -	TENTATIVE MAP



SLOPE MAP

Scale 1" = 100'

SLOPE DATA

	AREAS (GACRES)			0% TO 15%	15% TO 30%	30% TO 50%	> 50%	TOTAL (NET)
APN 103-071-50	[illegible] ACRES	(RR)	[illegible] ACRES	[illegible] ACRES	[illegible] ACRES	[illegible] ACRES	[illegible] ACRES	[illegible] ACRES
		(RM)	[illegible] ACRES	[illegible] ACRES	[illegible] ACRES	[illegible] ACRES	[illegible] ACRES	[illegible] ACRES
TOTAL			[illegible] ACRES	[illegible] ACRES	[illegible] ACRES	[illegible] ACRES	[illegible] ACRES	[illegible] ACRES

PARCEL DATA

PROPOSED	GROSS	(RM)	100 YEAR FLOOD	RIGHTS OF WAY	50% SLOPE	PROPOSED R/W	NET RA (TOTAL)
PARCEL 1	[illegible] ACRES	0 ACRES	0 ACRES	[illegible] ACRES	[illegible] ACRES	[illegible] ACRES	[illegible] ACRES
PARCEL 2	[illegible] ACRES	[illegible] ACRES	0 ACRES	[illegible] ACRES	[illegible] ACRES	[illegible] ACRES	7.24 ACRES
PARCEL 3	[illegible] ACRES	[illegible] ACRES	0 ACRES	[illegible] ACRES	[illegible] ACRES	[illegible] ACRES	[illegible] ACRES

SLOPE SHADING RANGE

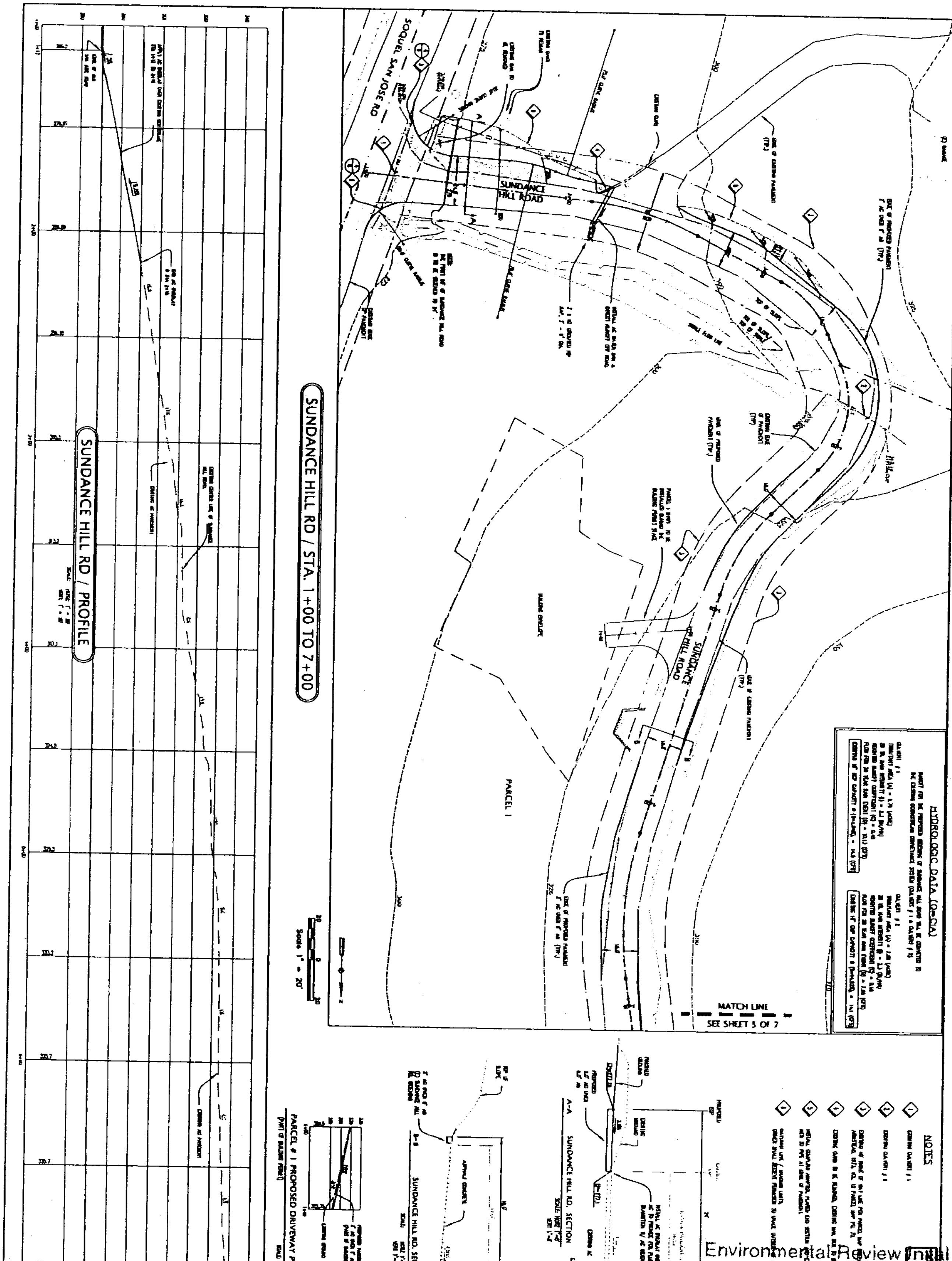
Environmental Review Inital Study
ATTACHMENT 5, 3 of 8
APPLICATION 05-0277

MACNAUGHTON PROPERTY
MLD 04-0284
APN 103-071-50
SANTA CRUZ. CA.

C2G/Civil Consultants Group, Inc.
Engineers/Planners

SLOPE MAP
SLOPE DATA
PARCEL DATA &
SITE STATIONING

Date: 3-18-08
Scale: 1"=100'
Drawn: WO/CTO
Job: 310-00
Sheet: C1



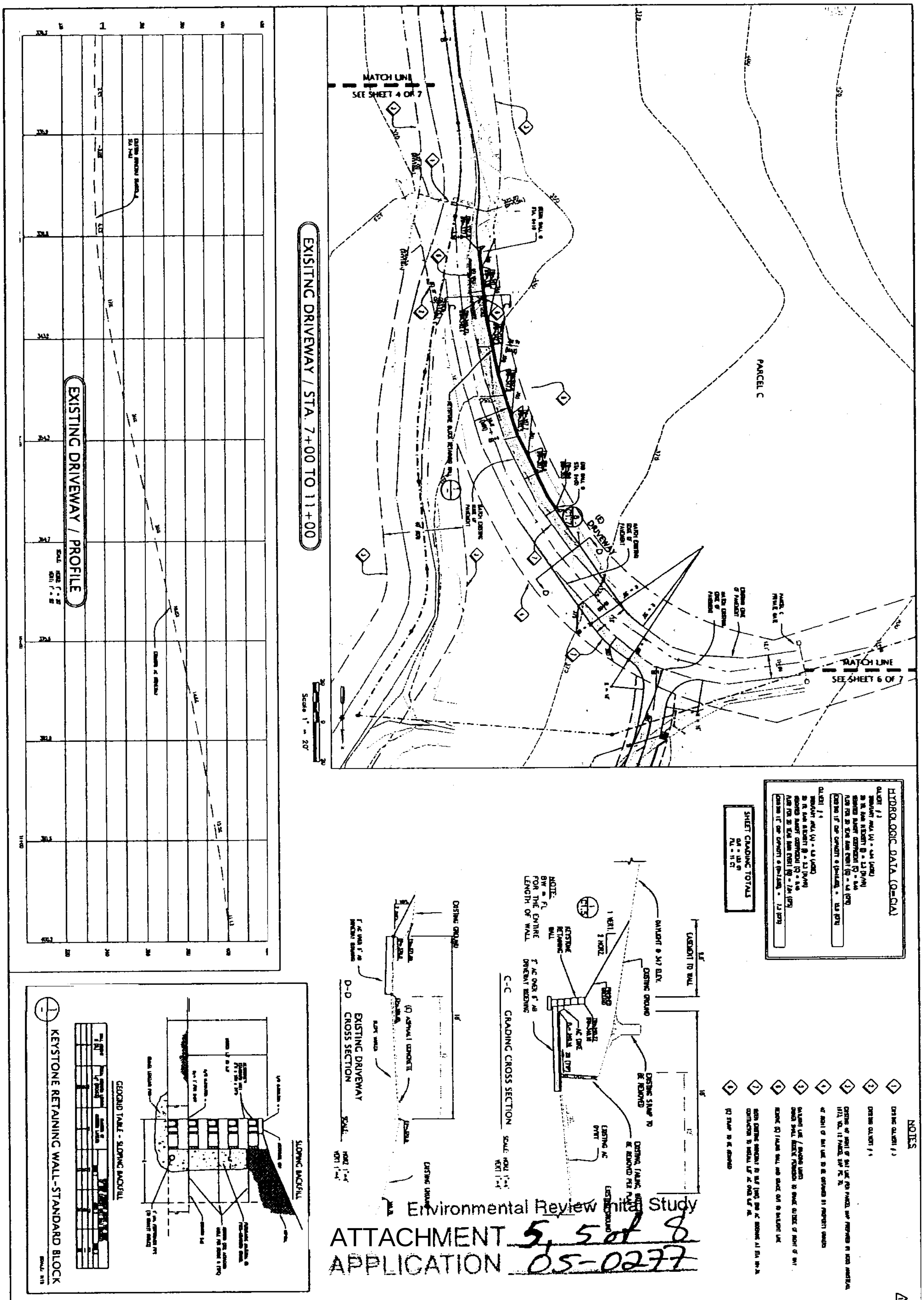
Environmental Review Initial Study
ATTACHMENT 5, 4 of 8
APPLICATION 05-0277

C14

MACNAUGHTON PROPERTY
MLD 04-0284
APN 103-071-50
SANTA CRUZ

C2G/Civil Consultants Group, Inc.
Engineers/Planners

SUNDANCE HILL ROAD
DRAINAGE & IMPROVEMENTS
PLAN & PROFILE
STA 1+00 TO 7+00

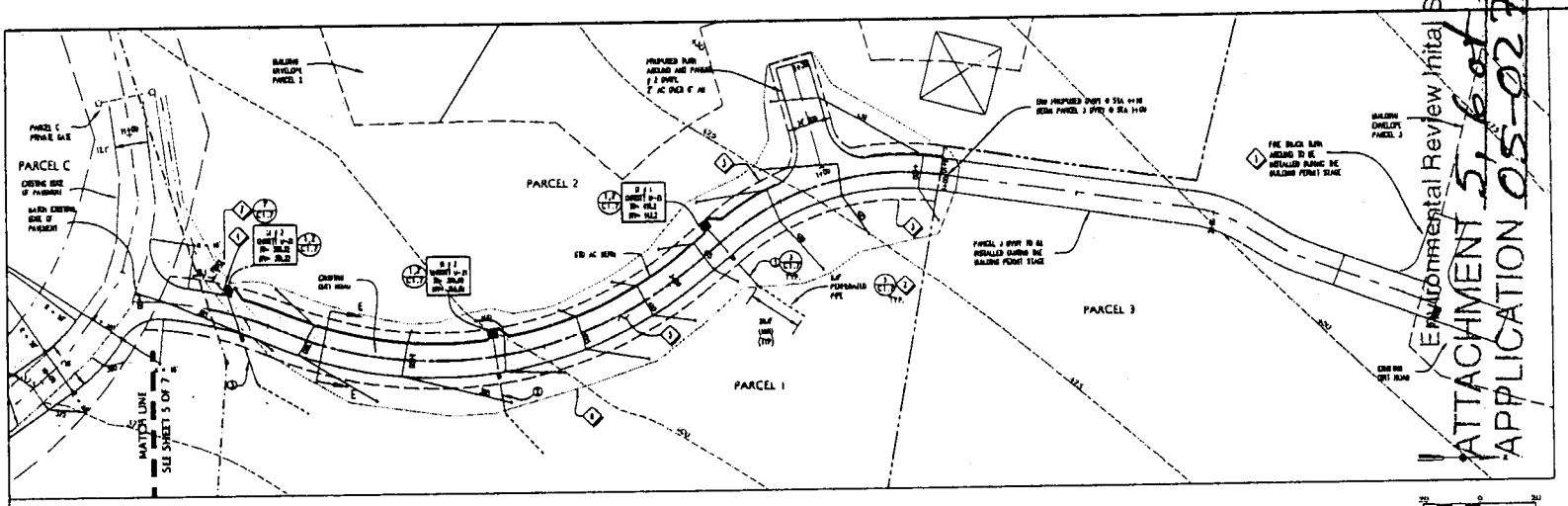


Environmental Review Initial Study
ATTACHMENT 5, 5 of 8
APPLICATION 05-0277

MACNAUGHTON PROPERTY
MLD 04-0284
APN 103-071-50
SANTA CRUZ

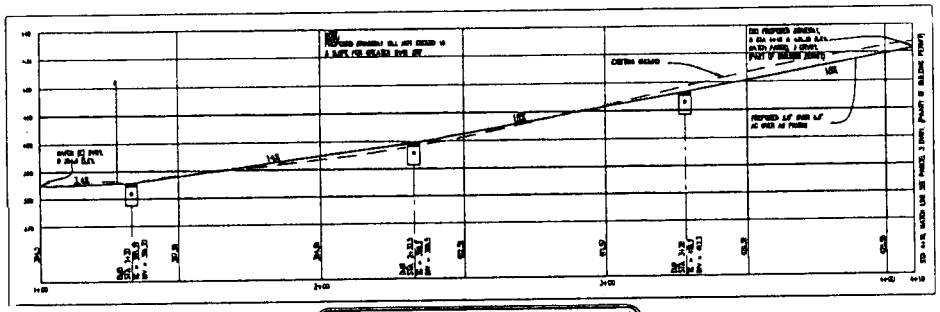
C2G/Civil Consultants Group, Inc.

EXISTING DRIVEWAY
DRAINAGE & IMPROVEMENTS
PLAN & PROFILE
STA 7+00 TO 11+00

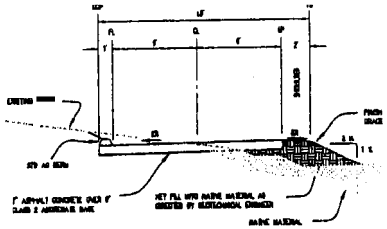


ATTACHMENT 5, 6 of 8
APPLICATION 05-0277
Environmental Review Initial Study

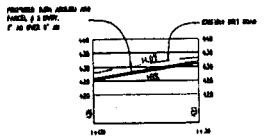
PROPOSED DRIVEWAY / STA. 1+00 TO 4+10



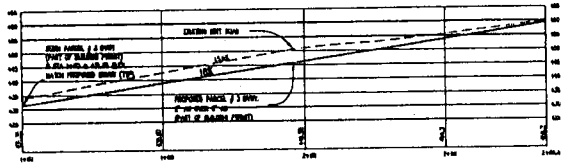
PROPOSED DRIVEWAY / PROFILE



E-E TYPICAL DRIVEWAY SECTION



PARCEL # 2 PROPOSED DRIVEWAY PROFILE



PARCEL # 3 PROPOSED DRIVEWAY PROFILE

HYDROLOGIC DATA (Q=CIA)

SHEET GRADING TOTALS

STORM DRAIN NOTES

STORM DRAIN PIPE DATA

NOTES

REVISIONS	BY

PROPOSED DRIVEWAY
DRAINAGE & IMPROVEMENTS
PLAN & PROFILE
STA 1+00 TO 5+50

C2G Civil Consultants Group, Inc.
Engineers/Planners

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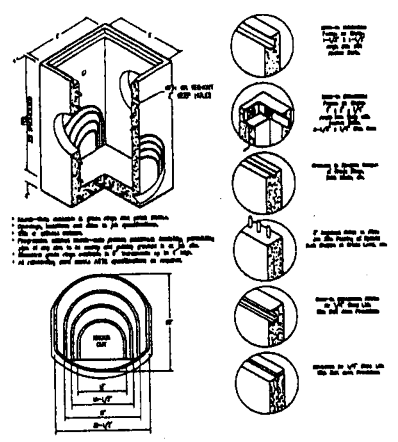
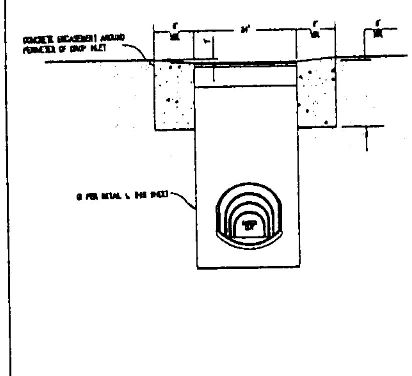
MACNAUGHTON PROPERTY
MLD 04-0284
APN 103-071-50
SANTA CRUZ

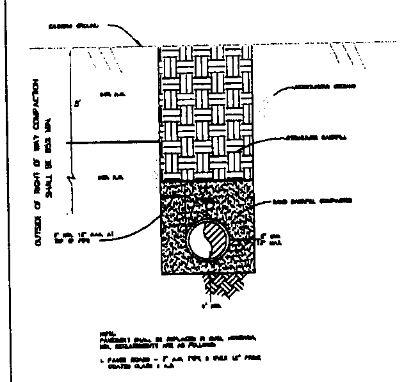
Date: 10-05
Scale: 1"=20'
Drawn: JO
Job: 0-00
Sheet
C1.6



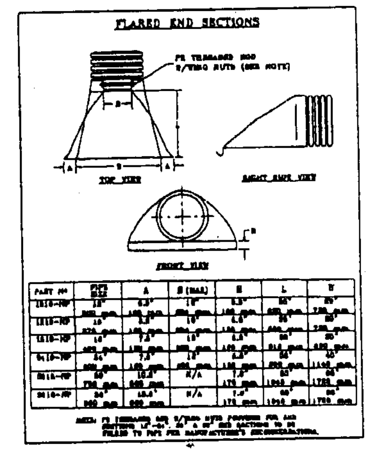
1 SCALE: NTS



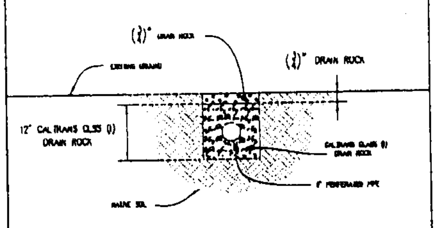
2 CONCRETE ENCASED 2' x 2' WITH 6" WALLS
SCALE: NTS



3 STANDARD TRENCH BACKFILL
SCALE: NTS



4 FLARED END SECTION
SCALE: NTS



5 DISPERSION TRENCH
SCALE: 1" = 1'

Erosion Control Notes

1. BETWEEN OCTOBER 15 AND APRIL 15, EXPOSED SOIL SHALL BE PROTECTED FROM EROSION AT ALL TIMES. HAY BALES, FILTER BERMS, OR OTHER MEANS SHALL BE EMPLOYED TO PREVENT EROSION RUNOFF TO ADJACENT PROPERTIES.

2. ALL AREAS ON AND OFF SITE, EXPOSED DURING CONSTRUCTION, IF NOT PERMANENTLY LANDSCAPED PER PLANS, SHALL BE PROTECTED BY MULCHING AND/OR PLANTING OF THE FOLLOWING APPROVED EROSION CONTROL MIX, AT A RATE OF 35 POUNDS PER ACRE:

BLANDO BROME	[illegible]
ROSE CLOVER (PELLET INOCULATED)	[illegible]
CREEPING RED FESCUE	[illegible]
ZORRO ANNUAL FESCUE	TRACE
WILDFLOWERS	TRACE

3. UNNECESSARY GRADING AND DISTURBANCE OF SOIL SHALL BE AVOIDED.

4. ANY EXCESS MATERIAL SHALL BE DISPOSED OF OFF-SITE OR STOCKPILED IN A MANNER TO AVOID RUNOFF ONTO ADJACENT PROPERTIES.

5. UPON COMPLETION OF CONSTRUCTION, ALL REMAINING EXPOSED AREAS SHALL BE PERMANENTLY REVEGETATED.

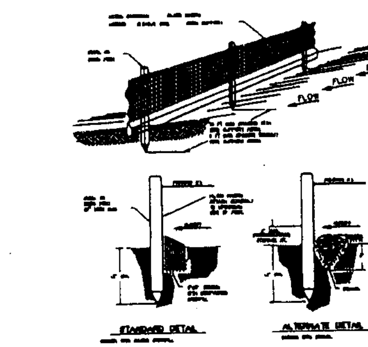
6. ANY MATERIAL STOCKPILED DURING CONSTRUCTION SHALL BE COVERED WITH PLASTIC.

7. DURING CONSTRUCTION, NO RUNOFF SILT LADEN WATER SHALL BE PERMITTED TO ENTER STORM DRAIN SYSTEM. USE OF SILT AND GREASE TRAPS, FILTER BERMS, OR HAY BALES MAY BE USED TO PREVENT SUCH DISCHARGE.

8. CONTRACTOR SHALL NOTIFY SANTA CRUZ COUNTY 48 HOURS BEFORE ANY EARTHWORK IS BEGUN.

9. ALL CONSTRUCTION SHALL CONFORM TO EXCAVATION, GRADING, EROSION AND SEDIMENT CONTROL REGULATIONS OF SANTA CRUZ COUNTY CRITERIA. NO CLEARING, GRADING, OR EXCAVATION SHALL TAKE PLACE BETWEEN OCTOBER 15, AND APRIL 15 UNLESS THERE IS AN APPROVED WINTER EROSION CONTROL PLAN. ALL DISTURBED SOIL SHALL BE SEEDED, MULCHED, OR OTHERWISE PROTECTED BY OCTOBER 15.

6 EROSION CONTROL NOTES



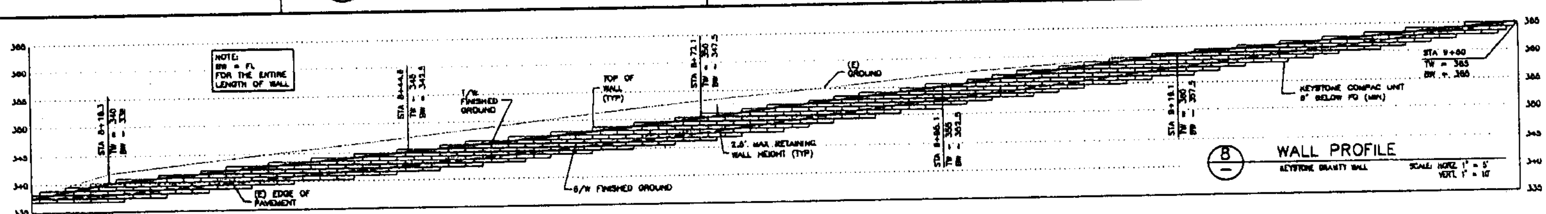
NOTE:

[illegible]

Construction Specifications

[illegible]

7 SILT FENCE
NTS



8 WALL PROFILE
KEYSTONE GRAVITY WALL
SCALE: HORZ. 1" = 5'
VERT. 1" = 10'

Environmental Review Inital Study
ATTACHMENT 5, 7 of 8
APPLICATION 05-0277

REVISIONS	BY

DETAILS

C2G C2G/Civil Consultants Group, Inc.
Engineers/Planners

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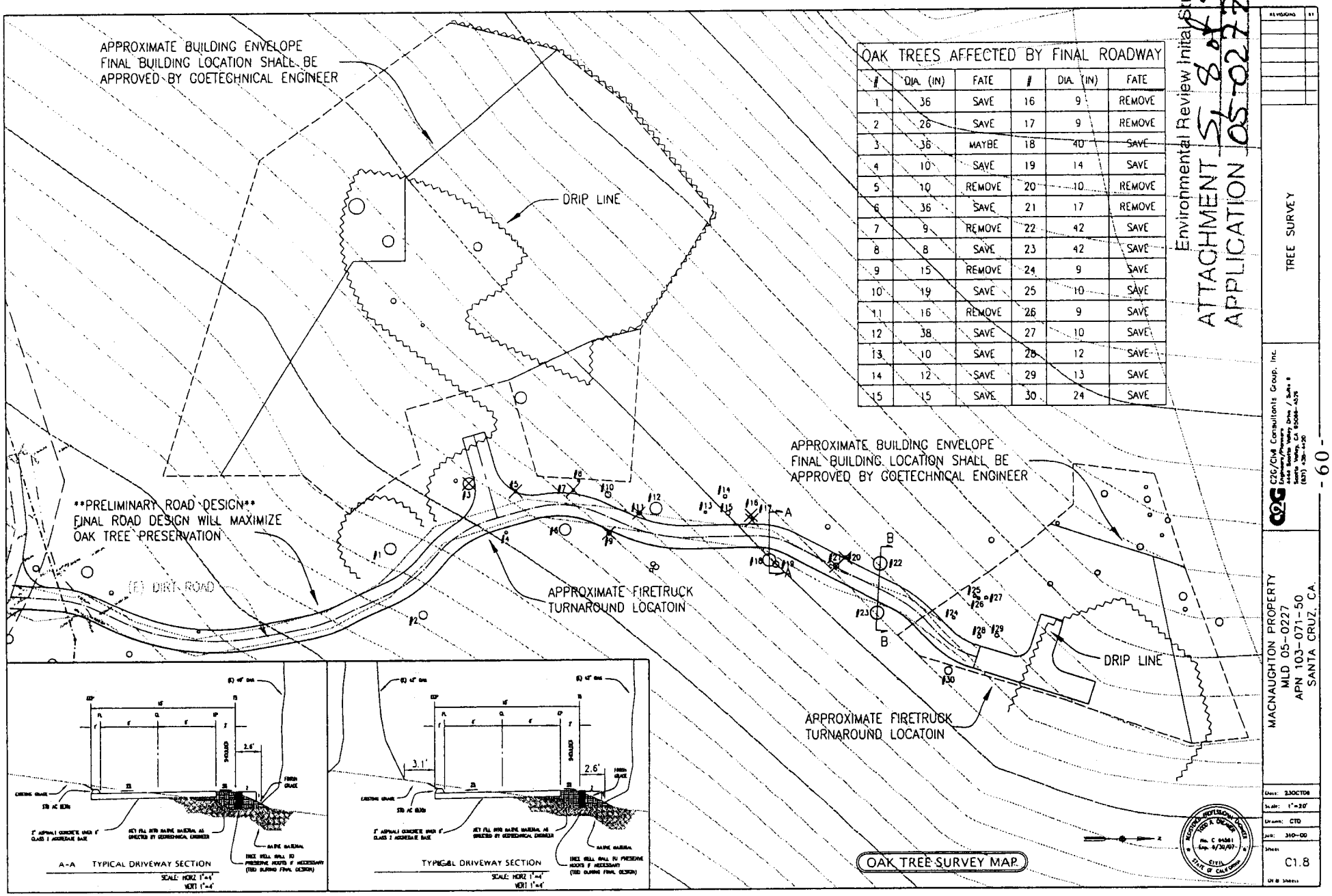
MACNAUGHTON PROPERTY
MLD 04-0284
APN 103-071-50
SANTA CRUZ

Date: 3-18-00
Scale: 1"=20'
Drawn: MO
Job: 310-00
Sheet
C1.7
Of 7 Sheets



OAK TREES AFFECTED BY FINAL ROADWAY

#	DIA. (IN)	FATE	#	DIA. (IN)	FATE
1	36	SAVE	16	9	REMOVE
2	26	SAVE	17	9	REMOVE
3	36	MAYBE	18	40	SAVE
4	10	SAVE	19	14	SAVE
5	10	REMOVE	20	10	REMOVE
6	36	SAVE	21	17	REMOVE
7	9	REMOVE	22	42	SAVE
8	8	SAVE	23	42	SAVE
9	15	REMOVE	24	9	SAVE
10	19	SAVE	25	10	SAVE
11	16	REMOVE	26	9	SAVE
12	38	SAVE	27	10	SAVE
13	10	SAVE	28	12	SAVE
14	12	SAVE	29	13	SAVE
15	15	SAVE	30	24	SAVE

Environmental Review Initial Study
ATTACHMENT 5 8 of 8
APPLICATION 05-0227

REVISIONS

TREE SURVEY

C2G/Civil Consultants Group, Inc.

MACNAUGHTON PROPERTY
MLD 05-0227
APN 103-071-50
SANTA CRUZ, CA.

Date: 23OCT08
Scale: 1"=20'
Drawn: CTD
Job: 310-00
Sheet: C1.8

- 60 -

Dees & Associates
Geotechnical Engineers
501 Mission Street. Suite EA Santa Cruz. CA 95060 Phone (831) 427-1770 Fax (831) 427-1794

August 31, 2005 Project No SCR-0046

MR. MALCOLM MACNAUGHTON, JR
% Stephen Graves *8* Associates
2735 Porter Street
Santa Cruz, California 95062

Subject: Geotechnical Plan Review

Reference: Proposed Sundance Hill Road Improvements and Driveway Improvements
Proposed Minor Land Division MLD 04-0284
APN 103-071-50
Santa Cruz County, California

Dear Mr. MacNaughton:

At the request of Stephen Graves & Associates, we have reviewed the geotechnical aspects of the tentative improvement plans (Sheets C1 1 and C1.3 to C1 6) for **the** minor land division proposed at the referenced site The plans were prepared by C2G/Civil Consultants Group, Inc., and **are** dated August 25, 2005.

The plans indicate the existing paved Sundance Hill Road and existing paved driveway (currently providing access to the neighboring residence) will be widened, as necessary, to obtain minimum road widths. A new, 12 foot wide, driveway will be constructed off **the** existing paved driveway to provide access to the proposed Parcels 2 and 3.

Existing drainage patterns will be maintained along the existing paved roads with the exception of a water bar that is proposed around Station 2+20. The water bar is proposed to reduce off-site runoff onto Soquel-San Jose Road by directing the water into the existing drainage. Rip rap rock will line the path from the water bar to the drainage. Surface runoff from the newly proposed driveway will be collected in catch basins and discharged into three, widely spaced, dispersion trenches located on gentle slopes below the driveway. One of the catch basins will collect water coming down an eroded gully that crosses the proposed driveway alignment. Provisions should be made to protect the catch basin from sediment build-up and clogging.

Our review indicates the plans are in general accordance with our recommendations. If you have any questions, please call our office.

Very truly yours,

DEES & ASSOCIATES

Rebecca L. Dees
Geotechnical Engineer
G.E. 2623

RLD/bd

Copies: **4** to Addressee

Environmental Review Inital Study
ATTACHMENT 6, 1 of 2
APPLICATION 05-0277

Dees & Associates
Geotechnical Engineers
501 Mission Street, Suite 8A Santa Cruz. CA 95060 Fhcne (831) 427-1770 Far (831) 427-1794

November 21,2005 Project No. SCR-0046

MR. MALCOLM MACNAUGHTON, JR.
% Stephen Graves & Associates
2735 Porter Street
Santa Cruz, California 95062

Subject: Geotechnical Plan Review No. 2

Reference: Tentative Sundance Hill Road Improvements
Proposed Minor Land Division MLD 04-0284
APN 103-071-50
Santa Cruz County, California

Dear Mr. MacNaughton:

At the request of Stephen Graves & Associates, we have reviewed the geotechnical aspects of the tentative improvement plans (Sheets C1.1 through C1.7) for the minor land division proposed at the referenced site. The plans were prepared by C2G/Civil Consultants Group, Inc., and are dated November 21. 2005.

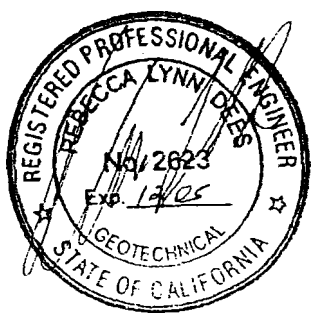
The plans indicate the existing paved Sundance Hill Road and existing paved driveway (currently providing access to the neighboring residence) will be widened, as necessary, to obtain minimum road widths. A new, 12 foot wide, driveway will be constructed off the existing paved driveway to provide access to the proposed Parcels 2 and 3

Existing drainage patterns will be maintained along the existing paved roads with the exception of a water bar that is proposed around Station 2+20. The water bar is proposed to reduce off-site runoff onto Soquel-San Jose Road by directing the water into the existing drainage. Rip rap rock will line the path from the water bar to the drainage. Surface runoff from the newly proposed driveway will be collected in catch basins and discharged into three, widely spaced, dispersion trenches located on gentle slopes below the driveway. One of the catch basins will collect water coming down an eroded gully that crosses the proposed driveway alignment. Provisions should be made to protect the catch basin from sediment build-up and clogging.

Our review indicates the plans are in general accordance with our recommendations. If you have any questions, please call our office.

Very truly yours,

DEES & ASSOCIATES



Rebecca L. Dees
Geotechnical Engineer
G.E 2623

RLD/bd

Copies: 4 to Addressee

Environmental Review Inital Study
ATTACHMENT 6, 2 of 2
APPLICATION 05-0277

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**

January 27, 2005

Malcolm Mac Naughton
C/o Stephen Graves and Associates
2735 Porter Street
Soquel, California 95073

Subject: **Review of Engineering Geology Report by Nolan, Zinn, and Associates Dated November 1, 2004; Project No. (04047-SC)**
APN:* 703-077-50, *Application No's: 04-0284

Dear Malcolm Mac Naughton:

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

1. All construction shall comply with the recommendations of the report.

2. Final plans shall reference the report and include a statement that the project shall conform to the report's recommendations.

3. Before building permit issuance a *plan review letter* shall be submitted to Environmental Planning The author of the report shall write this letter and shall state that the project plans conform to the report's recommendations.

4. The proposed building envelopes shall be shown on all consiruction plans and shall be indicated on the parcel map.

After building permit issuance the engineering geologist *must remain involved with the project* during construction.

Our acceptance of the report 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 454-(3175) if we can be of any further assistance.

Sincerely,

Joe Hanna
County Geologist
Cc: Robin Bolster, Environmental Planning
Nolan, Zinn, and Associates, 1509 Seabright Avenue, Suite 2A, Santa Cruz, CA 95062
Don Bussey, Zoning Administrator

Environmental Review Inital Study
ATTACHMENT 7
APPLICATION 05-0277

• Engineering Geology
• Hydrogeology
• GIS Services

NOLAN ASSOCIATES

March 24, 2006 Job no. 04047-SC

Malcolm MacNaughton
c/o Stephen Graves and Associates
2735 Porter Street
Soquel, California 95073

Subject: **Plan Review: Building Envelope Locations**
MacNaughton Property
MLD 05-0227
APN 103-071-50, Santa Cruz, CA
Sheet C1.1: Cover sheet, vicinity map
Sheet C1.2: Tentative map
Sheet C1.3: Slope map, slope data, parcel dara & site stationing
Plans by C2G/Civil Consultants Group, lnc.
Scotts Valley, California
Dated March 16, 2006

References: 1) *Landslide Inventory and Geologic Hazards Investigation*
Proposed Three Unit Subdivision
APN 103-071-50
Santa Cruz County, California
Geologic Report by Nolan, Zinn, and Associates, Jnc.
Santa Cruz, California
Dated November 1, 2004

Dear Mr. MacNaughton:

At the request of your representatives, we have reviewed the building envelope locations on the above referenced plan sheets for the proposed subdivision. In our opinion, the locations of the building envelopes are acceptable as development envelopes (to include development of septic systems and appurtenances). In order to conform with the geologic report recommendations (ref. 1), habitable structures should be restricted to areas designated as habitable building envelopes, as shown on the above referenced plan sheets, for Parcels 2 and 3. The entire Parcel 1 building envelope is considered acceptable for habitable structures.

Please note that we are not engineers, and we have not reviewed or approved any aspect of the project engineering.

Environmental Review Inital Study
ATTACHMENT 8, 1 of 3
APPLICATION 05-0227

1509 Seabright Avenue. Suite A2 Santa Cruz, CA 95062 Tel 831-423-7006 Fax 831-423-7008 email@nolangeology.com

If you have any questions, please do not hesitate to call our office.

Sincerely,
Nolan Associates

Jeffrey M. Nolan
Principal Geologist
CEG #2247

cc: 1 copy to Addressee
4 copies to Zack Dahl, Stephen Graves and Associates

Environmental Review Inital Study
ATTACHMENT 9, 2 of 34
APPLICATION 05-0277

• Engineering Geology
• Hydrogeology
• GIS Services

NOLAN ASSOCIATES

November 28,2005 Job no. **04047-SC**

Malcolm MacNaughton
c/o Stephen Graves and Associates
2735 Porter Street
Soquel, California 95073

Subject: **Plan Review: Building Envelope Locations**
MacNaughton Property,
MLD 04-0284
APN 103-071-50, Santa Cruz, CA
Sheet C1.3: Slope map, slope data, parcel data & site stationing
Plan by C2G/Civil Consultants Group, Inc.
Scotts Valley, California
Dated August 25,2005

References 1) ***Landslide Inventory and Geologic Hazards Investigation***
Proposed Three Unit Subdivision
APN 103-071-50
Santa Cruz County, California
Geologic **Report** by Nolan, Zinn, and Associates, Inc.
Santa Cruz, California
Dated November 1, **2004**

Environmental Review Inital Study
ATTACHMENT 6, 3 of 34
APPLICATION 05-0272

Dear Mr. MacNaughton:

At the request of your representatives, **we** have reviewed the above referenced plan sheet for the proposed subdivision. In our opinion, the locations of the **building** envelopes, **as** shown **on** the above referenced **plan sbeet,** are acceptable as development envelopes (to include development of septic systems and appurtenances). However, **in** order to conform with **the** geologic **report** recommendations (ref. 1), habitable structures should be restricted to areas designated **as** habitable building envelopes, **as** shown on the attached Figure 1, for parcels two and three. The entire parcel 1 building envelope is considered acceptable for habitable buildings.

Please note **that** we are not engineers, and we have **not** reviewed or approved any aspect of the project engineering

1509 Seabright Avenue. Suite A2 Santa Cruz, CA 95062 Tel 831-423-7006 Fax 831-423-7008 email na@nolangeology.com

If you have any questions, please do not hesitate to call our office.

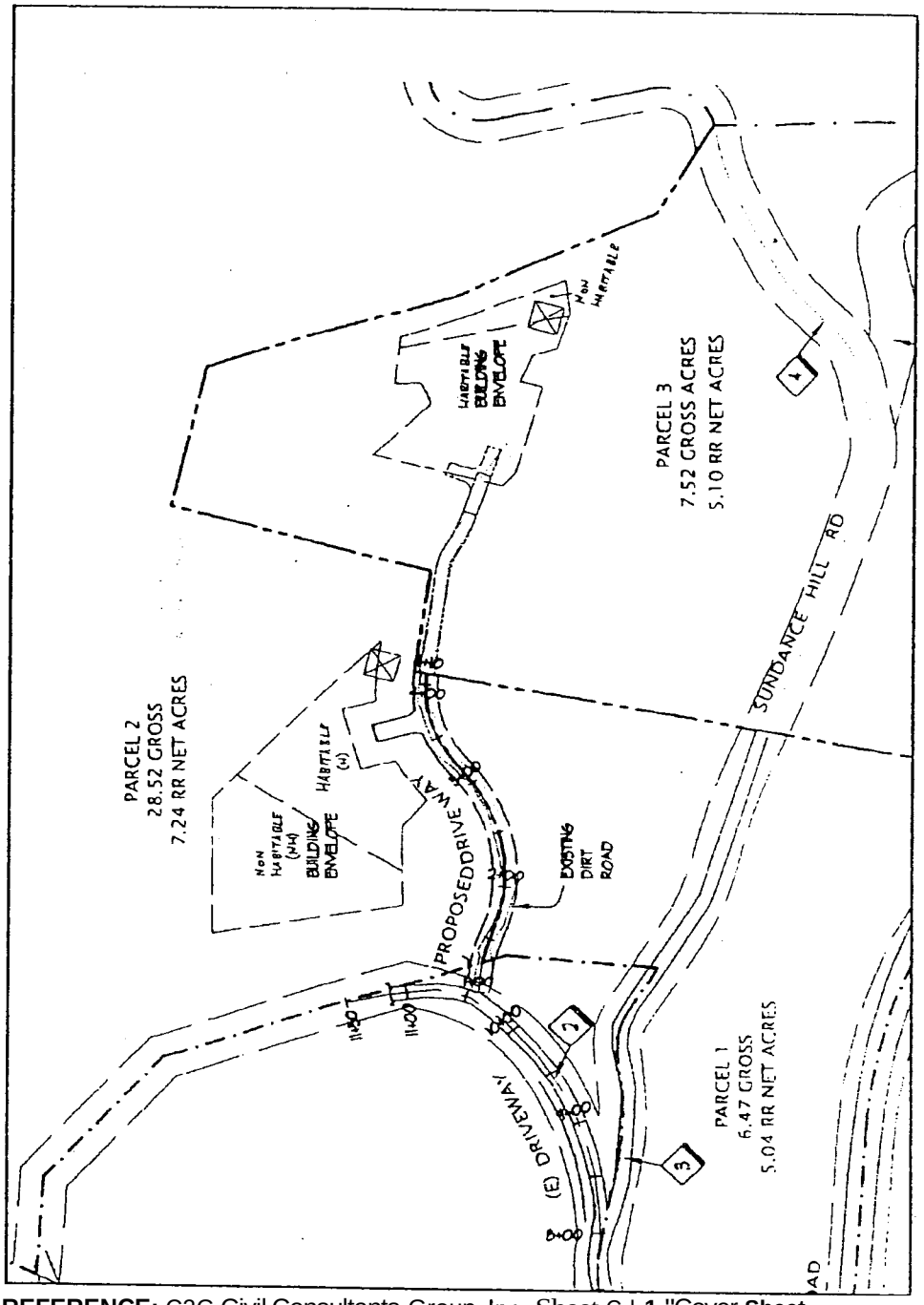
Sincerely,
Nolan Associates

Jeffrey M. Nolan
Principal Geologist
CEG #2247

cc: 1 **copy** to Addressee
4 copies **to** Zack Dahl, **Stephen** Graves **and** Associates

attachments: Figure 1

Environmental Review Inital Study
ATTACHMENT 8, 4 of 34
APPLICATION 05-0277



REFERENCE: C2G Civil Consultants Group, Inc. Sheet C I **1** "Cover **Sheet** - Vicinity **Map",** Dated **November 11, 2005.**

Environmental Review Inital Study
ATTACHMENT 2, 5 of 34
APPLICATION 05-0227

SCALE 1"=150'

N

• Engineering Geology • Hydrogeology • GIS Services NOLAN ASSOCIATES	**Geologically Feasible Building Envelope** *MacNaughton Property* MLD 05-0227; APN 103-071-50 Santa Cruz County, California	FIGURE # **1** JOB # **04047-SC**

• Engineering Geology
• Coastal Geology
• Hydrogeology

Nolan, Zinn, and Associates

November 1, 2004 Job No. 04047-SC

Malcolm MacNaughton
c/o Stephen Graves and Associates
2735 Porter Street
Soquel, California 95073

Re: Landslide Inventory and Geologic Hazards Investigation
Proposed Three Unit Subdivision
APN 103-071-50
Santa Cruz Count).., California

Dear Mr. MacNaughton:

This report presents the results of our geologic evaluation for a proposed subdivision of property on Old San Jose Road, APN 103-071-50. located in central Santa Cniz County. California (Figure 1. Topographic Index Map). The purpose of our geologic evaluation was to evaluate geologic hazards relevant 10 development of three single family residences on the property. one on each of the proposed lots.. These sites are near areas identified on the Santa Cruz County landslide map as possible landslides. **As** part of our site investigation. we also performed landslide inventory mapping of the property as a whole.

SCOPE OF INVESTIGATION

Environmental Review Inital Study
ATTACHMENT 9, 6 of 34
APPLICATION 05-0277

Work performed for this study included:

1. **A** review of geologic literature and maps pertinent to the subject site.

2. Preliminary mapping of landslides and geomorphic features based on review of several sets of stereographic aerial photos.

1509 Seabright Avenue Suite A2 Santa Cruz, CA 95062 Tel 851-423-7006 Fax 631-423-7006 email nza@nolanzinn.com

3. Reconnaissance geologic mapping of the property.

4. Analysis and interpretation of the geologic data and preparation of this report.

SITE SETTING

The subject property is an in-egularly-shaped: 43.86 acre property situated on a moderately to steeply sloping hillside west of the south-flowing Soquel Creek drainage (Figure 1). The subject property is bounded to the east by Old San Jose Road and extends up the west flank of the Soquel Creek drainage to the ridge crest dividing the Soquel Creek and Rodeo Gulch drainages. The study area is dominated by a gently to moderately sloping topographic bench located between steeper slopes near the ridge crest and along Old San Jose Road. Topographic elevation on the subject property varies between 410 and 780 feet above sea level. Natural slopes on the property range from a low of about 20% gradient to near vertical at steep rock outcrops on the upper slopes.

The property is vegetated mostly by oak woodlands, with some redwood trees filling in drainages and some open grasslands in the more gently sloping areas. We did not observe any springs or flowing surface water on the property during our field work in September of 2004. Drainage of surface water on the property is via sheetflow into local swales, collecting into small, incised stream drainages that flow eastward across San Jose Road to Soquel Creek.

REGIONAL GEOLOGY

The subject property is located in the foothills of the Santa Cruz Mountains in the central portion of the Coast Ranges Physiographic Province of California. The Coast Ranges Province consists of a series of coastal mountain chains paralleling the pronounced northwest-southeast structural grain of central California geology. The study area is underlain by a large. northwest-trending. fault bounded; elongate prism of granitic and metamorphic basement rock. known collectively as the Salinian Block (Figure 2). Overlying the granitic and metamorphic basement rocks is a sequence of dominantly marine sediments of Paleocene to Pliocene age and non-marine sediments of Pliocene to Pleistocene age. all of which show evidence of uplift and deformation. Bedrock under the subject property is identified as Purisma Formation sandstone of upper Miocene to Pliocene age (Clark *et al.* 2001).

Throughout the Cenozoic Era. this portion of California has been dominated by tectonic forces associated with lateral or "transform" motion between the North American and Pacific litliospheric plates. producing long. northwest-trending faults such as the San Andreas and San Gregorio. with horizontal displacements measured in tens to hundreds of miles (Figure 3. Regional Seismicity Map). Compressive stress has accompanied the lateral movement of the plates. reflected by repeated episodes of uplift. deformation. erosion, and subsequent deposition of sedimentary rocks Near the crest of the Santa Cruz Mountains. this tectonic deformation is evidenced by steeply dipping folds.

overturned bedding, faulting, jointing, and fracturing in the sedimentary rocks older than the middle Miocene. The Loma Prieta earthquake of 1989 and its aftershocks are the most recent reminders of the geologic unrest in the region.

The Quaternary history of the Santa Cruz Mountains includes abundant evidence for landslide related processes as an important factor shaping the evolution of the modem landscape. Historical accounts and geologic studies of the San Andreas earthquake of 1906 and the Loma Prieta earthquake of 1989 indicate that there is a strong correlation between major earthquakes and resulting landslides, earth flows and ground cracking in this region. The occurrence of landsliding is also strongly controlled by the amount of seasonal rainfall the area receives.

REGIONAL SEISMICITY

California's broad system of strike-slip faulting has had a long and complex history. Local faults that present the most significant seismic hazard to the subject properties include the San Andreas and Zayante faults. These faults are considered to be active (Hall et al., 1974; Cao et al., 2003). Figure 3 shows the locations of earthquake epicenters associated with faults in the Monterey Bay and Santa Cruz Mountains region. Appendix B contains detailed descriptions of the San Andrea: Zayangte, and other local active or potentially active fault zones.

SITE GEOLOGIC SETTING

The Geologic Site Map (Plate 1) and Geologic Cross Sections (Plate 2) depict relevant topographic and geologic information for the subject property and vicinity.

Earth Materials

Bedrock

Previous researchers have mapped the subject property as being underlain by siltstones and fine- to medium-grained sandstones of the Purisma Formation. The Purisma Formation in this area is described as thick-bedded to massive. locally cross-bedded fine- to medium-grained sandstone and very thick-bedded, tuffaceous and diatomaceous siltstone. Bedding in the Purisma Formation in the region surrounding the study area dips at 3 to 5 degrees south. towards Monterey Bay (Figure 4. Local Geologic Map).

Our observations of bedrock exposed in road cuts and natural exposures revealed a ven dense. moderately indurated. light greyish brown to yellowish brown, fine- to medium-grained sandstone. consistent with published descriptions of the Purisima Formation (Clark, 1981). The moderately sloping topographic bench that forms the mid-slope portion of the property. bounded above by steep

to near vertical slopes near the ridge crest and below by steep slopes along San Jose Road, is attributable to differences in erosional resistance between different layers within the unit: with steeper slopes forming on the more resistant layers and shallower slopes on the more easily eroded layers. Well indurated sandstone layers forming vertical cliffs are depicted on Plate 1. Bedding. where observed, was approximately flat-lying.

Surficial Units

We observed three types of relatively shallow, surficial units on the property: 1) alluvium. 2j landslides, and 3) colluvial soils. These three units are discussed separately, below.

Alluvium

Alluvium of Quaternary age was observed filling the more gently sloping portions of the stream drainages on the property (Plate 1). These deposits occur on the mid-slope topographic bench on the property. Stream channels above and below this bench are too steep to permit deposition of alluvium. The alluvium appears to have collected as alluvial fans within existing drainages from sediment shed from steep slopes along the ridge crest.

Alluvial deposition in these drainages is no longer active, as indicated by the moderate to deep incision of alluvium by steam courses. The change from active deposition to incision may be a result of climatic changes or changes in vegetation and land use brought on by human activities. Incisions of up to 12 feet were observed. indicating that the alluvium can be of this thickness. or thicker.

Landslides

A portion of the Santa Cruz County Landslide Map is depicted on Figure 5. This map shows a number of suspected landslide deposits on the subject property. This landslide map was constructed as part of a county-wide landslide mapping program based on inspection of aerial photographs. It is intended for reconnaissance or planning purposes only and is not intended to be an accurate depiction of actual landslide deposits. Landslides shown on the niap are classified as definite: probable, or uncertain based on the degree of confidence that the person constructing the map had in their landslide interpretation (Figure 5). All the landslides depicted on the subject property are classified as *uncertain*. The heavy tree cover of the subject property obscures the ground and makes interpretation of aerial photographs difficult.

We perfonned our own reconnaissance mapping of the property from aerial photographs prior to going into the field. We inspected stereographic aerial photos from 1943, 1948. 1956. 1973. 1982. 1989, 1994 and 1997. In general, the older aerial photos were more useful: heavy logging in the early part of the twentieth century led to reduced tree cover on the earlier photos. Selective logging in the late '60s or early '70s was evident from the thinned tree cover on the 1973 photographs. Our

aerial photo based landslide map was similar to the County Landslide Map, with questionable landslides mapped in drainages on the moderately sloping portion of the property.

It became clear during our field reconnaissance that the suspected landslides were, in fact, the moderately sloping areas of alluvial deposition coinciding with the mid-slope topographic bench on the property. We identified a small probable landslide crossing an existing road in the drainage north of the proposed building site on Parcel 3 (Plate 1). We also identified a few older, suspected evacuation scars in the far northwest comer of the property. Other than these relatively small areas, we did not observe evidence of landsliding on the property.

Colluvial Soils

In areas of sloping terrain, weathering of geologic units produces a soil layer a few feet thick composed of loose rock and sand, silt, and clay grains. This soil layer mantles slopes and tends to creep downslope over time due to gravity. Colluvium can accumulate at the base of steep slopes in appreciable thicknesses. whereas it tends to be thin or absent on very steep slopes. Colluvial soils were observed in road cuts on the property ranging up to 3 to 4 feet thick. Thicker colluvial soils are presumed to mantle the moderately sloping areas on the mid-slope topographic bench. Because of its limited thickness, the colluvial soil layer is not depicted on the geologic site map

Faulting

There are no mapped faults shown on or near the subject property. We did not observe any evidence for active faulting on or near the subject property during our aerial photo review or site geologic reconnaissance.

GEOLOGIC HAZARDS

Our observations of site geology, summarized above. suggest that the proposed development is potentially subject to geologic hazards that include seismic shaking and landsliding. Other potential geologic hazards, such as fault surface rupture. soil liquefaction. or ridge top ground cracking are not considered to be hazards at the proposed building sites. Below is a discussion of each geologic hazard. Recommendations for mitigating geologic hazards to an "ordinary" level. as defined in Appendix **A.** are provided in a following section

Seismic Shaking

The subject property will likely be subjected to strong seismic shaking from one of the loca! fault systems during the design life of the proposed structures. We have used published data to estimate both probabilistic and deterministic seismic shaking intensities for the proposed home site. Seismic shaking intensity is expressed as a multiple of the force of gravity (g).

A probabilistic seismic analysis differs from a deterministic analysis in that it takes into account the probability that strong seismic shaking of a certain intensity will occur at a particular site. A deterministic assessment considers only the effects of the largest ground motion that is considered possible at a site, regardless of how likely it is to occur within the 50-year design life of a single family.residence.

It is important to note that predicting seismic shaking intensity is a field that is imprecise, at best. Consequently, the seismic accelerations discussed below should only be considered estimates, rather than precise predictions. Actual measured "free-field" accelerations may be larger.

Seisinic Sources

Fault systems near the subject property considered by the State of California to be likely sources of damaging earthquakes include the San Andreas, San Gregorio, and Zayante faults and the Monterey Bay-Tularcitos fault zone (Peterson et al, 1996: Cao et al, 2003). Table 1 summarizes the seismic source characteristics of these faults. Other faults in the region are considered less capable of producing large earthquakes or are more distant from the site

TABLE 1
Seismic Source Parameters

Fault Name	Distance from site	Seismic Source	Moment Magnitude,	Recurrence Interval (yrs)	Slip Rate (mm/yr)
San Andreas (1906 rupture)	7.32	A	7.9 (3)	210 (3)	24.0 +/- 3.0 (3)
Zayante-Vergeles	2.20	B	7.0 (1)	8.821 (3)	0.1 +/- 0.1 (1)
San Gregorio (North Segment)	25 .78	B	7.3	400 (3)	2.5 +/- 1.0 (3)
Monterey Bay-Tularcitos	20.93	B	6.8	2841 (3)	0.5 +/- 0.4 (3)

Environmental Review Inital Study
ATTACHMENT 4, 11 of 34
APPLICATION 05-0277

Nolan, Zinn, and Associates

Probnbilistic Seismic Shaking Analysis

Ground Motion	Firm Rock	Soft Rock	Alluvium
Peak Ground Acceleration (g)	*0.55*	*0.55*	*0.55*
Spectral Acceleration (g) at 0.2 sec.	1.221	1.221	1.235
Spectrai Acceleration (g) at 1.0 sec.	0.53	0.522	0.716

Deterministic Seismic Shaking Analysis

For the purpose of evaluating deterministic peak ground accelerations for the site. we have considered two seismic sources: the San Andreas and the Zayante fault zones. While other faults or fault zones in this region may be active. their potential contribution to deterministic seismic hazards at the site is overshadowed by these two faults.

Expected ground accelerations at the subject property from the characteristic or maximum earthquakes generated by each of the two fault systems are shown in Table 3. These accelerations are calculated using attenuation relationships derived from the analysis of historical earthquakes and the seismic source parameters listed in Table 1. *An* attenuation relationship is a mathematical model that predicts the rate at which ground shaking intensity diminishes as the distance from the earthquake increases. Because the historical data can be interpreted in different ways. there are a number of different attenuation relationships available. We have employed the attenuation relationships for soft rock sites developed by Sadigh et al (1997) in deriving the acceleration values listed in Table 3. using the parameters for strike-slip rupture for these fault zones.

TABLE 3
Deterministic Ground Motions

Fault	Type of Movement	Estimated Mean Peak Horizontal Ground Motion (g) (1)	Estimated Mean Peak Horizontal Ground Motion Plus One Dispersion (g) (1)	Maximim Considered Ground Motion (g) (2)
San Andreas	Strike-Slip	*0.53*	0.78	0.80
Zayante	Reverse-Oblique	0.77	1.16	1.16

The estimated mean peak ground acceleration in Table 3 is the average: or "expected" ground motion determined from the attenuation relationship. The "mean plus one dispersion" ground motion is a measure of the uncertainty in the attenuation relationship and is roughly equal to the mean peak acceleration plus one standard deviation of the historical data set.

The "maximum considered earthquake ground motion": as defined by FEMA (1998). is also listed in Table 3. FEMA (1998) and the National Earthquake Hazards Reduction Program suggest that in regions of high seismicity, such as coastal California: the appropriate design level for ground shaking is the deterministically derived mean peak horizontal ground acceleration multiplied by 1.5. Applying, this method to the subject property results in ground shaking, parameters roughly equivalent to the deterministically derived mean plus one dispersion values (Table 3).

Based on the results listed in Table 3. the maximum earthquake ground motion (mean acceleration plus one dispersion) expected at the subject property will be approximately 1 16g. based on a M 7.0 earthquake centered on the Zayante Fault. 2.20 kilometers northeast of the site.

Naeim and Anderson (1993) found that "effective peak acceleration" (EPA) is more typically about 75 percent of the mean peak acceleration. Effective peak acceleration is comparable to "repeatable high ground acceleration" of Ploessel and Slossen (1974) and is generally considered to represent the large number of lower amplitude peaks on an accelerogram. This relationship suggests that the mean peak horizontal ground acceleration of 0.77 g would generate an EPA of approximately 0.58

Environmental Review Inital Study
ATTACHMENT 8, 13 of 34
APPLICATION 05-0277

Duration of Shaking

The duration of strong seismic shaking may be more critical as a design parameter than the intensity of the shaking itself. The duration of strong shaking is dependent on magnitude. Dobry et al. (1978) have suggested a relationship between magnitude and duration of "significant" or strong shaking

expressed by the formula:

Log D = 0.432 M - 1.83 (where D is the duration and M is the magnitude).

On the basis of the above relationship, the duration of strong shaking associated with a magnitude 7.0 earthquake (the maximum earthquake for the Zayante Fault) is estimated to be about I6 seconds. In contrast, the duration of strong shaking associated with a magnitude 7.9 earthquake (the characteristic earthquake for the San Andreas Fault) is estimated to be about 38 seconds.

Landsliding

Landsliding is relatively uncommon on the subject properties. Plate 1 depicts our landslide mapping for the subject property. The building sites on Parcels 1 and 3 are situated on convex slopes underlain by firm bedrock with only a thin mantle of soil. The building site on Parcel 2 is located on a broad, even slope that probably has a thicker accumulation of colluvial soils. Nevertheless. there is no indication of landsliding or slope stability at this site.

One type of landsliding that can affect sites located near steep slopes are debris flows. Debris flows are small: highly mobile landslides that form on steep slopes at the heads of steep. narrow drainages. They result from the mobilization of soil/water mixtures and generally occur during periods of heavy rainfall. Debris flows usually require a steep. confined channel to keep them flowing and fluidized. Structures situated at the mouths of sreep. narrow stream channels can be damaged by impact of the moving debris flows. Once the flows leave a confined channel they spread out and gradually slow down and stop. None of the three proposed building sites are judged to be susceptible to debris flow hazards.

Based on the results of our geologic investigation for the subject property. we are of the opinion tha? landsliding does not pose a significant hazard to the proposed building sites.

ENGINEERING GEOLOGIC CONSIDERATIONS

Drainage at proposed building *site*, Parcel 2

The proposed building site on Parcel 2 is situated on a broad open slope with a poorly defined drainage network. Development of this building site should include channelization of runoff from upslope areas to conduct it around the proposed building site .

Access Roads

It is our understanding that the primary access to the proposed residential sites will be provided by the paved access road crossing the lower poi-tion of the subject property (Plate I). This road

presently serves a number of residences. We did not observe any evidence of geologic conditions along the road that would preclude it from use as a primary access road for the proposed homesites. However, as with many mountain roads, there are areas of undocumented fill that may settle or slump over time: there are cut slopes that may fail or ravel, and there is always the potential for landslides to initiate on steep slopes. Therefore, the proposed access road will require routine maintenance and will likely require repair from time to time.

CONCLUSIONS

The subject property is located on the moderately to steeply sloping western flank of the Soquel Creek drainage in the foothills of the Santa Cniz Mountains. It is proposed to subdivide the 43.86 acre subject property into three residential parcels. **A** homesite has been designated on each parcel.

The property is underlain by indurated sandstone of the Purisima Formation. All three proposed homesites are situated on moderate slopes in areas free of visible landsliding. No active or potentially active faults have been recognized on or near the subject property.

The principal geologic hazard posed to the proposed homesites is strong seismic shaking due to an earthquake in the study area.

Based on our analysis of geologic hazards, we consider the three proposed homesites to be geologically feasible and to be subject to "Ordinary" risks, as defined in Appendix A.

RECOMMENDATIONS

1. We recommend that all structures intended for human habitaiion be situated within the "geologically suitable building envelopes" depicted on Plate 1. These building envelopes are were specified for evaluation prior to our site geologic investigation and are not necessarily the only acceptable building site on the property with respect to geologic hazards. We reserve the right to specify other geologically suitable building envelopes where such approval is consistent with sound engineering geologic judgment.

2. The project designers and engineers should consider the effects of strong seismic shaking on any habitable structures. All structures should be designed for resistance to seismic shaking according to the most current version of the California Building Code, at a minimum. Site specific design for residential purposes should consider the probabilistic ground motion with a 10% probability of exceedence in 50 years. For the proposed site, this value is 0.55 g. Seismic shaking at this site will be intense during the next major earthquake on the San Andreas fault. We therefore recommend that the seismic design of the proposed residence be done carefully and thoroughly by someone familiar with seismic design standards in this portion of California.

3. The project geotechnical engineer should prepare a geotechnical evaluation of all sites proposed for development.

4. We recommend that all drainage from improved surfaces such as walkways, patios, roofs and driveways be collected and dispersed on site in such a way as to maintain existing runoff patterns and amounts as much as'possible. At no time should any concentrated discharge be allowed to pond on the ground adjacent to a building site or be allowed to spill directly onto steep slopes without some form of erosion protection. The graded pad on the site is flat and poorly drained. It may be prudent to elevate the structure slightly on a fill pad to encourage flow of water away from the foundation.

5. On proposed Parcel 2, we recommend that a drainage scheme be designed and constructed to capture ninoff from slopes above the proposed homesite and direct it away from areas proposed for development. We recommend that the project engineer consult with us prior to design of any drainage scheme so that we can ensure that our concerns are properly implemented in design.

6. We recommend that our firm be provided the opportunity for a general review of the final design ana specifications in order that our recommendations may be properiy interpreted and implemented in the design and specifications. If our firm is not accorded the privilege of making the recommended review we can assume no responsibility for misinterpretation of our recommendations or project failures.

7. It is the responsibility of the owner or his or her agent to see that this report is provided to architects. engineers. contractors, or other design and construction personnel involved with the project.

8. For further information about what you can do to protect yourself from earthquakes and their associated hazards, read *Pence of Mind in Earthquake Country*, by P. Yanev (1991).

INVESTIGATIVE LIMITATIONS

1. Our services consist ofprofessional opinions and recommendations made in accordance with generally accepted engineering geology principles and practices. No warranty, expressed or implied, including any implied warranty of merchantability or fitness for the purpose, is made or intended in connection with our services or by the proposal for consulting or other services. or by the furnishing of oral or written reports or findings.

2. The analysis and recommendations submitted in this report are based on the geologic and hydrogeologic information derived from the steps outlined in the introduction section of this report. The information is derived from necessarily limited natural and artificial exposures. Consequently, the conclusions and recommendations should be considered preliminary.

3. The findings of this report are valid as of the present date. However. changes in the conditions of property and its environs can occur with the passage of time. whether they be due to natural processes or to the works of man. In addition, changes in applicable or appropriate slandards 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, the conclusions and recommendations contained in this report cannot be considered valid beyond a period of two years from the date of this report without review by a representative of this **firm.**

This concludes our report. Please contact us if you have any questions

Sincerely,
NOLAN, ZINN, AND ASSOCIATES, INC.

Jeffrey M. Nolan
Principal Geologist
Registered Geologist #4493

Attachments: Figure 1: Topographic Index Map
Figure 2: Regional Geologic Map
Figure 3: Regional Seismicity Map
Figure 4: Local Geologic Map
Figure 5: Santa Cruz County Landslide Map
Appendix **A:** Scale of Acceptable Risks From Geologic Hazards
Appendix B: Fault Zone Descriptions
Plate 1: Geologic Site Map
Plate 2: Geologic Cross Sections

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REFERENCES

Aerial Photographs

DATE	FLIGHT LINE	PHOTO NUMBERS	TYPE	SCALE
1-5-43	CJA	IB-27, -28	black and white	1:20,000
5-14-48	CDF5	3-12, 3-13	black and white	1:10,000±
6-2-56	CJA	2R-57,-58	black and white	1:10,000±
4-11-73	Big Creek 16	8-5, -6	black and white	1:15.840
1-8-82	JSC	10-5. -6	black and white	1:20.000
2-6-82	USGS	18-3. -5. & -5	black and white	1:7200
11-1-89	AFS LIB	10-9. -10	black and white	1:24.000
6-22-94	Big Creek Lumber	12-7. -8	black and white	1:15.840
9-20-97	WAC-97CA	14-228. -229	blach and white	1:24.000

Photos are available for viewing at the Map Library in the McHenry Libra? at the University of California. Santa Cruz.

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APPENDIX A

SCALE OF ACCEPTABLE RISKS FROM GEOLOGIC HAZARDS

SCALE OF ACCEPTABLE RISKS FROM SEISMIC GEOLOGIC HAZARDS

Level of Acceptable Risk	Kinds of Structure	Extra Project Cost Probably Required to Reduce Risk to an Acceptable Level
Extremely low[1]	Structures whose continued functioning is critical, or whose failure might be catastrophic: nuclear reactors, large dams, power intake systems, plants manufacturing or storing explosives or toxic materials.	No set percentage [whatever is required for maximum attainable safety).
Slightly higher than under "Extremely low" level.[1]	Structures whose use is critically needed afier a disaster: important utility centers; hospitals; fire, police and emergency communication facilities; fire station; and critical transportation elements such as bridges and overpasses; also dams.	5 to 25 percent of project cost.'
Lowest possible risk to occupants of the structure.'	Structures of high occupancy, or whose use afier a disaster would be particularly convenient: schools, churches, theaters, large hotels. and other high rise buildings housing large numbers of people. other places normally attracting large concentrations of people, civic buildings such as fire stations: secondary utility structures, estremely large commercial enterprises, most roads, alternative or non-critical bridges and overpasses.	5 to 15 percent of project cost.'
An "ordinary" level of risk to occupants of the structure.'.'	The vast majority of structures: most commercial and industrial buildings. small hotels and apartment buildings. and single family residences.	1 to 2 percent of project cost. in most cases (2 to 10 percent of project cost in a minority of cases).[4]

[1] Failure of a single structure may affect substantial populations.

'These additional percentages are based on the assumptions that the base cost is the total cost of the building or other facility when ready for occupancy. In addition. it is assumed that the structure would have been designed and built in accordance with current California practice. Moreover. the estimated additional cost presumes that structures in this acceptable risk category are to embody sufficient safety to remain functional following an earthquake.

[3] Failure of a single structure would affect primarily only the occupants

'These additional percentages are based on the assumption that the base cost is the total cost of the building or facility when ready for occupancy. In addition. it is assumed that the structures would have been designed and built in accordance with current California practice. Moreover the estimated additional cost presumes that structures in this acceptable-risk category are to be sufficiently safe to give reasonable assurance of preventing injury or loss of life during and following an earthquake: but otherwise not necessarily to remain functional.

'"Ordinary risk": Resist minor earthquakes without damage: resist moderate earthquakes without structural darnage, but with some non-structural damage; resist major earthquakes of the intensity or severity of the strongest experienced in California, without collapse, but with some structural damage as well as non-structural damage. In most structures it is expected that structural damage. even in a major earthquake. could be limited to repairable damage. (Structural Engineers Association of California)

Source: Meeting the Earthquake, Joint Committee on Seismic Safety of the California Legislature. Jan 1974. p.9

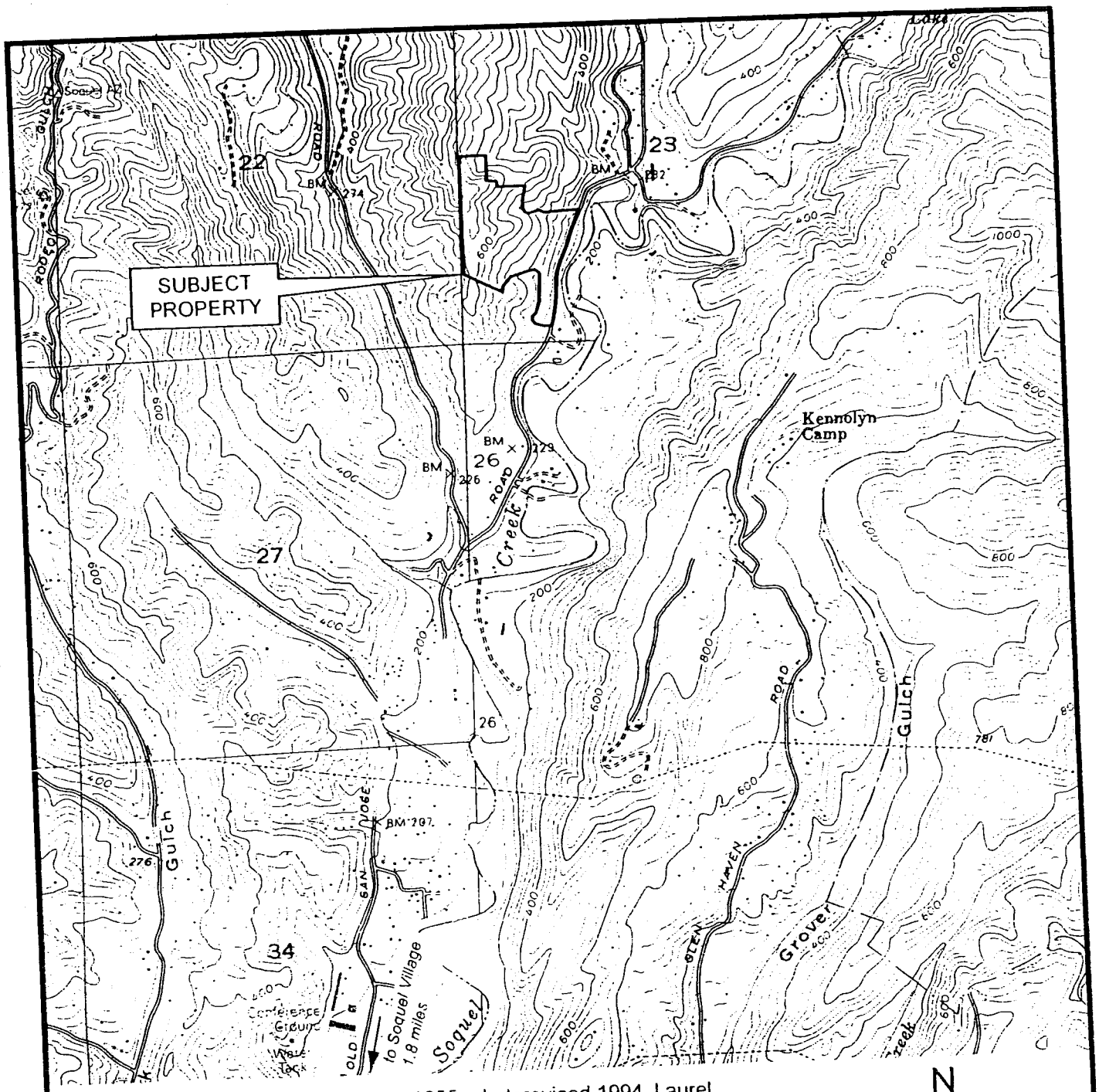
SCALE OF ACCEPTABLE RISKS FROM NON-SEISMIC GEOLOGIC HAZARDS[6]

Risk Level	Structure **Type**	Risk Characteristics
Extremely low risks	Structures whose continued functioning is critical, or whose failure might be catastrophic: nuclear reactors, large dams: power intake systems, plants manufacturing or storing explosives or toxic materials.	1. Failure affects substantial populations, risk nearly equals nearly zero.
Very low risks	Structures whose use is critically needed afier a disaster: important utility centers; hospitals; fire: police and emergency communication facilities; fire station; and critical transportation elements such as bridges and overpasses; also dams.	1. Failure affects substantial populations. Risk slightly higher than 1 above.
Low risks	Structures of high occupancy, or whose use after a disaster would be particularly convenient: schools, churches. theaters. large hotels. and other high rise buildings housing large numbers of people, other places normally attracting large concentrations of people, civic buildings such as fire stations, secondary utility structures: extremely large commercial enterprises, most roads, alternative or non-critical bridges and overpasses.	1. Failure of a single structure would affect primarily only the occupants.
"Ordinary" risks	The vast majority of structures' most commercial and industrial buildings. small hotels and apartment buildings. and single family residences	1. Failure only affects owners/occupants of a structure rather than a substantial population. 2. No significant potential for loss of life or serious physical injury. 3. Risk level is similar or comparable to other ordinary risks (including seismic risks) to citizens in a similar setting. 4 No collapse of structures: structural damage limited to repairable darnage in most cases. This degree of damage is unlikely as a result of storms with a repeat time of 50 years or less.
Moderate risks	Fences. driveways, non-habitable structures. detached retaining walls, sanitary landfills, recreation areas and open space.	1. Structure is not occupied or occupied infrequently. 2. Low probability of physical injury. 3. Moderate probability of collapse.

[6] Won-seismic geologic hazards include flooding. landslides. erosion. wave runup and sinkhole collapse

APPENDIX B

FAULT ZONE DESCRIPTIONS



BASE MAP: U.S. Geological Survey, 1955, photorevised 1994, Laurel quadrangle, California, 7.5' topographic series, scale 1:24,000.

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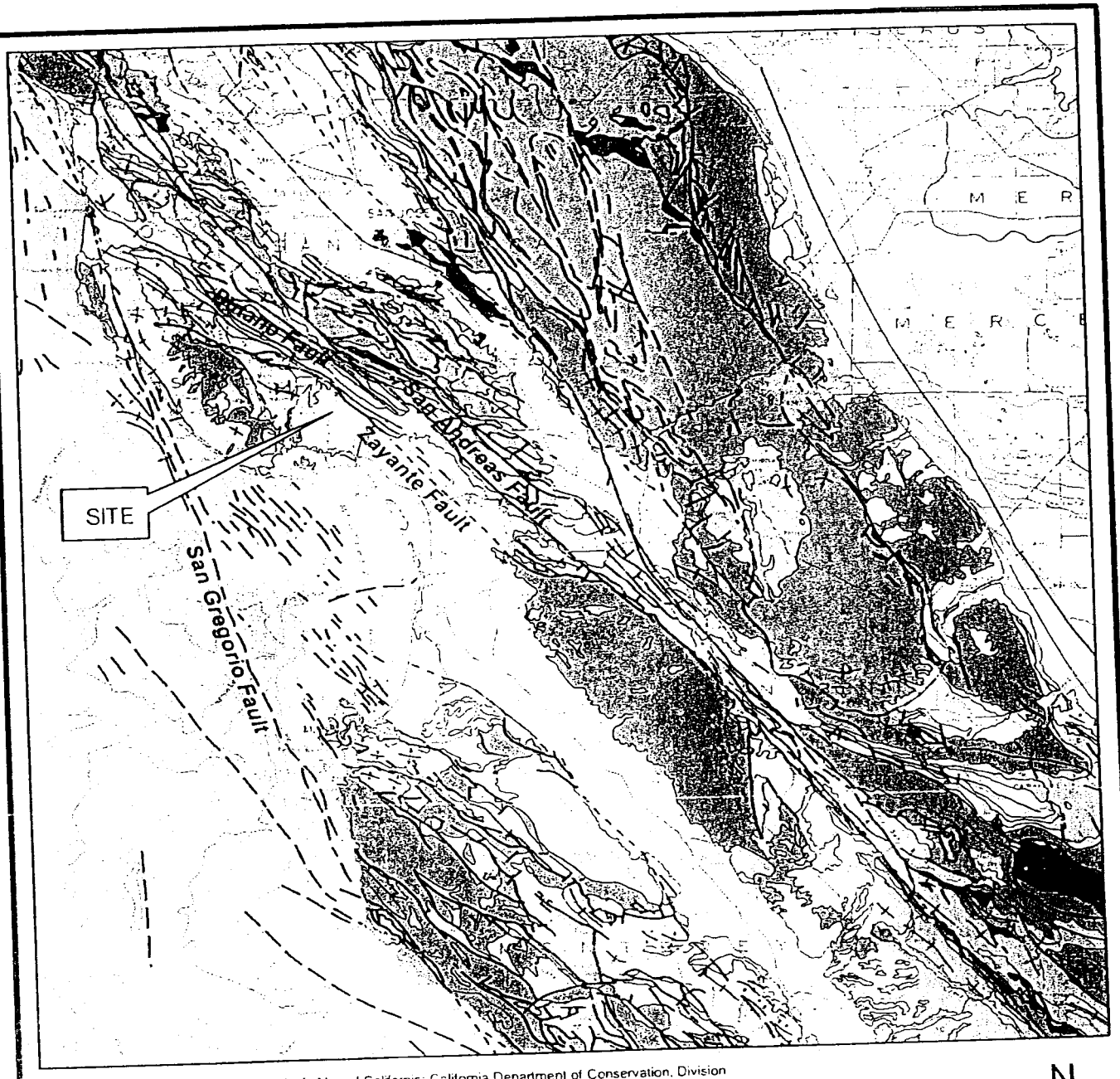
• Engineering Geology
• Coastal Geology
• Hydrogeology

Nolan, Zinn, and Associates

TOPOGRAPHIC INDEX MAP
Lands of MacNaughton
Old San Jose Road, Soquel, California
Santa Cruz County APN 103-071-50

FIGURE # 1
JOB # 04047-SC



Reference: Jennings, C.W., 1977, Geologic Map of California: California Department of Conservation, Division of Mines and Geology, scale 1:750,000.
Digital Data: Saucedo, G.J., Bedford, D.R., Raines, G.L., Miller, R.J., and Wentworth, C.M., 2000, GIS Data for the Geologic Map of California: California Department of Conservation, Division of Mines and Geology, CD-ROM 2000-007, ver. 2.0.

N

Legend

Geologic Units

- Quaternary Deposits
- Quaternary Volcanics
- Tertiary Sedimentary Rocks
- Tertiary Volcanic Rocks
- Pre-Tertiary Sedimentary Rocks
- Pre-Tertiary Volcanic Rocks
- Grantic Intrusive Rocks
- Franciscan Complex
- Ultramafic Rocks
- Pre-Tertiary Metamorphic Rock
- Pre-Cambrian Metamorphic and Igneous Rocks

Symbols

- contact
- fault, certain
- fault,approx. located
- fault, concealed or inferred
- anticline
- monocline
- syncline

SCALE 1:1,000,000

10 0 10 20 Miles

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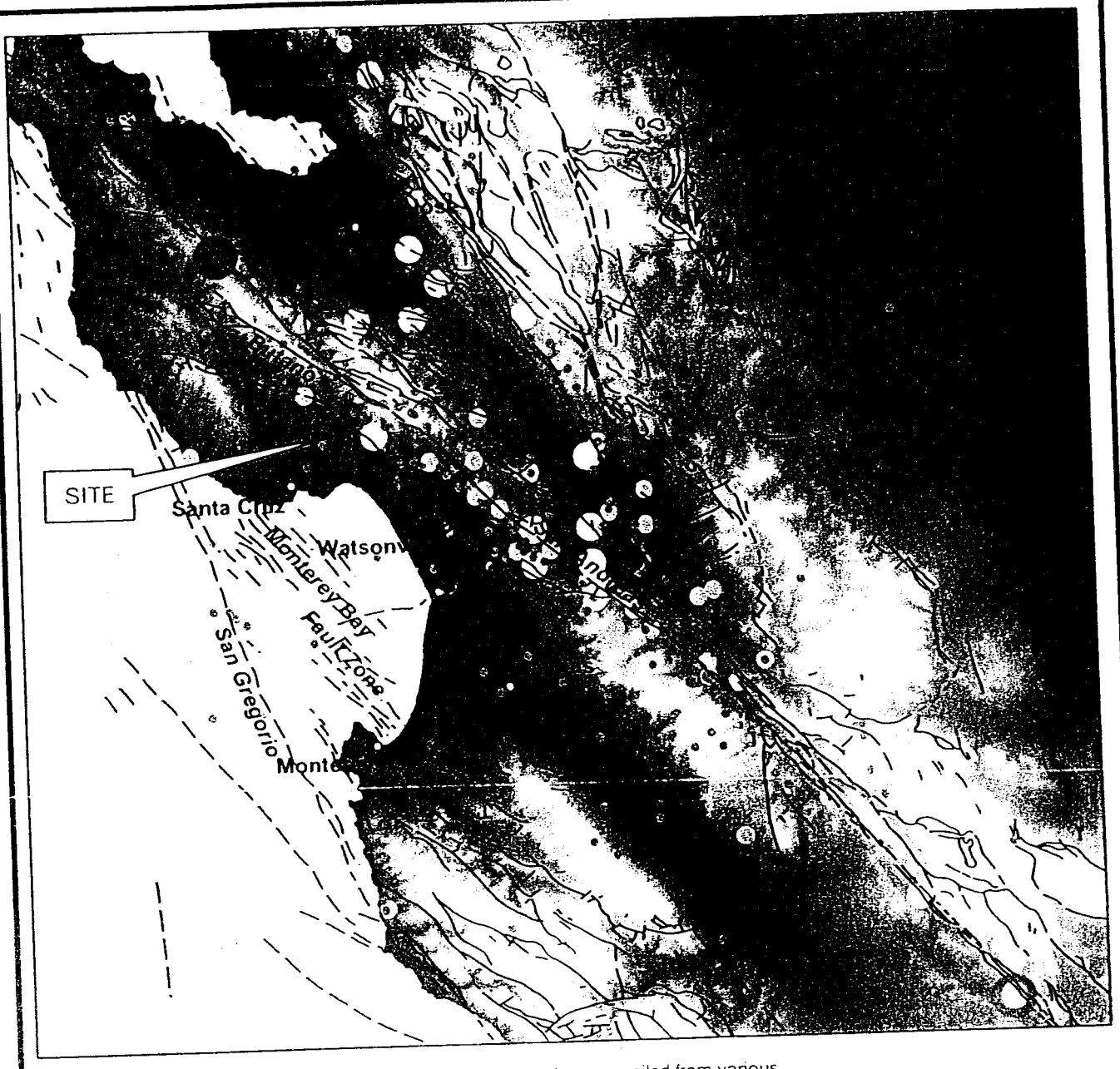
• Engineering Geology
• Coastal Geology
• Hydrogeology

Nolan, Zinn, and Associates

Regional Geologic Map
Lands of MacNaughton
Old San Jose Road, Soquel, California
Santa Cruz County APN 103-071-50

FIGURE # **2**
JOB # **04047-SC**



Seismicity Information: Magnitude 4 and greater earthquakes, compiled from various sources, 1769 to 2000; available at www.consrv.cagov/CGS/rghm/quakes/cgs2000_fnl.txt
Fault Information: Jennings, C.W., 1977, Geologic map of California: California Department of Conservation, Division of Mines and Geology, scale 1:750,000

N

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EXPLANATION

Symbols

- fault, certain
- fault,approx. located
- fault, concealed or inferred

Earthquake Magnitude

- 4.0 to 4.99
- 5.0 to 5.99
- 6.0 to 6.99
- 7.0 +

SCALE 1:1,000,000

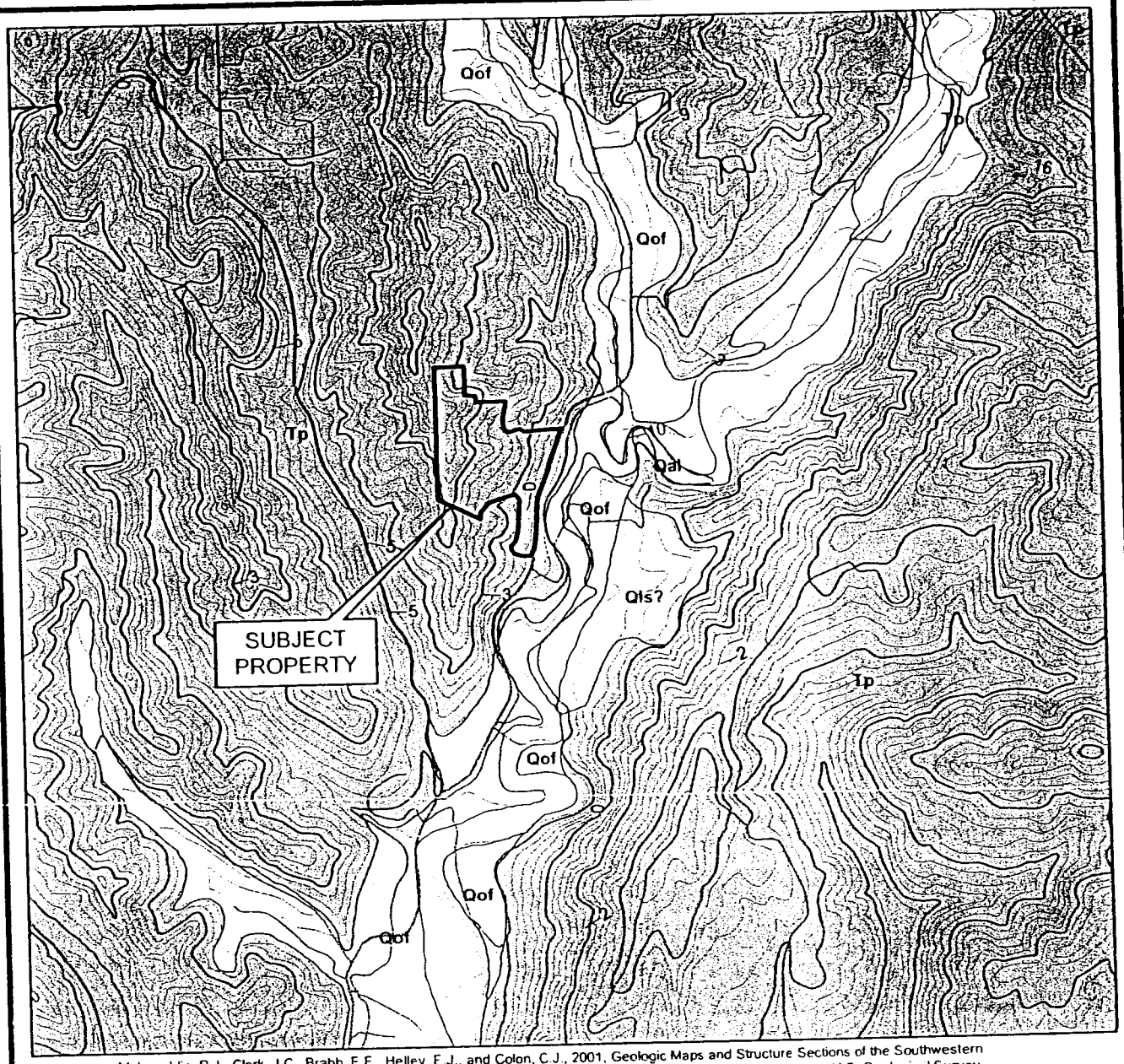
10 5 0 10 20 Miles

• Engineering Geology
• Coastal Geology
• Hydrogeology

Nolan, Zinn, and Associates

Regional Seismicity Map
Lands of MacNaughton
Old San Jose Road, Soquel, California
Santa Cruz County APN 103-071-50

FIGURE # **3**
JOB # **04047-SC**



Reference: McLaughlin, R.J., Clark, J.C., Brabb, E.E., Helley, E.J., and Colon, C.J., 2001, Geologic Maps and Structure Sections of the Southwestern Santa Clara Valley and Santa Cruz Mountains, Santa Clara and Santa Cruz Counties, California: Sheet 2: Laurel Quadrangle: U.S. Geological Survey Miscellaneous Field Studies Map MF-2373, scale 1:24,000.

EXPLANATION

SYMBOLS

- bedding
- contact. certain
- fault, approximately located

UNITS

- Qal Alluvial deposits
- Qof Older flood-plain deposits
- Qls?: Landslide deposits. uncertain
- Tp Purisma Sandstone

N

SCALE 1:24,000

1,000 0 1,000 2,000 Feet

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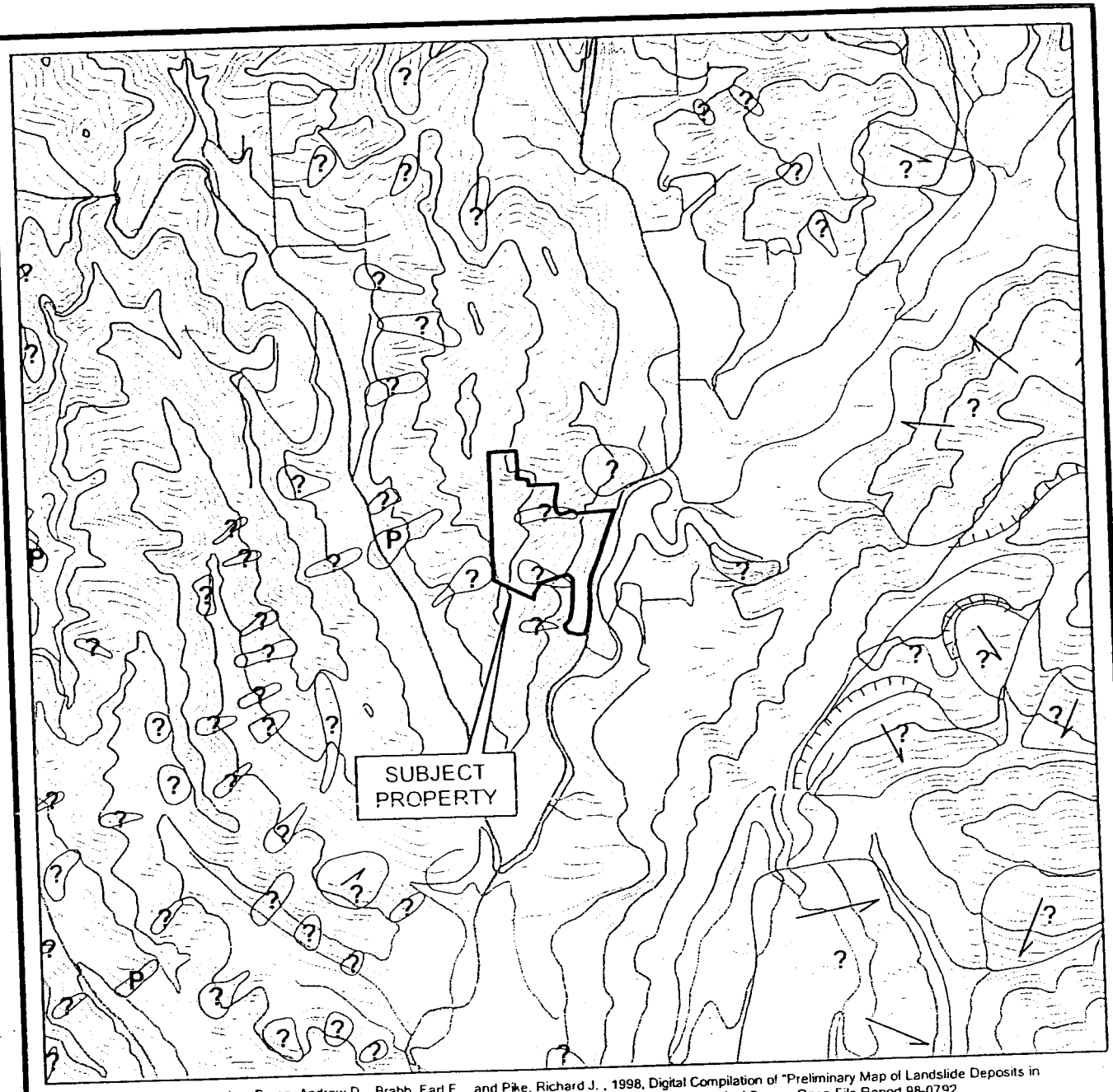
• Engineering Geology
• Coastal Geology
• Hydrogeology

Nolan, Zinn, and Associates

Local Geologic Map
Lands of MacNaughton
Old San Jose Road, Soquel, California
Santa Cruz County APN 103-701-50

FIGURE # **4**
JOB # **04047-SC**



Reference: Roberts, Sebastian, Baron, Andrew D. , Brabb, Earl E. , and Pike, Richard J. , 1998, Digital Compilation of "Preliminary Map of Landslide Deposits in Santa Cruz County, California, By Cooper-Clark and Associates, 1975". A Digital Map Database: U.S. Geological Survey Open-File Report 98-0792.

EXPLANATION

SYMBOLS

- contact, certain
- topographic escarpment
- county boundary

LANDSLIDE DEPOSITS

- DR: Definite. recent movement
- D: Definite
- P: Probable
- ?: Uncertain
- Unclassified

N

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SCALE 1:24,000

1,000 0 1,000 2,000 Feet

• Engineering Geology
• Coastal Geology
• Hydrogeology

Nolan, Zinn, and Associates

Santa Cruz County Landslide Map
Lands of MacNaughton
Old San Jose Road, Soquel, California
Santa Cruz County APN 103-071-50

FIGURE # **5**
JOB # **04047-SC**

San Andreas Fault

The San Andreas fault is active and represents the major seismic hazard in northern California (Hall et al., 1974; WGONCEP, 1996). The main trace of the San Andreas fault trends northwest-southeast and extends over 700 miles from the Gulf of California through the Coast Ranges to Point Arena, where the fault extends offshore.

Geologic evidence suggests that the San Andreas fault has experienced right-lateral: strike-slip movement throughout the latter portion of Cenozoic time, with cumulative offset of hundreds of miles. Surface rupture during historical earthquakes. fault creep: and historical seismicity confirm that the San Andreas fault and its branches: the Hayward: Calaveras. and San Gregorio faults, are all active today.

Historical earthquakes along the San Andreas fault and its branches have caused significant seismic shaking in Santa Cruz County. The two largest historical earthquakes on the San Andreas to affect the area were the moment magnitude (M_w) 7.9 San Francisco earthquake of 18 April 1906 (actually centered near Olema) and the M_w 6.9 Loma Prieta earthquake of 17 October 1989. The San Francisco earthquake caused severe seismic shaking and structural damage to many buildings in the Santa Cruz Mountains. The Loma Prieta earthquake appears to have caused more intense seismic shaking than the 1906 event in localized areas of the Santa Cruz Mountains, even though its regional effects were not as extensive. There were also significant earthquakes in northern California along or near the San Andreas fault in 1838. 1865 and possibly 1890 (Sykes and Nishenko, 1984; WGONCEP. 1996).

Geologists have recognized that the San Andreas fault system can be divided inro segments. Each segment is associated with a "characteristic" earthquake of a particular magnitude and recurrence interval (Working Group On California Earthquake Probabilities (WGOCEP). 1988 and 1990). More recent studies by the WGONCEP (1996, 2003) have redefined the segments and the characteristic earthquakes for the San Andreas fault system in northern and central California. Two overlapping segments of the San Andreas fault system represent the greatest potential hazard to the subject property. The first segment is defined by the rupture that occurred from the Mendocino **triple** junction to San Juan Bautista along the San Andreas fault during the great M_w 7.9 earthquake of 1906. The WGONCEP (1996) has hypothesized that this "1906 rupture" segment experiences earthquakes with comparable magnitudes about once every two centuries.

The second segment is defined by the rupture zone of the M,, 6.9 Lorna Prieta earthquahe. despite the fact that the oblique slip and focal depth of this event do not fit the typical, right-lateral strike-slip event on the San Andreas fault. Although it is uncertain whether this "Santa Cruz Mountains" segment has **a** characteristic earthquake independent of great San Andreas fault earthquakes. the WGONCEP (1996) has assumed an "idealized" earthquake of M_w 7.0 with the

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same right-lateral slip as the 1989 Loma Prieta earthquake, but having a recurrence interval of 138 years.

Zayante Fault

The Zayante fault lies west of the San Andreas fault and trends about 50 miles northwest from the Watsonville lowlands into the Santa Cruz Mountains. The postulated southern extension of the Zayante fault, known as the Vergeles fault. merges with the San Andreas fault south of San Juan Bautista.

The Zayante fault has a long. well-documented history of vertical movement (Clark and Reitman, 1973), probably accompanied by right-lateral. strike-slip movement (Hall et al., 1974; Ross and Brabb, 1973). Stratigraphic and geomorphic evidence indicates the Zayante fault has undergone late Pleistocene and Holocene movement and is potentially active (Coppersmith, 1979).

Some historical seismicity may be related to the Zayante fault (Griggs, 1973). The Zayante fault may have undergone sympathetic fault movement during the 1906 earthquake on the San Andreas fault. although evidence for this is equivocal (Coppersmith, 1979).

In summary, the Zayante fault should be considered poientiaiiy active. The WGONCEP (1996) considers it capable of generating a magnitude 6.S earthquake with an effective recurrence interval of about 9,000 years.

San Gregorio Fault

The San Gregorio fault. as mapped by Greene (1977). Weber and Lajoie (1974). and Weber et al. (1995) skirts the coastline of Santa Cruz Count! northwarc! from Monterey Bay. and trends onshore at Point Año Nuevo Northward from Año Nuevo. it passes offshore again. to connect with the San Andreas fault near Bolinas Southward from Monterey Bay. it may trend onshore north of Big Sur (Greene. 1977), to connect with the Palo Colorado fault. or continue southward through Point Sur to connect with the Hosgri fault in south-central California. Based on these two proposed correlations. the San Gregorio fault zone has a length of at least 100 miles. and possibly as much as 250 miles

The landward extension of the San Gregorio fault at Point Año Nuevo shows evidence of late Pleistocene and Holocene displacement (Weber and Cotton. 1981). Although stratigraphic offsets indicate a history of horizontal and vertical displacements. the San Gregorio is considered predominantly right-lateral strike slip by most researchers (Greene. 1977; Weber and Lajoie. 1974: and Graham and Dickinson. 1978).

In addition to stratigraphic evidence for Holocene activity. the historic seismicity in the region is

partially attributed to the San Gregorio fault (Greene, 1977). Due to inaccuracies of epicenter locations, even the magnitude 6+ earthquakes of 1926, tentatively assigned to the Monterey Bay fault zone, may have actually occurred on the San Gregorio fault (Greene. 1977).

The WGONCEP (1996) has divided the San Gregorio fault into the "San Gregorio" and "San Gregorio, Sur Region" segments. The segmentation boundary is located west of the Monterey Bay, where the fault appears to have a right step-over. The San Gregorio segment has been assigned a slip rate that results in a M_w 7.3 earthquake with a recurrence interval of 400 years. This is based on the preliminary results of a paleoseismic investigation at Seal Cove by Lettis and Associates (WGONCEP, 1996). and on regional mapping by Weber et al. (1995). The Sur Region segment has been assigned a slip rate that results in a M_w 7.0 earthquake with an effective recurrence interval of 400 years (coincidental with respect to the recurrence interval for the other segment). The Sur Region earthquake was derived from an assumed slip rate similar to that of the Hosgri fault.

Monterey Bay-Tularcitos Fault Zone

The Monterey Bay-Tularcitos fault zone is 6 to 9 miles wide. about 25 miles long, and consists of many en echelon faults identified during shipboard seismic reflection surveys (Greene, 1977). The fault zone trends northwest-southeas1 and intersects the coast in tne vicinity of Seaside and Ford Ord. At this point, several onshore fault traces have been tentatively correlated with offshore traces in the heart of the Monterey Bay-Tularcitos fault zone (Greene, 1977; Clark et al.. 1974; Burkland and Associates, 1975). These onshore faults are, from southwest to northeast. the Tularcitos-Navy, Berwick Canyon. Chupines, Seaside, and Ord Terrace faults. Only the larger of these faults, the Tularcitos-Navy and Chupines, are shown on Figure 2.11 must be emphasized that these correlations between onshore and offshore portions of the Monterey Bay-Tularcitos fault zone are only tentative; for example, no concrete geologic evidence for connecting the Navy and Tularcitos faults under the Carmel Valley alluvium has been observed. nor has a direct connection between these two faults and any offshore trace been found.

Outcrop evidence indicates a variety of strike-slip and dip-slip movements associated with the onshore and offshore traces. Earthquake studies suggest the Monterey Bay-Tularcitos fault zone is predominantly right-lateral, strike-slip in character (Greene, 1977). Both offshore and onshore fault traces in this zone have displaced Quaternary beds and, therefore, are considered potentially active (Buchanan-Banks et al., 1978). One offshore trace. which aligns with the trend of the Navy fault. has displaced Holocene beds and is therefore active by definition (Buchanan-Banks et al., 1978).

Seismically, the Monterey Bay-Tularcitos fault zone may be historically active. The largest historical earthquake *tentatively* located in the Monterey Bay-Tularcitos fault zone are two events. estimated at 6.2 on the Richter Scale. in October 1926 (Greene, 1977). Because of

possible inaccuracies in locating the epicenter of these earthquakes, it is possible that they actually occurred on the nearby San Gregorio fault (Greene, 1977).

Another earthquake in April 1890 might be attributed to the Monterey Bay-Tularcitos fault zone (Burkland and Associates, 1975); this earthquake had an estimated Modified Mercalli Intensity of VII (Table 1) for Monterey County on a whole.

The WGONCEP (1996) has assigned an earthquake of M_w 7.1 with an effective recurrence interval of 2,600 years to the Monterey Bay-Tularcitos fault zone, based on Holocene offshore offsets. Petersen et al. (1996) have a similar earthquake magnitude, but with a recurrence interval of 2,841 years. Their earthquake is based on a composite slip rate of 0.5 millimeters per year (after Rosenberg and Clark. 1995).

TABLE B1
Modified Mercalli Intensity Scale

The modified Mercalli scale measures the intensity of ground shaking as determined from obsenations of an earthquake's effect on people. structures. and the Earth's surface Richter magnitude is not reflected This scale assigns io an earthquake event a Roman numeral from 1 to XII as follows

1	Not felt by people. except rarely under especially favorable circumstances
II	Felt indoors only by persons at rest. especially on upper floors. Some hanging objects may swing.
III	Felt indoors by several. Hanging objects may swing slightly. Vibration like passing of light trucks. Duration estimated. May not be recognized as an earthquake.
IV	Felt indoors by many. outdoors by few. Hanging objects swing. Vibration like passing of heavy trucks; or sensation of a jolt like a heavy ball striking the walls. Standing automobiles rock. Windows. dishes. doors rattle. Wooden walls and frame may creak.
V	Felt indoors and outdoors by nearly everyone; direciion estimated. Sleepers wakened. Liquids disturbed. some spilled. Small unstable objects displaced or upset. some dishes and glassware broken Doors swing; shutters. pictures move. Pendulum clocks stop, start. change rate. Swaying of tall trees and poles sometimes noticed.
VI	Felt by all. Damage slight. Many frightened and run outdoors. Persons walk unsteadily Windows. dishes. glassware broken. Knickknacks and books fall off shelves; pictures off walls. Furniture moved or overturned. Weak plaster and masonry cracked.
VII	Difficult to stand. Damage negligible in buildings of good design and construction: slight to moderaie in well-built ordinary buildings: considerable in badly designed or poorly built buildings. Noticed by drivers of automobiles. Hanging objects quiver. Furniture broken. Weak chimneys broken. Damage io mason?. fall of plaster, loose bricks. stones. tiles. and unbraced parapets. Small slides and caving in along sand or gravel banks. Large bells ring.
VIII	People frightened. Damage slight in specially designed structures: considerable in ordinary substantial buildings. partial collapse; great in poorly built structures. Steering of automobiles affected. Damage or partial collapse to some masonry and stucco. Failure of some chimneys. factory stacks. monuments. towers. elevated tanks. Frame houses moved on foundations if not bolted down: loose panel walls thrown out. Decayed pilings broken off. Branches broken from trees. Changes in flow or temperature of springs and wells Cracks in wet ground and on steep slopes.
IX	General panic. Damage considerable in specially designed structures: peat in substantial buildings. with some collapse. General damage to foundations: frame structures. if not bolted. shified off foundations and thrown out of plumb. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in round: liquefaction
X	Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams. dikes. embankments. Landslides on river banks and steep slopes considerable. Water splashed onto banks of canals. rivers. lakes. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.
XI	Few, if any masonry structures remain standing. Bridges destroyed. Broad fissures in ground: earth slumps and landslides widespread. Underground pipelines completely out of service. Rails bent greatly
XII	Damage nearly total. Waves seen on ground surfaces. Large rock masses displaced. Lines of sight and level distorted Objects thrown upward into the air.

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Nolan, Zinn, and **Associates**

05-0277

Geotechnical Investigation
for
THREE PROPOSED SINGLE FAMILY RESIDENCES
Old San Jose Road
APN 103-071-50
Santa Cruz County, California

Prepared For
Malcolm MacNaughton
Woodside, California

Prepared By
HARO, KASUNICH & ASSOCIATES, INC.
Geotechnical & Coastal Engineers

Project No. SC8435
April 2004

Environmental Review Initial Study
ATTACHMENT 9, 1 of 11
APPLICATION 05-0277

DISCUSSIONS & CONCLUSIONS

Based on the results of our investigation, the three proposed homesites, indicated on Figure 2, are feasible for the site provided the recommendations presented in this report are incorporated into design and construction of the development. Primary geotechnical concerns at the site include loose surficial soils in the top 1 to 3 feet, the potential for slump slides to develop from uncontrolled runoff, setting back from gullies and steep cutslope, and strong seismic shaking.

The residences proposed for Building Sites 3 and 4 may be supported on conventional spread footings embedded into firm native soil or engineered fill. Firm native soil was located 2 to 3 feet below the ground surface. The residence proposed on Building Site 1 should be supported on a drilled pier and grade beam foundation embedded into firm native soil. Piers should be at least 8 feet deep.

Bedrock *is* shallow in the proposed building sites with 2 to 7 feet of soil over the bedrock. The depth of soil cover increases at the drainage gullies. Water will tend to perch on top of the underlying bedrock and flow downslope. If runoff is allowed to concentrate, the soil overlying the bedrock could become overly saturated and slide off the bedrock surface, initiating a debris flow. Therefore, concentrated runoff should be dispersed and directed towards existing drainage features.

The proposed structures will most likely experience strong seismic shaking during the design lifetime. All portions of the wood-frame structure should be tied securely to the foundation. The foundation and structures should be designed utilizing current Uniform Building Code (UBC) seismic design standards.

RECOMMENDATIONS

The following recommendations should be used as guidelines for preparing project plans and specifications:

Site Grading

1. The soil engineer should be notified **at least four (4) working days** prior to any site clearing or grading so that the work in the field can be coordinated with the grading contractor, and arrangements for testing and observation can be made. The recommendations of this report are based on the assumption that the soil engineer will perform the required testing and observation during grading and construction. It is the owner's responsibility to make the necessary arrangements for these required services.

2. Where referenced in this report, Percent Relative Compaction and Optimum Moisture Content shall be based on ASTM Test Designation D1557-00.

3. Areas to be graded should be cleared of obstructions including loose fill, trees not designated to remain, or other unsuitable material. Existing depressions or voids created during site clearing should be backfilled with engineered fill.

4. Cleaned areas should be stripped of organic-laden topsoil. Stripping depth should be about 2 to 6 inches. The actual depth of stripping should be determined in the field by

the soil engineer. Strippings should be wasted off-site or stockpiled for use in landscaped areas if desired

5. Areas to receive engineered fill should be scarified to a depth of 6 inches, moisture conditioned, and compacted to at least 90 percent relative compaction. Portions of the site may need to be moisture conditioned to achieve a suitable moisture content for compaction. These areas may then be brought to design grade with engineered fill.

6. Engineered fill should be placed in thin lifts not exceeding 8 inches in loose thickness, moisture conditioned, and compacted to at least 90 percent relative compaction. The upper 6 inches of pavement subgrades should be compacted *to* 95 percent relative compaction. The aggregate base below pavements should be compacted to at least 95 percent relative compaction.

7. Fills should be keyed and bench 3 into firm soil or bedrock in areas whe e existing slope gradients exceed 6:1.

8. The on-site soils generally appear suitable for use as engineered fill. Materials used for engineered fill should be free of organic material, and contain no rocks or clods greater than 6 inches in diameter, with no more than 15 percent larger than 4 inches.

9. We estimate shrinkage factors of about 10 to 15 percent for the on-site materials when used in engineered fills.

10. Fill slopes should have a maximum slope gradient of 2:1 (horizontal to vertical). The outboard edge of fill slopes should be well groomed and compacted. Following grading, all exposed slopes should be planted as soon as possible with erosion-resistant vegetation.

11. After the earthwork operations have been completed and the soil engineer has finished his observation of the work, no further earthwork operations shall be performed except with the approval of and under the observation of the soil engineer.

Building Site 1 - Pier and Grade Beam Foundation

12. The residence proposed for Building Site 1 should be supported on a drilled pier and grade beam foundation. The foundation should be setback at least 25 feet from the top of the steep slope that descend to the drainage gully to the south and the top of the steep slope that descends to Old San Jose Road to the east.

13. Piers should penetrate the upper 5 feet of soil and be embedded at least 8 below the final ground surface.

14. Piers designed in accordance with the above may be designed for an allowable skin friction of 400 psf plus a 1/3 increase for short term wind and seismic loads in the sandstone. The top 2 feet of soil should be neglected when computing skin friction.

15. For passive lateral resistance an equivalent fluid weight (EFW) of 250 pcf, times 1.5 pier diameters, may be used from 2 to 13 feet. An equivalent fluid weight (EFW) of 475

pcf, times 2 pier diameters, may be used below 13 feet. The top 2 feet of soil and bedrock (measured from the final ground surface) should be neglected in passive design.

16. The soil engineer should observe the pier excavations prior to placing steel reinforcement to verify subsurface soil conditions are consistent with the anticipated soil conditions. Prior to placing concrete, foundation excavations should be thoroughly cleaned and observed by the soil engineer

Building Sites 3 and 4 - Spread Footing Foundations

17. Conventional footings should be embedded at least 12 inches into firm native soil for one story structures and 18 inches into firm native soil for two-story structures. Actual footing depths should be determined in accordance with anticipated use and applicable design standards. The footings should be reinforced as required by the structural designer based on the actual loads transmitted to the foundation. The footings should penetrate the top 1 to 3 feet of loose soil and be founded on firm native soil.

18. The foundation trenches should be kept moist and be thoroughly cleaned of slough or loose materials prior to pouring concrete. Footings located adjacent to other footings or utility trenches should have their bearing surfaces founded below an imaginary 1.5:1 plane projected upward from the bottom edge of the adjacent footings or utility trenches.

19. Foundations designed in accordance with the above may be designed for an allowable soil bearing pressure of 3,000 psf for dead plus live loads. This value may be increased by one-third to include short-term seismic and wind loads.

20. Total and differential settlements under the proposed light building loads are anticipated to be less than 1 inch and ½ inch respectively.

21. Lateral load resistance for structures supported on footings may be developed in friction between the foundation bottom and the supporting subgrade. A friction coefficient of 0.40 is considered applicable. Where footings are poured neat against the adjacent soil surface a passive lateral pressure of 250 pcf, equivalent fluid weight, may be assumed in firm native soil.

Retaining Walls and Lateral Pressures

22. Retaining walls should be designed to resist both lateral earth pressures and any additional surcharge loads. Unrestrained retaining walls up to 8 feet high should be designed to resist an active equivalent fluid pressure of 40 pcf for level backfills, and 55 pcf for sloping backfills inclined up to 2:1 (horizontal to vertical). Restrained walls should be designed to resist uniformly applied wall pressure of 28 H psf, where H is the height of the wall, for level backslopes and 38 H for sloping backslopes inclined to 2:1. The walls should also be designed to resist any surcharge loads imposed on the backfill behind the walls

23. For seismic design of retaining walls, a dynamic surcharge load of 14 H psf, where H is the height of the wall, should be added to the above active lateral earth pressures.

24. The above lateral pressures assume that the walls are fully drained to prevent hydrostatic pressure behind the walls. Drainage materials behind the wall should consist of Class 1, Type A permeable material (Caltrans Specification 68-1.025) or an approved equivalent. The drainage material should be at least 12 inches thick. The drains should extend from the base of the walls to within 12 inches of the top of the backfill. A perforated pipe should be placed (holes down) about 4 inches above the bottom of the wall and be tied to a suitable drain outlet. Wall backdrains should be plugged at the surface with clayey material to prevent infiltration of surface runoff into the backdrains.

25. Retaining wall footings should be designed in accordance with the foundation section of this report.

Slabs-on-Grade

26. Interior and exterior concrete slabs-on-grade should be founded on firm, well-compacted ground. Reinforcing should be provided in accordance with the anticipated use and loading of the slab.

27. The reinforcement of exterior slabs should not be tied to the building foundations These exterior slabs can be expected to suffer some cracking and movement. However, thickened exterior edges, a well-prepared subgrade including premoistening prior to

pouring concrete, adequately spaced expansion joints, and good workmanship should minimize cracking and movement.

28. A professional, experienced with moisture transmission and moisture retarders, should be consulted if moisture through concrete slabs would be undesirable. **At** a minimum, interior concrete slabs-on-grade should be protected from moisture transmission using the current state of practice. The current state of practice is to place a 4-inch blanket of free-draining gravel, covered with a plastic membrane, below slab floors. The membrane should be covered with 2 inches *of* sand or rounded gravel to protect it during construction. The sand or gravel should be lightly moistened just prior to placing the concrete to aid in curing the concrete.

Site Drainage

29. Thorough control of roof and surface runoff at the homesite is important to the long-term performance of the project.

30. Full *roof* gutters should be placed around eaves. Discharge from the roof gutters should be conveyed away from the downspouts via buried, solid, closed conduit pipe and discharged away from improvements.

31. Runoff should be designed to disperse on-site or be discharged directly into the drainage gullies. Concentrated runoff should be dispersed and allowed to sheet flow down the slopes.

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32. Surface drainage should include provisions for positive gradients so that surface runoff is not permitted to pond adjacent to foundations or other improvements. Surface drainage should be directed away from the building foundations. Minimum slope gradients of 2 percent should divert runoff away from all improvements.

33. The migration of water or spread of extensive root systems below foundations, slabs, or pavements may cause undesirable differential movements and subsequent damage to these structures. Landscaping should be planned accordingly.

Plan Review, Construction Observation, and Testing

34. Haro, Kasunich and Associates should be provided the opportunity for a general review of the final project plans prior to construction to evaluate if our geotechnical recommendations have been properly interpreted and implemented. If our firm is not accorded the opportunity of making the recommended review, we can assume no responsibility for misinterpretation of our recommendations. We recommend that our office review the project plans prior to submittal to public agencies, to expedite project review. Haro, Kasunich and Associates also requests the opportunity to observe and test grading operations and foundation excavations at the site. Observation of grading and foundation excavations allows anticipated soil conditions to be correlated to those actually encountered in the field during construction.

Dees & Associates
Geotechnical Engineers
501 Mission Street. Suite 8A Santa Cruz. CA 95060 Phone (831)427-1770 Fax (831) 427-1794

June 23, 2005 Project No. SCR-0046

MR. MALCOLM MACNAUGHTON
% Stephen Graves & Associates
2735 Porter Street
Soquel, California 95073

Subject: Disposal of Collected Surface Runoff

Reference. Three Proposed Single Family Residences
Soquel-San Jose Road
APN 103-071-49
Santa Cruz County, California

Dear Mr. MacNaughton:

The County of Santa Cruz requires runoff from new impervious surfaces to be retained on-site. At the request of Stephen Graves 8 Associates, we visited the site on June 20,2005 and met with your design team to develop general drainage recommendations for the proposed site improvements The proposed site improvements include three new single family residences and widening of the existing access road.

The existing access road is paved and ranges from 11 5 *to* about 20 feet in width We understand some of the road bed needs to be widened to 18 feet and some needs *to* t e widened to 12 feet Most of the road widening will occur where there are gentle slopes or wide shoulders that would accommodate minor cuts and fills A small retaining wall will probably be necessary along the downslope side of the road around station 8+50 to protect the existing road ditch and drain inlet

Collected runoff from the new pavemeni surfaces will be collected and discharged into existing drainages Some of the runoff from the driveway that used *to* go to Soquel-San Jose Road will be diverted and retained on-site to allow the proposed road surface just above Soquel-San Jose Road to discharge into the existing storm drain system on Soquel-San Jose Road

The new homesites are located on gentle to moderate slopes. Based on ?hepercolation rates determined for the septic leachfields and the site's topography, each building site appears to have adequate room to discharge collected runoff on-site provided the runoff is discharged into gravel tilled trench dissipaters located away from steep slopes,

The building envelope on Parcei 1 is located on a moderate siope below the access road. A wide gently sloping bench is located near the base *of* the slope that is well suited for trench dissipaters The dissipaters should be located just below the homesite staked in the field to allow ample room between the dissipater and the steeper slope down to Soquel-San Jose Road.

The building site on Parcel 2 is located on a small knoll with moderate side slopes Collected runoff from this homesite should be dispersed with two or more dissipater trenches tc disperse runoff onto the slopes east of the homesite. The number and location of the dissipater trenches should be determined once the project plans have been developed. however, based on the percolation rates

Environmental Review Initial Study
ATTACHMENT 10, 1 of 2
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and large parcel size there appears to be adequate area to discharge runoff from a typical single family development Runoff from Parcel 2 should not be allowed to flow towards improvements proposed on Parcel 3 to the south or be directly discharged into the drainage swale to the north.

Parcel 3 is located on a broad gentle slope. The upslope neighbors have created a ditch that directs runoff from their upslope property through the homesite on Parcel 3 and onto the slopes above Soquel-San Jose Road. We understand the ditch has been moved at least three times to mitigate erosion on the slope below the outlet of the ditch. The slope below the homesite is very gentle but highly susceptible to erosion. Erosion scars on the slope range from 1 to 15 feet wide and 1 to 3 feet deep. The eroded areas have re-vegetated and blended with the surrounding areas. In order to provide adequate drainage for Parcel 3, the runoff from the upslope neighbors and runoff from the proposed improvements needs to be well controlled to prevent erosion within and below the homesite The percolation rates at Parcel 3 are fast enough to percolate runoff back into the ground if the runoff is slowed down and retained long enough to do so. Runoff from the upslope neighbors should be diverted away from the improvements proposed on Parcel 3 and dispersed in a controlled manner. A combination of retention devices (ponds, gravel pits, etc.), permeable pavers, and dispersal devices may be used to control runoff. Concentrated runoff must not be allowed to flow onto the slopes below the homesite.

Dissipater trenches should be about 12 inches deep, 12 to 18 inches wide and 20 feet long. A perforated pipe (holes down) should be placed about 4 inches from the bottom of the trench and the trench should be backfilled with Caltrans Class 1, Type A permeable material. Drain lines should be connected to a "T" fitting with no more than 10 feet of perforated pipe on each side of the "T". Drain lines and perforated pipes used to discharge runoff should consist of rigid pipe with permanent connections such as glue. Drain lines should be buried or staked to the ground surface. The location of all dissipaters should be approved in the field by the geotechnical engineer prior to installalion.

If you have any questions, please call our office.

REGISTERED PROFESSIONAL ENGINEER
REBECCA LYNN DEES
No. 2623
Exp. 12/05
GEOTECHNICAL
STATE OF CALIFORNIA

DEES & ASSOCIATES

Rebecca L. Dees
Geotechnical Engineer
G.E. 2623

RLD/bd

Ccpies: 2 to Addressee

Environmental Review Inital Study
ATTACHMENT 10, 2 of 2
APPLICATION 05-0277

SANTA CRUZ COUNTY HEALTH SERVICES AGENCY
ENVIRONMENTAL HEALTH SERVICE
701 Ocean Street - Room 312, Santa Cruz, CA 95060 (831) 454-2022

Site 1
Parcel 1

SITE EVALUATION

03-091

☐ PRELIMINARY LOT INSPECTION REPORT

MLD # ______ PROPOSED LOT ____ LOT SIZE ______ SITE LOCATION ____________

APN ____________ WATER SUPPLY ____________ OWNER'S WRITTEN PERMISSION ATTACHED: YES __ NO __

VALIDATION

☑ SITE EVALUATION

☐ FULL ☑ SOIL ☑ GROUNDWATER ☐ PERCOLATION ☐ REPAIR ☐ ALTERNATIVE SYSTEM

☐ OTHER CONSULTATION ____________

REQUESTED BY: Environmental ____________ 684-1555
(NAME) (ADDRESS) (PHONE)

OWNER: Malcolm MacNaughton 395 ____________ CA 94062 (650) 851-2679
(NAME) (ADDRESS) (PHONE)

☐ Item/s checked below do not meet present sewage disposal requirements or require further testing:

- ☐ Soil tests indicate soils not suitable.
- ☐ Lot slope excessive, area has been graded; and/or unable to provide setback from cut bank
- ☐ Winter water table testing required.
- ☐ Tests indicate failure to provide required separation of leaching and seasonal high groundwater.
- ☐ Unable to provide a 100 foot separation between a septic system and a well, spring, stream, or waterway.
- ☐ Inadequate space for both the sewage disposal system and the required future expansion area.
- ☐ Septic area in floodplain.
- ☐ Other ____________

☑ Preliminary inspection of this lot indicates suitability for individual sewage disposal using conventional septic technology under standards currently in effect, subject to any limitations identified below.

☑ Water supply must be developed.

☐ Site conditions may be mitigated by alternative technology. Further testing and evaluation is needed.

Design Parameters

Percolation Rate 1-5 6-30 30-60 60-120 Groundwater Depth for Design Purposes +14'

REMARKS: 6-19mpI

Slope 30-37%
See Attached Soils Report

NOTE: Preliminary inspections and evaluations do not take into account all factors which are considered in the issuance of a sewage disposal permit. An application for sewage disposal will be subject to further evaluation based on the specific sewage disposal design; the possible presence of geologic hazards, biotic resources, or other site constraints; and the provisions of the Sewage Disposal Ordinance in effect at the time of permit application.

____________ ENVIRONMENTAL HEALTH SPECIALIST ______ DATE ____________ SUPERVISOR ______ DATE

Environmental Review Inital Study
ATTACHMENT 11, 1 of 3
APPLICATION 05-0277

site 4 Parcel B

SANTA CRUZ COUNTY HEALTH SERVICES AGENCY
ENVIRONMENTAL HEALTH SERVICE
701 Ocean Street - Room 312, Santa Cruz, CA 95060 (831) 454-2022

SITE EVALUATION

☐ PRELIMINARY LOT INSPECTION REPORT

M.D.# _____ PROPOSED LOT:___ LOT SIZE _____ SITE LOCATION _____

APN _____ WATER SUPPLY _____ OWNER'S WRITTEN PERMISSION ATTACHED YES__ NO__

VALIDATION

☑ SITE EVALUATION

☐ FULL ☑ SOIL ☐ GROUNDWATER ☐ PERCOLATION ☐ REPAIR ☐ ALTERNATIVE SYSTEM

☐ OTHER CONSULTATION _____

REQUESTED BY: Environmental Concepts _____ 684-1555
(NAME) (ADDRESS) (PHONE)

OWNER: Wilcom McNaughton 305 Miramontes CA 94062
(NAME) (ADDRESS) (PHONE)

☐ Items checked below do not meet present sewage disposal requirements *or* require further testing:

- ☐ Soil tests indicate soils not suitable.
- ☐ Lot slope excessive, area has been graded; and/or unable to provide setback from cut bank
- ☐ Winter water table testing required.
- ☐ Tests indicate failure to provide required separation of leaching and seasonal high groundwater.
- ☐ Unable to provide a 100 foot separation between a septic system and a well, spring, stream, or waterway
- ☐ Inadequate space for both the sewage disposal system and the required future expansion area.
- ☐ Septic area in floodplain.
- ☐ Other _____

☐ Preliminary inspection of this lot indicates suitability for individual sewage disposal using conventional septic technology under standards currently in effect, subject to any limitations identified below.

☐ Water supply must be developed.

☐ Site conditions may be mitigated by alternative technology. Further testing and evaluation is needed

Design Parameters

Percolation Rate (1-5) 6-30 30-60 60-120 Groundwater Depth for Design Purposes 4 14'

REMARKS: 3.72 mpi

Slope 28-30%

SEE ATTACHED Soil Report

Environmental Review Initial Stu
ATTACHMENT 11 2 of 3
APPLICATION 05-027

NOTE: Preliminary inspections and evaluations do not take into account all factors which are considered in the issuance of a sewage disposal permit. An application for sewage disposal will be subject to further evaluation based on the specific sewage disposal design; the possible presence of geologic hazards, biotic resources, or other site constraints; and, the provisions of the Sewage Disposal Ordinance in effect at the time of permit application.

ENVIRONMENTAL HEALTH SPECIALIST DATE SUPERVISOR 3/15/05 DATE

Parcel 2

SANTA CRUZ COUNTY HEALTH SERVICES AGENCY
ENVIRONMENTAL HEALTH SERVICE
701 Ocean Street - Room 312, Santa Cruz, CA 95060 (831) 454-2022

SR 2136

PG 4212

03-083

SITE EVALUATION

☐ PRELIMINARY LOT INSPECTION REPORT

M.D.# _____ PROPOSED LOT ____ LOT SIZE _____ SITE LOCATION _____

APN 103-071-48 WATER SUPPLY _____ OWNER'S WRITTEN PERMISSION ATTACHED YES __ NO __

VALIDATION

☐ SITE EVALUATION

☐ FULL ☐ SOIL ☐ GROUNDWATER ☐ PERCOLATION ☐ REPAIR ☐ ALTERNATIVE SYSTEM

☐ OTHER CONSULTATION _____

REQUESTED BY: Environmental Concepts (NAME) PO Box 1445 Aptos, CA 95001 (ADDRESS) 684-1555 (PHONE)

OWNER: Malcolm MacNaughton (NAME) 345 Miramonte, Woodside, CA 94062 (ADDRESS) _____ (PHONE)

☐ Item/s checked below do not meet present sewage disposal requirements or require further testing:

- ☐ Soil tests indicate soils not suitable.
- ☐ Lot slope excessive, area has been graded; and/or unable to provide setback from cut bank.
- ☐ Winter water table testing required.
- ☐ Tests indicate failure to provide required seperation of leaching and seasonal high groundwater.
- ☐ Unable to provide a 100 foot separation between a septic system and a well, spring, stream, or waterway.
- ☐ Inadequate space for both the sewage disposal system and the required future expansion area.
- ☐ Septic area in floodplain.
- ☐ Other _____

☐ Preliminary inspection of this lot indicates suitability for individual sewage disposal using conventional septic technology under standards currently in effect, subject to any limitations identified below.

☐ Water supply must be developed.

☐ Site conditions may be mitigated by alternative technology. Further testing and evaluation is needed.

Design Parameters

Percolation Rate 1-5 SAT 6-30 30-60 60-120 Groundwater Depth for Design Purposes #4'

REMARKS:

Slope 30%

MAINTAIN 100' SET-BACK FROM DRAINAGE SWALE

See ATTACHED SOILS PROFILE

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APPLICATION 05-0227

NOTE: Preliminary inspections and evaluations do not take into account all factors which are considered in the issuance of a sewage disposal permit. An application for sewage disposal will be subject to further evaluation based on the specific sewage disposal design; the possible presence of geologic hazards, biotic resources, or other site constraints; and, the provisions of the Sewage Disposal Ordinance in effect at the time of permit application.

_____ 3/3/05
ENVIRONMENTAL HEALTH SPECIALIST DATE

_____ 3/3/05
SUPERVISOR DATE

ECOSYSTEMS WEST
CONSULTING GROUP

June 16,2005

Paia Levine
Planning Department
county of santa Cruz
701 Ocean Street
Santa Cruz, CA 95060

Re: Biological Review of the Vegetation Assessment for the MacNaughton Property, Application No. 050277

Dear Paia:

This letter summarizes my review of the "Vegetation Assessment" prepared by Albion Environmental, Inc. dated May 5, 2004. The vegetation survey and report was prepared two assess the two parcels in preparation for a minor land division and the creation of two parcels. During the course of their assessment the surveyor, Tom Mahoney, characterized the riparian comdor along Soquel Creek near what was then Parcels 4 and 5. In addition, he surveyed parcels 1, 2, and 3, for the presence of chaparral vegetation. Subsequent to this survey report, the project applicant adjusted the application to **a** subdivision of the parcel west of Old San Jose Road (APN 103-071-50) into three parcels. **As** per Mr. Mahoney's vegetation assessment he surveyed these parcels to determine if they supported .chaparral vegetation and thus high fire hazard habitat. The location of the tree building envelopes and access driveways is shown on the "Tentative Map" prepared by C2G/Civil Consultants Group, Inc. dated April 25, 2005.

Mr. Mahoney of Albion Environmental conducted his vegetation reconnaissance survey on April 23, 2004. During the course of the reconnaissance survey: Ms. Mahoney conducted habitat characterization to determine if the proposed three parcels supported chaparral habitat. He determined that the parcels occurred within to prominent habitat types: one a California annual grassland series and the other a mixed *oak* series. I conducted a site visit to verify this characterization on 14 June 2005.

During my field visit I observed that the plant communities found on each of the three proposed parcels and building envelopes were annual grassland and live *oak* forest/woodland. The species he identified were the same as those observed during my field visit. No chaparral indicator species or habitat was observed anywhere on the portion of the parcel demarcated for the building sites and access driveways and septic systems. No special-status plants or animals were observed during the course of the reconnaissance level surveys. Plant survey was conducted at the appropriate phenological period for the potential listed species known to occur in the vicinity of the parcel.

Environmental Review Inital Study
ATTACHMENT 12, 1 of 3
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6191/2 PACIFIC AVE. • SUITE 4. SANTA CRUZ, CA 95060
PMONE 831-429-6730' FAX 831-429-8742

This reviewer agrees with the characterization of the habitats as depicted in the letter report prepared by Mr. Mahoney.

Should you require further clarification of this review, please don't hesitate to contact me.

Sincerely,

Bill Davilla
Principal/Senior Botanist

Environmental Review Inital Study
ATTACHMENT 12, 2 of 3
APPLICATION 05-0277

COUNTY OF SANTA CRUZ

PLANNING **DEPARTMENT**

701 OCEAN STREET, ROOM 400, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123
TOM BURNS. DIRECTOR

June 28,2005

Steve Graves for McNaughton
2735 Porter Street
Soquel, CA 95073

APN: 103-071-50, 51
App #: 05-0277

Dear Mr. Graves:

Our review of the two letters of vegetation assessment; Albion Environmental, May, 2004 and June, 2004 has been completed. The letters were submitted in order to determine whether the vegetation on the parcels is appropriately described as chaparral habitat. The description is important for the project because additional matrix points are awarded if the vegetation is not chaparral, which is identified as a factor in elevated fire hazard.

A copy of the review letter from our consultant is attached for your reference. The review letter explains that the vegetation assessment has properly concluded that the vegetation is not considered to be chaparral habitat. Further, no special status plants or animals were identified by the survey.

Please call me if you have any questions about this letter. A copy will also be sent to the project planner so this information can be properly incorporated into the project review.

Sincerely,

Paia Levine
Resource Planner

FOR: Ken Hart
Principal Planner
Environmental Planning

CC: Cathleen Carr, Project Planner
Andrea Koch, Resource Planner

Environmental Review Inital Study
ATTACHMENT 12, 3 of 3
APPLICATION 05-0277

ALBION ENVIRONMENTAL, INC.
NATURAL AND CULTURAL RESOURCES CONSULTANTS

1414 SOQUEL AVENUE, SUITE 205
SANTA CRUZ, CALIFORNIA 95062

TELEPHONE (831) 469-9128
FACSIMILE (831) 469-9137

June 24, 2004

Malcolm MacNaughton
c/o Stephen Graves
Stephen Graves & Associates
2735 Porter Street
Soquel, CA 95073

Re: Vegetation Mapping, APN 103-071-50

Dear Mr. MacNaughton:

At your request, I have prepared a vegetation map for your property adjacent to and north of Old San Jose Road in Santa Cruz County (APN 103-071-50)("Study Area"). The purpose of the map is to demarcate the location and extent of vegetation communities on the Study Area, with particular emphasis on the potential presence of chaparral vegetation. Chaparral is considered a Critical Fire area by Santa Cruz County. For areas mapped as Critical Fire, the Santa Cruz County General Plan Requires "Report from biologist showing site is not chaparral habitat". This report and associated map builds upon the May 5, 2004 vegetation assessment letter prepared, in part, for three potential building envelopes on APN 103-071-50.

Definitions

Many types of chaparral exist, differentiated by factors such as species composition, stand physiognomy, and geographic location (Holland 1986; Sawyer and Keeler-Wolf 1995; CDFG 2002). As with all vegetation communities, definitions are often vague and boundanes diffuse, since plant species act as individuals along environmental gradients. Vegetation communities are therefore artificial groupings meant to classify and communicate information aboui a particular assemblage of plants (Sawyer and Keeler-Wolf 1995).

Chaparral in Santa Cruz County consists of numerous vegetation series recognized by Sawyer and Keeler-Wolf (1995), and is usually distinguished by a dense shrub layer and the presence of species such as manzanita *(Arctostaphylos* spp.), ceanothus (*Ceanothus* spp.), chamise *(Adenostoma fasciculatum),* and toyon *(Heteromeles arbutifolia*), among many others. Northern Mixed Chaparral is a common chaparral type in Santa Cruz County, and is defined, in part: by Holland (1986) as:

Broad-leaved sclerophyll shrubs. 2-4 meters tall, forming dense, often nearly impenerrable vegetation dominated by Quercus dumosa, Adenostoma fasciculatum, *and any one of several taxa in* Arctostaphylos *and* Ceanothus. *Plants typically deep-rooted. Usually little or no understory vegetation.*

Therefore, for the purposes of this report, chaparral is distinguished by: (1) a dense. nearly impenetrable shrub layer 2-4 meters (6-12 feet) tall that lacks significant tree or herb development. and (2) the presence of species common to recognized chaparral in the region. Including such species as manzanita, ceanothus. chamise. and toyon.

Environmental Review Inital Study
ATTACHMENT 13, 1 of 6
APPLICATION 05-0272

Methods

Prior to the field visit, a color aerial photograph with a parcel boundary overlay, dated June 2003, was obtained from the Santa Cruz County GIS staff. The photograph was reviewed for areas of similar color, texture, structure, and other attributes that differentiate vegetation units. I conducted a field visit on June 18, 2004. The Study Area was traversed on foot and relatively homogeneous (structure, species composition) vegetation units were delimited on the aerial photograph. The minimum mapping unit used was approximately 0.20-acre (8,700 ft²). Vegetation units were described using nomenclature in Holland (1986), Sawyer and Keeler-Wolf (1995), and CDFG (2002). Plant taxonomy nomenclature follows Hickman (1993).

Results

Four vegetation communities, and one unvegetated community, were located on the Study Area during the June 18,2004 field visit (Appendix **A).** Vegetation series correspond to those described in Sawyer and Keeler-Wolf (1995) and CDFG (2002). None likely meet the definition of chaparral used in this report. The vegetation communities are described below, summarized in Table 1, and depicted on the map in Appendix A.

Table 1. Vegetation Communities Observed on the Study Area

Vegetation Series	'Physiognomy	Habitat Type
California Annual Grassland Senes		
Mixed Oak Senes	Tree Dominated	Woodland
Redwood Senes	Tree Dominated	Forest
Coyote Brush-California Sagebrush-Poison Oak Senes	Shrub Dominated	Coastal Scrub
Unvegetated 1	Likely Shrub Dominated Prior to Clearance	Unvegetated
Unvegetated 2	Tree/Shrub Dominated Prior to Clearance	Unvegetated

California Annual Grassland Series

The California annual grassland series (=Non-native Grassland (Holland 1986)) is an herbaceous dominated vegetation community composed principally of non-native grasses and herbs. Dominant species in this community on the Study Area include wild oat *(Avena* sp.), soft chess (*Bromus hordeaceus*), ripgut brome *(Bromus diandrus*), Italian ryegrass (*Lolium multiflorum*), Harding grass (*Phalaris aquatica*), wild radish *(Raphanus sativus*), geranium *(Geranium molle*), Italian thistle (*Carduus pycnocephalus*), little quaking grass *(Briza minor),* rattlesnake grass (*Briza maxima*), scarlet pimpernel (*Anagallis arvensis*), and vetch (*Vicia* sp.). Native grasses and herbs are occasionally present, including purple needlegrass (*Nassella pulchra*), blue-eyed-grass (*Sisyrinchium bellum*), soap plant (*Chlorogalum pomeridianum*), spreading rush (*Juncus parens),* yarrow *(Achillea millefolium*), brodiea *(Brodiea elegans),* and bracken fern (*Pteridium aquilinum* var. *pubescens),* with occasional shrubs such as coyote brush. On the Study Area, California annual grassland series occurs in three small areas in the vicinity of the three proposed building envelopes. California annual grassland series does not meet the definition of chaparral used in this report.

Environmental **Review** Inital Study
ATTACHMENT 13, 2 of 6
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Mixed Oak Series

Mixed oak series is a tree dominated vegetation community, with a diverse and variable shrub and herb understory. Dominant species are native trees including coast live oak (*Quercus agrifolia*), interior live oak *(Quercus wislizeni*), California bay (*Umbellularia californica*), with occasional madrone *(Arbutus rnenziesii),* California buckeye (*Aesculus californica*), and emergent Douglas-fir (*Pseudotsuga menziesii).* The understory vanes according to tree canopy cover, disturbance, and other factors, but usually consists of a layer of native shrubs including coyote brush, California blackberry (*Rubus ursinus),* poison oak *(Toxicodendron diversiloburn),* coffeeberry (*Rhamnus californica),* California hazelnut (*Corylus cornuta* var. *californica),* toyon, snowberry (*Symphoricarpos albus* var. *laevigatus*), and oceanspray *(Holodiscus discolor),* and mixed herb layer of soap plant, wood fern (*Dryopteris arguta*), hound's tongue (*Cynoglossum grande),* yerba buena (*Satureja douglasii*), as well as other native and non-native herbs and grasses Characteristic of the California annual grassland series. On the Study Area, Mixed oak series is the dominant vegetation community and occurs throughout the area. Mixed oak series does not meet the definition of chaparral used in this report.

Redwood Series

Redwood series is a tree dominated vegetation community dominated by redwood *(Sequoia sempervirens*) with occasional co-dominant Douglas-fir. **A** discontinuous subcanopy is present, consisting of tanoak (*Lithocarpus densiflorus*), California bay, coast live oak, and interior live oak, with widely scattered big-leaf maple *(Acer macrophyllum*) and madrone. Due to deep shade, the shrub layer is generally sparse, consisting primarily of natives such as California hazelnut, snowberry, California blackberry, thimbleberry *(Rubus parviflorus*), and wood rose *(Rosa gymnocarpa*). The herb layer is generally well developed, dominated primarily by native herbs including yerba buena, wood fem, hound's tongue, swordfem *(Polystichum muniturn),* hedge nettle (*Stachys bullata*), trillium *(Trillium ovatum*), disporum (*Disporum hookerij,* sweet-scented bedstraw *(Galium triflorum*), goose *grass (Galium aparine),* and sweet-cicely *(Osmorhizo chilensis).* Redwood series occurs primarily in mesic locations in the northern portion of the Study Area, with a smaller stand located on an upper slope along the Southwestern property boundary. Redwood series does not meet the definition of chaparral used in this report.

Coyote Brush-California Sagebrush-Poison Oak Series

The Coyote brush-California sagebrush-poison oak series is composed of a dense, continuous shrub layer dominated principally by native shrubs such as coyote brush, California sagebrush, poison oak, sticky monkeyflower (*Mimulus aurantiacus*), and toyon. The tree and herb layer is generally lacking. This vegetation community, while shrub dominated, appears to better meet the definition of coastal scrub rather than chaparral because: (1) it is classified as Coastal Scrub in CDFG (2002); (2) it is generally lower growing (less than 6 feet tall) than chaparral; (3) it lacks common indicator species of chaparral in the region (e.g., manzanita, ceanothus, chamise); and (4) it better meets the definition of Central Coastal Scrub rather than Northern Mixed Chaparral in Holland (1986). The Coyote brush-California sagebrush-poison oak series occurs primarily in upper slope and ridgetop locations in the western portion of the Study Area.

Unvegetated

One portion of the Study Area had been cleared prior to the field visit The vegetation clearing took place in two stages The first, and largest area, had been cleared prior to the original site ("Unvegetated 1" in Appendix **A)** visit conducted on April 23, 2004 and detailed in the May 5, 2004

letter report. Since I did not observe this area prior to clearing, I cannot definitively determine the vegetation community that was present, and whether or not it may qualify as chaparral vegetation. However, based on slash piles and resprouting vegetation that were observed during the June 18, 2004 field visit, the area was likely a dense shrub layer of poison oak with a fringing canopy of coast live oak and interior live oak. This would not likely meet the definition of chaparral used in this report.

The second stage of vegetation clearing took place after I had observed the area to be cleared ("Unvegetated 2" in Appendix **A).** It consisted of an open canopy of coast live oak and interior live oak, with a shrub layer of poison oak. No oak trees were removed as part of the vegetation clearing, but the poison oak layer was removed by the time of the June 18,2004 field survey. Based on the methodologies used in this report, this area would have been mapped as Mixed oak series and would not qualify as chaparral vegetation.

Conclusion

Four vegetation communities, and one unvegetated community, were located on the Study Area during the June 18, 2004 field visit (Appendix **A).** No areas were observed on the Study Area that likely meet the definition of chaparral, as defined in this report, and used by Santa Cruz County to determine areas of Critical Fire. The results of this report represent conditions observed at the time of the field visit.

Please don't hesitate to contact me if you have questions or need additional information.

Sincerely,

Tom Mahony
Plant Ecologist

(831) 469-1775
tmahony@albionenvironmental.com

REFERENCES

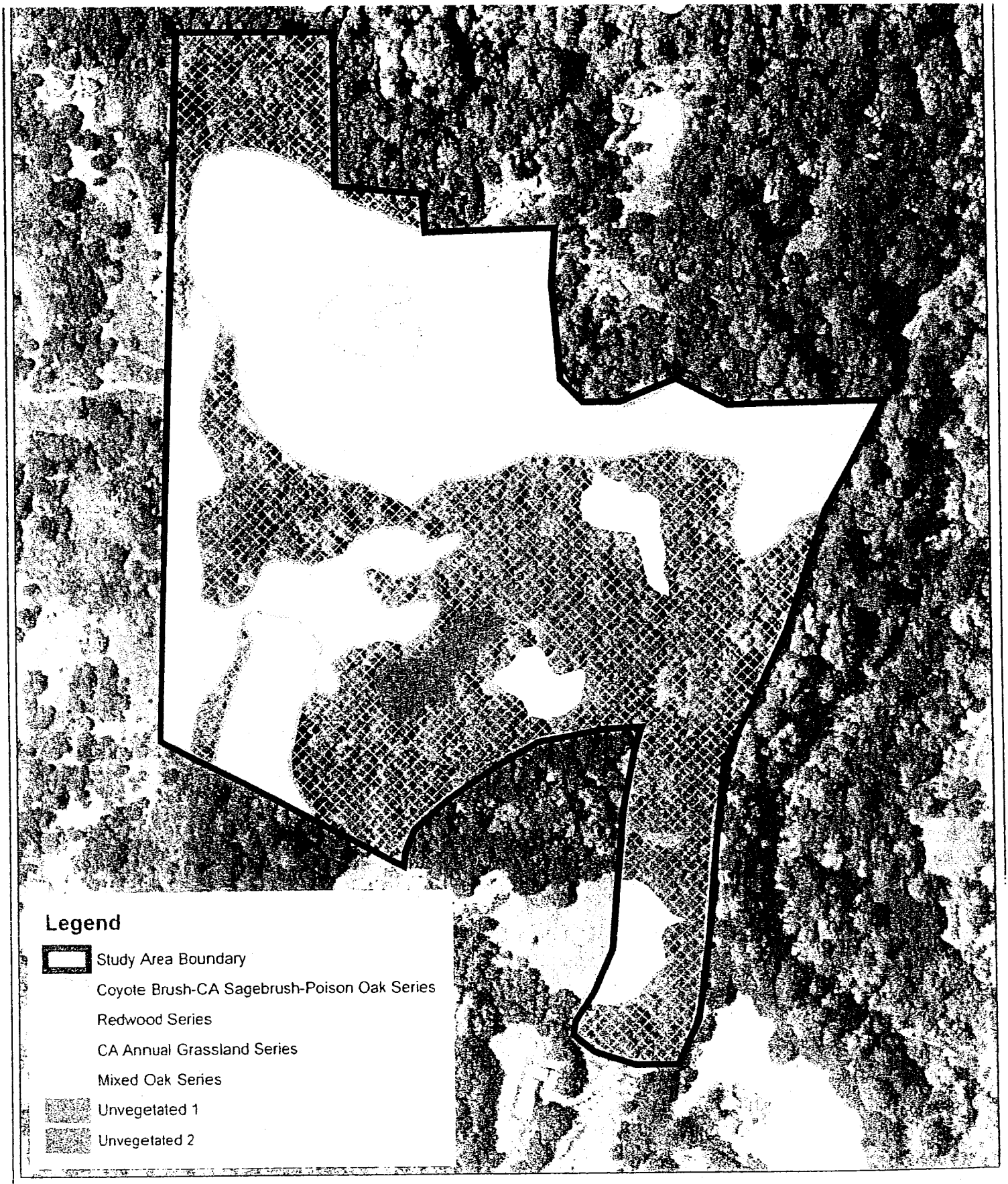
California Department of Fish and Game. 2002. List of California terrestrial natural communities recognized by the California natural diversity database.

Hickman, J.C. (ed.). 1993. The Jepson manual: higher plants of California. University of California Press, Berkeley, **CA.**

Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California California Department of Fish and Game, Sacramento, **CA.**

Sawyer, J.O and T. Keeler-Wolf. 1995. **A** manual of California vegetation. California Native Plant Society. Sacramento.

Appendix A. Map of Vegetation Communities on the Study Area



Mapscale 1:3,500

0 100 200 400 600 800 1,000 1,200 Feet

Appendix A Map of Vegetation Communities on the Study Area.

ATTACHMENT 13, 6 of 6
APPLICATION 05-0277

Stephen R. Staub
Forester & Environmental Consultant
STAUB

Stephen Graves & Associates
2735 Porter Street
Soquel, CA 95073

March 7, 2005

Re Focused Forestry Assessment of Timber Resource Overlay for Minor Land Division on Lands of Henderson/MacNaughton (APN # 103-071-50)

Mr. Graves,

In February of this year you asked that we review the above referenced parcel (map attached) with regard to the County's Timber Resource overlay as it relates to the proposed Minor Land Division (MLD) that you are shepherding through County Planning Specifically, you asked that we evaluate the presence and commercial viability of the conifer trees located on that portion of the property that the County has designated Timber Resource, and then make a determination as to whether said timber resource or the associated landscape features were somehow vital to future management of the neighboring parcels to the north which also share the Timber Resource Overlay

The attached Timber Resource Overlay Map identifies approximately 1.5 aces of "timber overlay" in the property's northeast comer. Field review of the overlain portion of the property confirmed the presence of timber. though two-thirds of the timber is located on extremely steep terrain (80%+) between Old San Jose Road and Sundance Hill Road that is bisected by an ephemeral watercourse, and the remaining one-third is located on similarly steep ground that is bisected by the same watercourse and bound by two forks on Sundance Hill Road. Given timber falling constraints; Forest Practice Regulations restricting harvesting near watercourses and steep terrain, public health and safety concerns when dealing with public roads (Old San lose Road), and bonding and associated difficulties when operating from or near improved private drives (Sundance Hill Road), it is my professional opinion that the portion of tlie property that the County has designated as "Timber Resource" is not commercially viable timberland.

Field review suggests that the parcels which lie north of the subject property at the end of Sundance Hill Road (APNs 103-071-42, 34. 45. and 36). do not require use of the subject parcel for timber harvesting. Also, as discussed in the paragraph above, the limited timber volume in the designated Timber Resource area does not present economies of scale that "make or break" the future harvest potential of said properties. In fact, the four parcels north of the subject piece likely provide better locations for gathering and loading of logs given the presence of moderate ground near ridgetop areas. That said, a successful timber harvest that included the four northern parcels and the small Timber

Environmental Review Initial Study
ATTACHMENT 14, Lot 3
APPLICATION 05-0277

6010 Highway 9, # 6 , Felton CA 95018 Phone: (831) 335-1452 Fax: (831) 335-1462 Registered Professional Forester, License No. 1911

Resource area on the subject parcel would likely be preempted given the lack of total timber volume and the presence of road and residential improvements.

In summary, the Timber Resource overlay portion of Santa Cruz Assessor Parcel Number 103-071-50 does not contain enough harvestable timber to warrant consideration with regard to the proposed MLD, nor does it provide needed access or economies of scale that would affect potential future management of the four parcels to its north. It should be noted that my evaluation is limited only to the Timber Resource overlay portion of the subject property and the associated parcels to the north, and does not constitute a property-wide timber evaluation or compatibility analysis relative to the proposed lot line configurations. If there are any questions, please feel free to call our office (831) 335-1452.

Sincerely,

Cassady Bill Vaughan, RPF #2685

Environmental Review Inital Study
ATTACHMENT 14, 2 of 3
APPLICATION 05-0277

Environmental Review Inital Study
ATTACHMENT 14 3 of 3
APPLICATION 05-0277

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT
701 OCEAN STREET, SUITE 400, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123
TOM BURNS, DIRECTOR

July 26, 2004

Stephen Graves and Associates
2735 Porter Street
Soquel, CA 95073

SUBJECT: Archaeological Reconnaissance Survey for APN 103-071-50 and 103-071-51

To Whom It May Concern,

The County's archaeological survey team has completed the Phase 1 archaeological reconnaissance for the parcel referenced above. The research has concluded that pre-historical cultural resources were not evident at the site. A copy of the review documentation is attached for your records. No further archaeological review will be required for the proposed development.

Please contact me at 831-454-3372 if you have any questions regarding this review.

Sincerely,

Elizabeth Hayward

Planning Technician

Enclosure

Environmental Review Inital Study
ATTACHMENT 15 1 of 2
APPLICATION 05-0277

EXHIBIT B

SANTA CRUZ ARCHAEOLOGICAL SOCIETY
1305 EAST CLIFF DRIVE, SANTA CRUZ, CALIFORNIA 95062

Preliminary Prehistoric Cultural Resource
Reconnaissance Report

Parcel APN: 103-071-(50 and 51) SCAS Project #: SE-04-987

Planning Permit #: 04-0248 Parcel Size: 42 AC

Applicant: Steven Graves

Nearest Recorded Prehistoric Site: CA-SCR-90 about 1 mile south

On July 1, 2004 (24) members of the Santa Cruz Archaeological Society spent a total of (1T) hours on the above described parcel for the purposes of ascertaining the presence or absence of prehistoric cultural resources on the surface. Though the parcel was traversed on foot at regular intervals and diligently examined, the Society cannot guarantee the surface absence of prehistoric cultural resources where soil was obscured by grass, underbrush or other obstacles. No core samples, test pits, or any subsurface analysis was made. A standard field form indicating survey methods used, type of terrain, soil visibility, closest freshwater source, and presence or absence of prehistoric and/or historic cultural evidence was completed and filed with this report at the Santa Cruz County Planning Department.

The preliminary field reconnaissance did not reveal any evidence of prehistoric cultural resources on the parcel. The proposed project would therefore, have no direct impact on prehistoric resources. If subsurface evidence of such resources should be uncovered during construction the County Planning Department should be notified.

Further details regarding this reconnaissance are available from the Santa Cruz County Planning Department or from Rob Edwards, Director, Archaeological Technology Program. Cabrillo College, 6500 Soquel Drive, Aptos CA 95003, (831) 479-6294, or email redwards @Cabrillo.cc.ca.us.

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Environmental Review Inital Study
ATTACHMENT 15, 2 of 3
APPLICATION 05-0277

Project Planner: Joan Van Der Hoeven
Application No.: 05-0277
APN: 103-071-50

Date: September 18. 2006
Time: 11:06:30
Page: 1

Environmental Planning Completeness Comments

========= UPDATED ON JANUARY 3, 2006 BY ANDREA M KOCH =========
1) Thank you for submitting an owner-agent form from the owner of APN 103-071-47. Please also submit an owner-agent form from the owner of APN 103-071-48.

========= UPDATED ON JANUARY 5, 2006 BY KENT M EDLER =========

The following comments are in addition to Andrea Koch's completeness comments dated 1/3/06:

1) The review letter from Nalan Associates must be an original wet-signed copy. Also the letter submitted does not review the most current set of plans. Nolan's letter must review the latest set of plans.

2) Hand written notes on engineered drawings are not accepted (labeling of habitable and non-habitable building envelopes). Please have the civil engineer revise the plans and re-submit.
========= UPDATED ON APRIL 17, 2006 BY KENT M EDLER ========= 1) The letter from Nolan and Associates is unclear as to whether or not all septic must be contained within the development envelopes or not. (Note: the plans show septic outside of the development envelopes on Lots 1 & 2). It must be clear whether Nolan approves of the "Approved Septic Location" for Parcels 1 & 2. Also note that the Parcel 1 location is partially on slopes greater than 30%.

2) The revised grading plan sheet C1.5 shows a new wall to be constructed in order to keep all grading within the easement. The 2:1 slope shown behind the wall is incorrectly drawn and will result in grading outside of the easement. The wall height either must be increased or submit an owner agent form from the adjacent property owner.

Environmental Planning Miscellaneous Comments

========= REVIEW ON MAY 19. 2005 BY JESSICA L DEGRASSI =========
All comments from previous application 04-0284 apply.

========= UPDATED ON SEPTEMBER 21, 2005 BY KENT M EDLER =========

1) Engineered Grading and Drainage Plans must be submitted

2) Flan review letters from the project soils engineer and engineering geologist must be submitted.

3) An erosion control plan prepared by a Certified Erosion Control Specialist must be submitted.

4) A Landscape Plan must be submitted, which includes the number, size and species of all mature trees removed for this project as well as all replacement trees. Replacement trees will be requiredon a one-to-one basis and must be native.
========= UPDATED ON JANUARY 3, 2006 BY ANDREA M KOCH =========

Environmental Review Inital Study
ATTACHMENT 16, 1 of 9
APPLICATION 05-0277

1) No additional comments

Housing Completeness Comments

========== REVIEW ON MAY 26. 2005 BY TOM POHLE ==========
NO COMMENT

The project plans do not indicate any existing dwellings on the property which is proposed for dividing into 3 separate parcels. Based on our understanding of the proposed project, and in accordance with the terms of County Code 37.10. this project will be required to pay a Small Project In Lieu Fee of $10,000.

Housing Miscellaneous Comments

========== REVIEW ON MAY 26. 2005 BY TOM POHLE ==========
NO COMMENT

The project involves relatively large parcels of property. Any future creation of additional parcels for either the existing, or any proposed new parcels. could create an additional Affordable Housing Obligation (AHO). It is therefore recommended that conditions be recorded against the title of all (existing and new) parcels for this proposed project, providing notice that County of Santa Cruz Affordable Housing In Lieu Fees may be due should any additional land division occur in the future.

========== UPDATED ON MAY 26. 2005 BY TOM POHLE ==========

Long Range Planning Completeness Comments

========== REVIEW ON MAY 25. 2005 BY GLENDA L HILL ========== Environmental Review Inital Study
NO COMMENT

ATTACHMENT 16, 2 of 9
APPLICATION 05-0277

Long Range Planning Miscellaneous Comments

========== REVIEW ON MAY 25. 2005 BY GLENDA L HILL ==========
A portion of this property is mapped Critical Fire Hazard. Ensure that the building sites are located outside of this area or the density standards of General Plan Policy 6.5.4(d) will apply.

Dpw Drainage Completeness Comments

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

========== REVIEW ON MAY 27, 2005 BY CARISA REGALADO ==========
Comments made on the first and second routing of previous application 04-0284 still need to be addressed. Until further information is submitted for those comments, a thorough review of this application cannot be completed. Once submitted, additional items may need to be addressed before the application can be deemed complete.
========== UPDATED ON OCTOBER 3, 2005 BY CARISA REGALADO ==========
2nd ROUTING. 9/30/25:

Revised drawings dated 8/25/05, a letter from Zack Dahl of Steven Graves & Associates dated 9/2/05, and letters from Rebecca Dees of Dees & Associates dated 6/23/05 & 8/31/05 have been received.

Based on the submitted information, this application is deemed complete. Please see Miscellaneous Comments for additional comments.

Dpw Drainage Miscellaneous Comments

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

========== REVIEW ON MAY 27, 2005 BY CARISA REGALADO ==========
No comment. ========== UPDATED ON OCTOBER 3, 2005 BY CARISA REGALADO ==========
The following items are required prior to recording the final map:

1) For Sheet C1.1. DRAINAGE NOTE, the Dees & Associates drainage letter must be specifically referenced; i.e., date and subject of letter.

2) Matchline sheet numbering was not updated from last submitted plans. Please correct.

3) Label on plans the eroded gully and catch basin that is to be protected from sediment build-up and clogging per Dees & Associates 8/31/05 letter. Specify protection proposed.

Dpw Driveway/Encroachment Completeness Comments

========== REVIEW ON MAY 16, 2005 BY RUTH L ZADESKY ==========
No comment. project involves a subdivision or MLD.

Dpw Driveway/Encroachment Miscellaneous Comments

========== REVIEW ON MAY 16, 2005 BY RUTH L ZADESKY ==========
No comment.

Environmental Review Inital Study
ATTACHMENT 16, 3 of 9
APPLICATION 05-0277

Dpw Road Engineering Completeness Comments

========== REVIEW ON MAY 27, 2005 BY GREG J MARTIN ==========
========== UPDATED ON SEPTEMBER 29, 2005 BY GREG J MARTIN ==========
Please label the gradient of Sundance Road at its intersection with Soquel San Jose Road. The grade appears to be approximately 35 percent. The gradient of a street entering an intersection shall not be more than three percent with a distance of 20 feet from the edge of Soquel San Jose Road. The profile shall be required to be designed by a civil engineer based upon the County-s requirements and the constraints imposed by the topography. Sundance Road from Station 8+14 to Station 10+00 is recommended to be a minimum of 18 feet wide instead of the 14 feet shown on the plans.

If you have any questions please call Greg Martin at 831-454-2811.
========== UPDATED ON JANUARY 18, 2006 BY GREG J MARTIN ========== The sight distance at the intersection of Sundance Hill Road and Soquel San Jose Road is recommended to

be evaluated by a Traffic Engineer or qualified Civil Engineer, shown on the plans. Any mitigation measures should be incorporated into the plans. ========== UPDATED ON SEPTEMBER 13, 2006 BY GREG J MARTIN ==========
The sight distance analysis by C2G in a letter dated August 31, 2005 provides sufficient information to conclude that the recommended mitigations should provide adequate sight distance at the intersection of Sundance Hill Road and Old San Jose Road. The mitigations are below and should be made conditions of approval for the project or shown on the plans. Trimming the existing vegetation north of Sundance Hill Road and the removal of small trees and shrubs less than 6-inches in diameter. Signage for Sundance Hill Road along Old San Jose Road should be installed by the County at the applicant's cost

Dpw Road Engineering Miscellaneous Comments

========== REVIEW ON MAY 27, 2005 BY GREG J MARTIN ==========
1. The intersection of Sundance Hill Road and Soquel San Jose road is recommended to be improved. The Sundance Hill Road intersection approach is recommended to be 24 feet in width and no less than 18 feet wide minimum. The returns on the intersection are recommended to be 20 feet in radius. A profile of the Sundance Hill Road should be provided and meet county standards for intersections. The transition in plan view from a 24 foot width to a 17 foot width does not meet engineering design standards part of the improvements, the sight distance at this intersection is recommended to be'evaluated by a Traffic Engineer or qualified Civil Engineer and any mitigation measures incorporated into the plans. The minimum structural section for a road is 3 inches of asphalt concrete over inches of aggregate base.

2. For any portion of road which serves three or more parcels the width is recommended to be 24 feet and no less than 18 feet wide minimum. The minimum structural section for a road is 3 inches of asphalt concrete over inches of aggregate base.

3. Access roads (driveways) serving two parcels are recommended to be 24 feet in width and no less than 18 feet wide minimum. The structural section shall meet driveway requirements.

4. Please show driveways and profiles for each new parcel

5. Roads that extend through the property shou d indicate how many parcels the road serves. Place this information on the plans.

If you have any questions please contact Greg Martin at 831-454-2811. ========== UPDATED ON MAY 27, 2005 BY GREG J MARTIN ==========
========== UPDATED ON SEPTEMBER 29, 2005 BY GREG J MARTIN ==========
========== UPDATED ON JANUARY 18, 2006 BY GREG J MARTIN ==========
========== UPDATED ON SEPTEMBER 13, 2006 BY GREG J MARTIN ==========

Environmental Health Completeness Comments

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

========== REVIEW ON MAY 25, 2005 BY JIM G SAFRANEK ========== Preliminary septic testing results were positive for the 3 proposed parcels. Completeness for EHS has been satisified for this proposal.

Environmental Health Miscellaneous Comments

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

========== REVIEW ON MAY 25, 2005 BY JIM G SAFRANEK ==========
NO COMMENT

Environmental Review Initial Study
ATTACHMENT 16, 5 of 9
APPLICATION 05-0277

COUNTY OF SANTA CRUZ

INTER-OFFICE CORRESPONDENCE

DATE: September 21,2005

TO: Cathleen Carr, Planning Department

FROM: Carl Rom, Department of Public Works

SUBJECT: APPLICATION 05-0227, APN 103-071-50, HENDERSON, SOQUEL-SAN JOSE ROAD

This submittal addresses my comments from the first submittal.

Given the extent of work shown on the improvement plans in this submittal, including work within the Soquel-San Jose Road right-of-way, it might be best if the project conditions require that the review and approval of the improvement plan be done by Public Works prior to map recordation.

If that is the case, upon approval of the plans and prior to recording the map, the developer will have to sign a subdivision agreement and submit securities to guarantee the construction of all work shown on the plans.

If you have any questions or would like to discuss these comments, please call me at extension 2806.

CDR:cdr

Environmental Review Inital Study
ATTACHMENT 16 6 of 9
APPLICATION 050227

COUNTY OF SANTA CRUZ

INTER-OFFICE CORRESPONDENCE

DATE: May 25,2005

TO: Cathleen Carr, Planning Department

FROM: Carl Rom, Department of Public Works

SUBJECT: APPLICATION 05-0277, APN 103-071-50, HENDERSON, SOQUEL-SAN JOSE ROAD

As with all minor land divisions, the developer will have to submit a parcel map to Public Works for review and approval. If Public Works is going to inspect the construction of improvements, plans should also be submitted to us for review and approval. Upon approval of the plans and prior to recording the map, the developer will have to sign a subdivision agreement and submit securities to guarantee the construction of all work shown on the improvement plans.

I also have the following comments specific to this application:

1. The applicant should correct the MLD number on all plan sheets.
2. The boundary between this parcel and APN 103-071-36 (labeled 103-071-45) doesn't agree with the assessor's map. It appears that a lot line adjustment has been done that is not reflected on the application.

If you have any questions or would like to discuss these comments, please call me at extension 2806.

CDR:cdr

Environmental Review Inital Study
ATTACHMENT 16 7 of 9
APPLICATION 05-0277

CENTRAL FIRE PROTECTION DISTRICT
of Santa Cruz County
Fire Prevention Division

930 17th Avenue, Santa Cruz, CA 95062
phone (831) 479-6843 fax (831) 479-6847

Date:	September 13,2005
To:	Vanessa Henderson
Applicant:	**Stephen Graves and Assoc.**
From:	Tom Wiley
Subject:	**05-0277**
Address	
APN:	*103-071-50*
OCC:	10307**150**
Permit:	*20050269*

We have reviewed plans for the above subject project.

Please ensure designer/architect reflects equivalent notes and requirements on velums as appropriate when submitting for **Application for Building Permit.**

When plans are submitted for multiple lots in a tract, and several standard floor Plans are depicted, include Fire District Notes on the small scale Site Plan. For each lot, submit only sheets with the following information; Site Plan (small scale, highlight lot, with District notes), Floor Plan, Elevation (roof covering and spark arreslor notes), Electrical Plan (if smoke detectors are shown on the Architectural Floor Plan this sheet is not required). Again, we must receive, VIA the COUNTY. SEPARATE submittals (appropriate site plans and sheets) FOR EACH APN!!

NOTE on the plans that these plans are in compliance with California Building and Fire Codes (2001) and District Amendment.

UWIC (Urban Wildland Interface Code) papers must be filled out for this site prior to the plan check being started, as further construction requirements may be needed in order io obtain a permit. Please obtain the form from Central Fire District: and make an appointment with the Central Fire Protection District for review.

NOTE on the plans the OCCUPANCY CLASSIFICATION, BUILDING CONSTRUCTION TYPE-FIRE RATING and either SPRINKLERED or NON-SPRINKLERED as determined by the building official and outlined in Chapters *3* through 6 of the 2001 California Building Code (e.g., R-3, Type V-N, Sprinklered).

Since this property is above the Urban Services Line, the tire flow and fire hydrant requirements are mitigated by the requirements outlined in the District rural Water Storage Requirements.

SHOW on the plans, DETAILS of compliance with District rural Water Storage Requirements. Please refer to and comply with the diagram on Page 5.

NOTE ON PLANS: New/upgraded hydrants, water storage tanks, and/or upgraded roadways shall be installed PRIOR to and during time of construction (CFC 901.3).

Environmental Review Inital Study
ATTACHMENT 16, 8 of 9
APPLICATION 05-0277

SHCW on the plans DETAILS of compliance with the District Access Requirements outlined on ihe enciosed handout. No roadway may be less than 12 feet in width, please be specific for the roadway width at the end of the road where it is indicated "14' easement".

The roadway profile with grade percentages shall be shown on the plans. These plans shall be wet stamped and signed by the Engineer/Designer/Survey of the roadway. The Central Santa Cruz Fire District must be notified and given to opportunity to inspect the finished grade prior to the installation of the permanent driving surface.

NOTE on the plans that the building shall be protected by an approved automatic sprinkler system complying with the edition of NFPA 13D currently adopted in Chapter 35 of the California Building Code.

NOTE that the designer/installer shall submit three (3) sets of plans and calculations for the underground and overhead Residential Automatic Sprinkler System to this agency for approval. Installation shall follow our guide sheet.

Show on the plans where smoke detectors are to be installed according to the following locations and approved by this agency as a minimum requirement:

- One detector adjacent to each sleeping area (hall, foyer, balcony, or etc).
- One detector in each sleeping room.
- One at the top of each stairway of 24" rise or greater and in an accessible location by a ladder.
- There must be at least one smoke detector on each floor level regardless of area usage.
- There must be a minimum of one smoke detector in every basement area.

NOTE on the plans where address numbers will be posted and maintained, Note on plans that address numbers shall be a minimum of FOUR (4) inches in height and of a color contrasting to their background.

NOTE on the plans the installation of an approved spark arrestor on the top of the chimney. Wire mesh not to exceed ½ inch.

NOTE on the plans that the roof coverings to be no less than Class "**B**" rated roof.

NOTE on the plans that a 100-foot clearance will be maintained with non-combustible vegetation around all structures.

Submit a check in the amount of $100.00 for this particular plan check, made payable to Central Fire Protection District. A $35.00 **Late Fee** may be added to your plan check fees if payment is not received within 30 days of the dale of this Discretionary Letter. INVOICE MAILED TO APPLICANT. Please contact the Fire Prevention Secretary at (831) 479-6843 for total fees due for your project.

If you should have any questions regarding the plan check comments, please call me at (831) 479-6843 and leave a message, or email me at tomw@centralfDd.com. All other questions may be directed to Fire Prevention at (831)479-6843.
CC: File & County
As a condition of submittal of these plans, the submitter, designer and installer certify that these plans and details comply with applicable Specifications, Standards, Codes and Ordinances, agree that they are solely responsible for compliance with applicable Specifications, Standards, Codes and Ordinances, and further agree to correct any deficiencies noted by this review, subsequent review, inspection or other source. Further, the submitter, designer, and installer agrees to hold harmless from any and all alleged claims to have arisen from any compliance deficiencies, without prejudice, the reviewer and the Central FPD of Santa Cruz County.
Any order of the Fire Chief shall be appealable to the Fire Code Board of Appeals as established by any party beneficially interested, except for order affecting acts or conditions which, in the opinion of the Fire Chief, pose an immediate threat to life, property, or the environment as a result of panic, fire, explosion or release.
Any beneficially interested party has the right to appeal the order served by the Fire Chief by filing a written "NOTICE OF APPEAL" with the office of the Fire Chief within ten days after service of such written order. The notice shall state the order appealed from, the identity and mailing address of the appellant, and the specific grounds upon which the appeal is taken.
10307150-091305

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APPLICATION 05-0277

C2G/Civil Consultants Group, Inc.
Engineers/Planners

4444 Scotts Volley **Drive** • Suite 6 • **Scotts** Valley, **CA** 95066-4529
831/438-4420 • **Fax** 831/438-5829 • [name]@c2gengrs.com

August 31, 2005

Mr. Malcolm MacNaughton
395 Miramonte Rd.
Woodside, Ca. 94062
(831) 234-2490

Subject: Sight Distance Study for
3-Parcel Minor Land Division
APN 103-071-50 Soquel, California

Dear Mr. MacNaughton:

During C2G's initial Minor Land Division submittal, C2G proposed a 100-foot transition widening of Sundance Hill Road as it approached Old San Jose Road (from the existing 16-foot wide road to a 24-foot wide road) Though C2G feels the widening of Sundance Hill Road to County Standards is a significant traffic improvement to Sundance Hill Road, the County of Santa Cruz has requested a sight distance evaluation in addition to the widening This sight distance evaluation has been performed by C2G/Civil Consultants Group, Inc at the intersection of Sundance Hill Road and Old San Jose Road and the summary of the findings are described below

Old San Jose Road is a rural roadway that travels through the Santa Cruz Mountains north of Soquel to Summit Road The roadway traverses steep terrain with steep inclined sections of roadway and road curvature that require decreased speeds by the motorist. The Sundance Hill Road intersection is located along a section of Old San Jose Road were steep inclines and sharp curves do not exist The slope of the Old San Jose Road from the Sundance intersection to 400-feet north has an incline of approximately 2-percent The slope of Old San Jose road increases to approximately 3-percent as it declines south bound from Sundance Hill Road. The posted speed limit on Old San Jose Road is 40 miles per hour (mph) for this area

C2G's staff visited the site August 29th to observe morning traffic as well as perform field measurements to evaluate the available site distance for north and south bound traffic along Old San Jose Road Site distance measurements are normally taken from a spot located 3 5-feet above the pavement at the location of the minor street approach to a spot located 4 25 feet above the pavement on the approaching lane of the major street Per the County of Santa Cruz Standards for sight distance (County of Santa Cruz Design Criteria. Part 6), the measurement location is located 6-feet off of the travel way On Sundance Hill Road, the shoulder is approximately 2-feet wide. creating the measurement location 8-feet from the path of travel on Old San Jose Road Using a 35 mph design speed (per the County Standards), a minimum sight distance of 250-feet is achieved in both directions (see accompanying exhibit) When performing the same sight distance calculations using Caltrans and American Association of State Highway and Transportation Officials (AASHTO) a

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more restrictive distance is calculated

When performing the Caltrans method for sight distance, a speed survey needs to be performed C2G conducted this survey the same day field measurement were obtained for the roadway The sampling of travel speeds allowed the 85th percentile speeds along Old San Jose Road to be generated for the site distance calculation A 41 mph speed was determined for northbound traffic, and a 43 mph speed was determined for the southbound traffic. With the 85th percentile speeds and existing ground slopes, the Caltran Standards would require a sight distance of 299-feet looking south and 346-feet looking north In addition to the greater sight distances required by the Caltrans method, the point of measurement is located 10-feet from the path of travel plus the width of the shoulder, but not less than 13-feet (in this case, the minimum 13-feet would apply)

The Caltrans sight distance can easily be achieved for the north bound traffic once the Sundance Hill Road approach is widened to 24-feet The widening of Sundance will require an existing 24-inch Oak Tree to be removed. The tree removal allows the comer to be re-shaped to a gentler slope allowing full compliance with Caltrans and County of Santa Cruz sight distance standards for the north bound traffic on Old San Jose Road

Achievement of the Caltrans sight distance standard for south bound traffic, based upon the 13-foot setback, would not be easily accomplished with the existing curvature of the roadway. Using the posted speed limit (40 mph), instead of the 85th percentile speeds (43 mph), reduces the sight distance by 37-feet which allows the site distance to be accomplished with some minor improvements These improvements would include trimming the existing vegetation north of Sundance Hill Road and the removal of small trees less than 6-inches in diameter. In additional to removing shrubs and trees within 15-feet of the roadway, consideration should be made for the addition of a "Cross Street Ahead" sign (Caltran W2-2) along the southbound side of Old San Jose Road in advance of Sundance Hill Road This sign would warn drivers of the presence of a cross street ahead With Soquel Creek Road being located an additional 120-feet south of Sundance Hill Road, the specialized "Cross Street Ahead" sign with two off-set streets would be the most appropriated for this area

If you have any questions regarding this letter, please do not hesitate to contact me or Michael O'Neal

Very truly yours,

C2G/CIVIL CONSULTANTS GROUP, Inc.

Todd R. Creamer: P.E
Senior Civil Engineer

X:\10-00 MacNaughton\MacNaughton-sight distance_ltr.wpd

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APPLICATION 05-0277

Site Distance Calculations

For
3 - Parcel Land Division
Sundance Hill Road

C2G/Civil Consultants Group, Inc.
Engineers/Planners
4444 Scotts Volley Drive/Suite 6
Scotts Valley, California 95066-3424
(831)438-5829 (FAX) (831)438-4420 (Voice)
E-mail — (First Name)@C2Gengrs.com

Project Name: McNaughton
Iob Number:
Date:

Site Distance Calculations

Direction	Design Speed (mph)	Break Reaction		Grade Effect on Stopping		Total Site Distance (ft)
		Time (s)	Distance (ft)	% Grade	Distance (ft)	
Looking South	41	2.5	150	3.00	148	299
Looking Noi th	43	2.5	158	-2.00	188	346

Notes:

1. Source: *A* Policy *on Geometric Desing of* Highways *and Streets,* American Associalion of State Highway and Transporlalion Officials (AASHTO), 2001
2. Design Speads: Based upon filed speed survey performed by C2G on:

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APPLICATION 05-0277

C2G/Civil Consultants Group, Inc
Engineers/Planners
4444 Scotts Volley Drive/Suite 6
Scotts Valley, California 95066-3424
(831)438-5829 [FAX] (831) 438-4420 [Voice]
E-mail — [First Name]@C2Gengrs com

Project Name: McNaughton
Job Number:
Date

Site Distance Calculations

Direction	Design Speed (mph)	Break Reaction		Grade Effect on Stopping		Total Site
		Time (s)	Distance (ft)	% Grade	Distance (ft)	Distauce (ft)
Looking South	40	2.5	147	3.00	141	288
Looking North	40	2.5	147	-2.00	163	309

Notes:

1 Source *A Policy on Geometric Desing of Highways and Streets*, American Associalion of Slate Highway and Transporlalion Officials (AASHTO). 2001
2 Design Speads Based upon filed speed survey perlormed by C2G on

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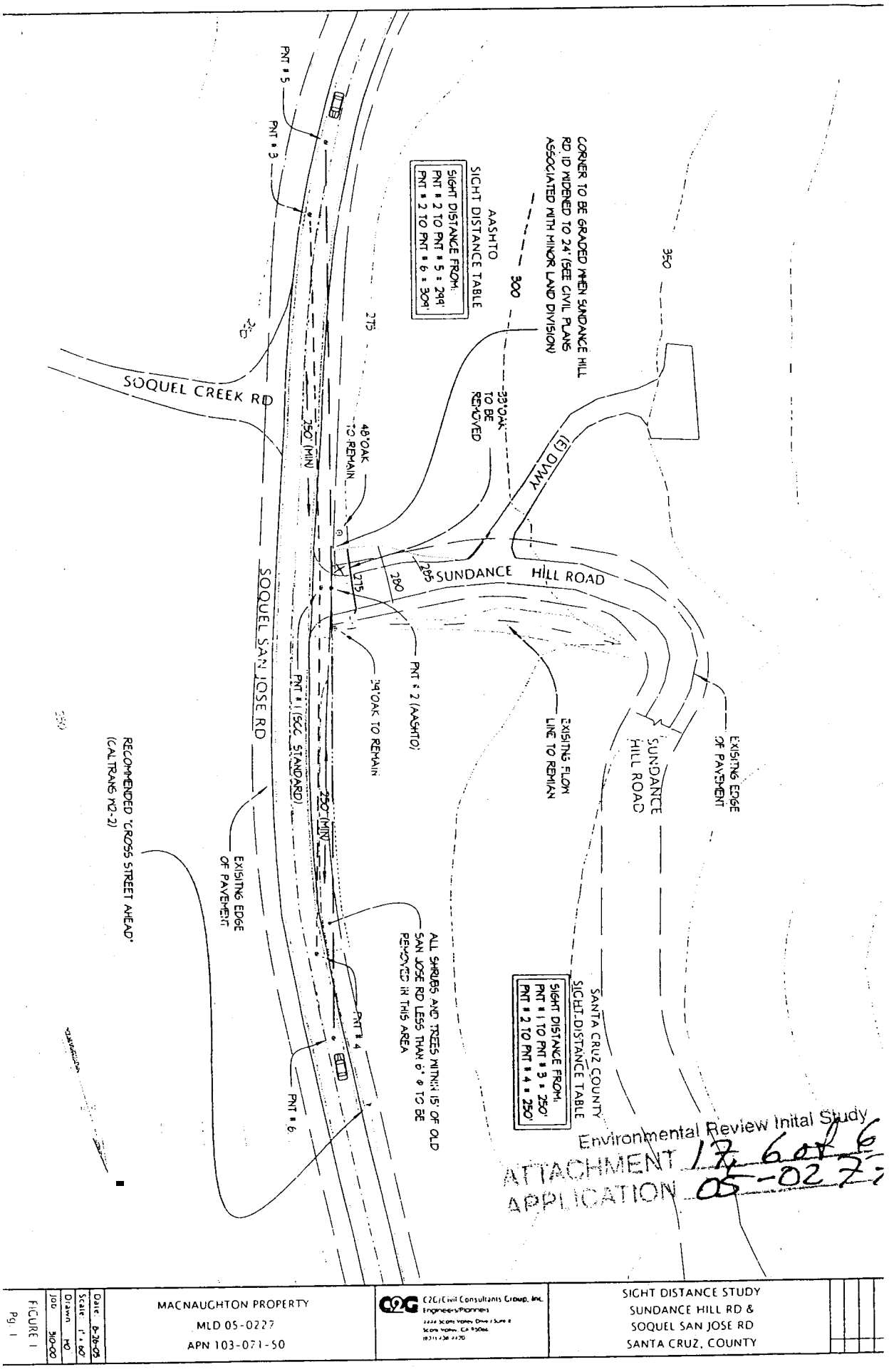

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General Plan and Rural Density Matrix

AFN **103-071-50**

The County allows for development based on a rural density score that is calculated from points obtained on nine different constraint matrixes. Below is a description of where the parcel falls under each constrain mamx and the score it obtained. Scores may *vary* for the rural residential and agricultural sections of the parcel.

		R-R Points	*Cond. Points*
1.	LOCATION *AND* ACCESS: Rural Residential Rural Home sites 2 1/2 – 20 acre sites; All lots served by a private mad 12' road w/ turnouts.	7	7
2.	GROUNDWATER QUALITY; Adequate Quantity, Good Quality; Supplied by a private or mutual well system.	8	8
3.	WATER RESOURCES PROTECTION: Septic Systems in areas without any known problems; Outside primary recharge and water supply watersbed areas.	6	6
4.	TIMBER RESOURCES: No timber resources present on the property. *There is a tiny portion of the timber resources overlay on the northeast comer of the property. This has been addressed by Stuab Forestry and deemed not to be a viable timber resource.*	10	10
5.	BIOTIC RESOURCES: Development activities outside designated important wildlife habitats. See *attached Albion Env biotic letter.*	10	10
6.	EROSION: Bedrock Geology: Purisma 10(0.03) + 8(0.38) + 5(0.58) = 6.32 See *slope map for slope breakdown*	6.32	6.32
7.	SEISMIC ACTIVITY: Nor located in a fault zone; no potential for liquefaction. *See Haro Kasunich geotechnical report.*	10	10
8.	LANDSLIDE: Bedrock Geology: Purisma 9(0.03) + 8(0.38) + 5(0.58) = 6.29 See *slope mag for slope breakdown.*	6.29	6.29
9.	FIRE HAZARD: Rural Residential: Less than 10 minutes response time on non-dead end road; Entire property outside Critical Fire Hazard Area on a 12-foot-road with turnouts. *See Critical Fire letter from Albion Environmental.*	12	12
	Subtotal:	75.61	75.61
	Deduct Cumulative Constraint Points:	0	0
	Final total:	75.61	75.61

There *are* **17.97 net developable acres.** Based on the score obtained, the **Rural Residential (R-R) portion of the parcel *can* subdivide with a minimum parcel size of** 5 **net developable acres per parcel.**

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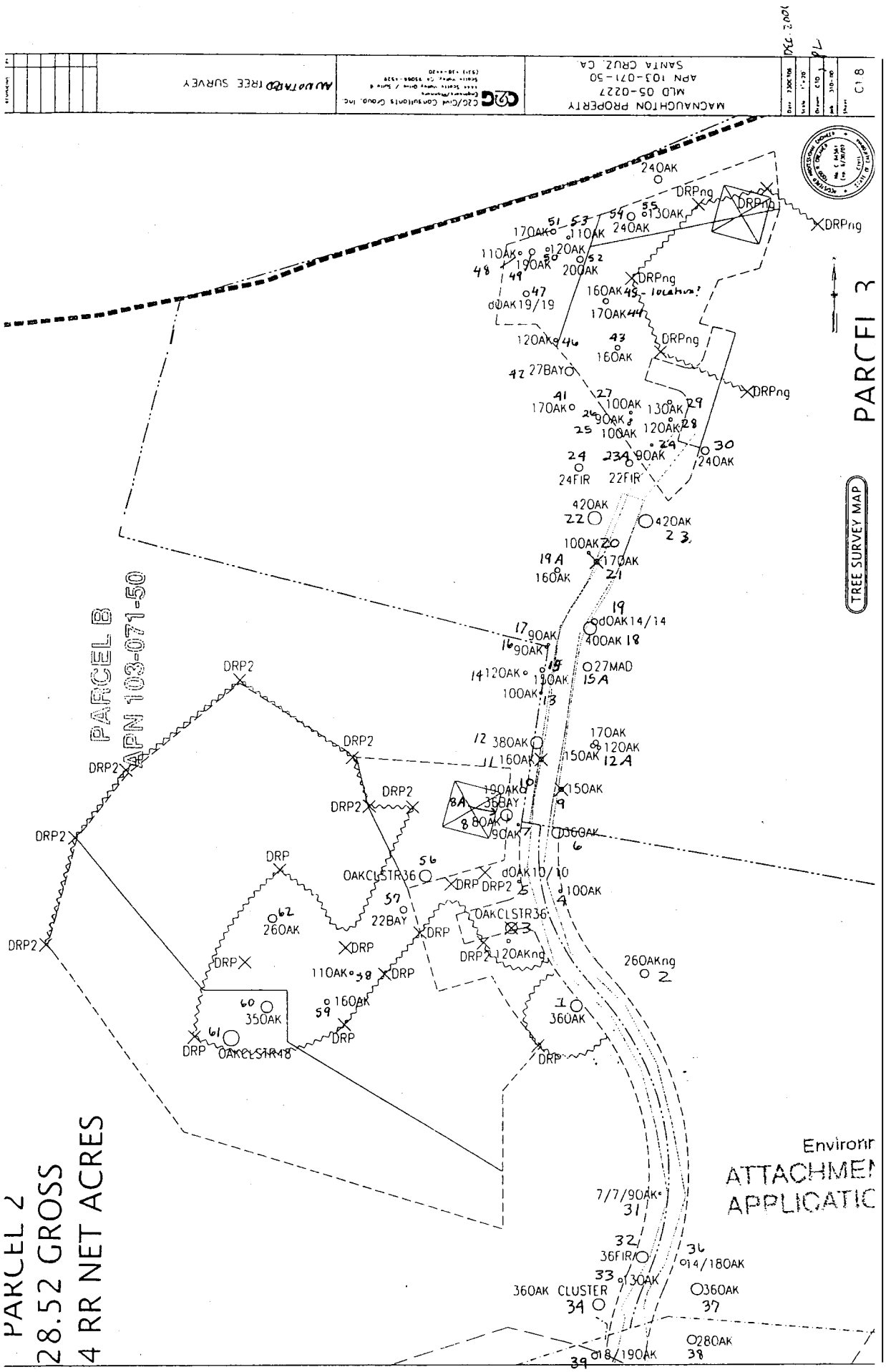

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ATTACHMENT 19
APPLICATION 05-0277

STEPHEN GRAVES & ASSOCIATES
Environmental and Land Use Consulting

January 10, 2007

Joan Van der Hoeven
County of Santa Cruz
Planning Dept., 4th Floor
701 Ocean Street
Santa Cruz, CA 95060

RE: Negative Declaration Comments for Application #05-0277, APN 103-071-50.

Dear Ms. Van der Hoeven,

Our office has reviewed the Initial Study and Negative Declaration **for** the three-lot land division off of Old San Jose Road and we have the following comments and suggested revisions:

To start, we would like to point out that the County does not have any regulations or restrictions on tree removal when a property is located outside of the Coastal Zone, not within a riparian comdor, or not considered habitat for rare. endangered or locally unique species. In essence, that means that any of the *oak* trees on this property could have been removed without a permit, without being replaced and without any mitigation measures. That being said, the property owner, Malcolm MacNaughton, purposely chose to maintain all of the subject ***oak*** trees on the property in hopes of preserving as many as possible during the land division and development process. However, because of Mr. MacNaughton's choice to not remove any *oak* trees before submitting a development application, it now appears that the County of Santa Cruz is unduly penalizing him for trying to do the right thing.

This land division has been designed to minimize oak tree removal and loss of the existing *oak* woodland by locating all three building sites within natural clearings (mixed grasslands]. We are concerned that the initial study inaccurately overstates the impacts of tree removal. The report states that 23 to **26** *oaks* will be removed, which is incorrect. **A** total of ten oak trees are proposed to be removed as part of the land division and future Parcel **3** driveway. In addition 12 trees located within the proposed building envelopes may or may not be impacted by future development. The report fails to distinguish between trees that are to be removed in order to construct improvements necessary for the land division and those trees that could be impacted by future development.

Future development impacts also need to distinguish between trees that **will** need to be removed adjacent to the existing driveway (Parcel **3)** and those trees that *could* be impacted depending on the size and location of the proposed residences on Parcels 2 and 3. The initial study proposes mitigation measures that include a conservation easement to protect individual trees. **A** conservation easement is not the appropriate mechanism in this case. Conservation easements are usually reserved for sites that contain habitat for rare, endangered and/or locally unique species. These easements have significantly adverse impacts on property values and cloud title, and

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2735 Porter Street
S[illegible]35073
Phone (831)46[illegible]5 . ax (831)465-0678

should not be used indiscriminately. In addition, the initial study should recognize the context of the project as follows:

- There are thousands of oaks on this 40+-acre parcel.
- Many of the trees that are proposed for removal are either isolated *oaks,* and/or smaller scrub type trees, that will not impact the *oak* canopy or woodland.
- Removal of certain trees of poor structure may actually improve the overall health of the oak woodland (this can be verified by an arborist) by reducing overcrowding and enhancing the health of larger more established *oaks*.

Here is a breakdown of the *oak* trees that will be removed as part of this project. This information is consistent with the plans prepared by Civil Consultants Group. The total is broken up into four sections, the shared access road to Parcel 2, the private driveway to Parcel 3, the development envelope for Parcel 2 and the development envelope for Parcel 3.

The Shared Access Road to Parcel 2 – This work will be designed and constructed as part of the land division process. As shown on the plans there three trees proposed to be removed: Tree #5, a 10" *oak,* and Tree #3, a scrub *oak* cluster will be removed. Tree #32, a cluster of three *oaks,* 7", 7", and 9", may be removed. **This is a total of three (3) trees removed, none of which are part of an *oak* woodland. Therefore, there should be no mitigation measures required for removal of these smaller isolated trees.**

The Private Driveway to Parcel 3 – This driveway has been preliminarily designed, however, as defined by County Code, a grading permit for this work will not be issued unless accompanied by a building permit. Rural land divisions do not require that house designs be included with the tentative map. Therefore, this will not be work that is completed as part of the land division. This driveway will be developed at some future date when the property owner wished applies for a permit to construct a residence on Parcel 3. As shown on the plans there are seven trees that will need to be removed when the driveway is constructed: Tree #7, a 9" *oak,* Tree #9, a 15" ***oak.*** Tree #11, a 16" *oak,* Tree #16 and #17, two 9" *oaks,* Trees #21 and #22, a 10" and 17" *oak.* **This is a total of seven (7) trees removed. The removal of the trees would only have a minimal impact the existing woodland canopy.**

Parcel 2 Development Envelope – There are no trees proposed to be removed within this development envelope. There are three *oak* trees, ranging from 11" to 26" dbh, within the building envelope, which could be impacted by future development. However, since these *oaks* are located in the area designated as annual/mixed grasslands, they should not be considered as part of the ***oak*** woodland. Due to the configuration of the meadow, the trees have been included within the building envelope but they should not be considered as being removed. **Total number of trees removed is zero (0).**

Parcel 3 Development Envelope – There are no trees proposed to be removed within this development envelope. There are nine trees, ranging from 9" to 17" dbh. within the building envelope, that could be impacted by future development. The building envelope includes the upper portion of the meadow and an area of

transitional *oak* woodland. The building envelope is relatively small in proportion to the size of Parcel 3, 7.5 acres, and was designed to offer flexibility for future home and site design. Some of these trees within the building envelope will most likely be removed, but it is not correct to assume that all trees within the building envelope will be removed. **Therefore, the number of trees to be removed is zero (0), but up to nine (9) trees could be proposed for removal as part of a future building permit.**

As discussed above, there will be a total of three oaks removed as part of this land division. The remaining oaks will be removed as part of grading and building permits that will be applied for after the Parcel Map has been recorded. Here is the breakdown:

Activity	Parcel 2	Parcel 3	Total
Trees removed by Land Division Improvements Plan.	3	0	3
Trees removed by future driveway.	0	7	7
Potential tree removals by future home site development.	up to 3	up to 9	up to 12

Land Division Improvement Plan – As part of the land division improvement plans, there will be *3 oak* trees removed. However, due to the small sizes of these *oaks*, a scrub *oak* cluster and two small multi-trunk trees, and their location on the edge of the established woodland these *oaks* should not have to be replaced. This is a 40+-acre parcel and under any other circumstances, removal of these *oaks* would be considered standard property maintenance with no permits or tree replacement required.

Future Driveway Development – As shown in the conceptual driveway design to Parcel 3, seven oak trees will need to be removed. However, this construction will not be taking place as part of the land division. The County will not issue a grading permit for a driveway on an undeveloped parcel without a building permit for a residence included. Therefore, any mitigation measures proposed for this aspect of the project should be included in a deed restriction that will apply when the property owner moves forward with a building and grading application.

The requirement of a 3:1 replacement ratio for any *oak* or native tree removed appears excessive given the fact that under any other circumstance, the property owner would not need a County permit or need to plant replacement trees if he or she desired to remove *oak* trees. In addition, given the small trunk size and limited canopy of many of the oak trees to be removed, this should be considered as tree thinning that could improve the overall quality of the *oak* woodland, rather then as a loss of *oak* woodland. With an *oak* woodland of this nature, preserving the canopy is the most important element to maintaining the viability and health of the woodland. **We recommend that a deed restriction be recorded on Parcel 3 that requires a licensed arborist to evaluate** all **trees impacted or removed by the construction of the driveway and building site. Any *oak* tree removed that is deemed to be contributing to the woodland canopy shall be replaced at a 1:1 ratio with the location to be determined by the project arborist.**

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Future Tree Removal within Building Envelopes – As noted above, there are *oak* trees located within the building envelopes for Parcel 2 and Parcel 3. While it is the intent of the current property owner to preserve all of these *oak* trees, it may be necessary to remove some of these trees as part of the future development of the home site. Therefore, a deed restriction should be recorded on Parcel 2 and Parcel 3 that requires a licensed arborist to evaluate all trees impacted or removed by the construction of the home site. Any *oak* tree removed that is deemed to be contributing to woodland canopy shall be replaced at a 1:1 ratio with the replacement species location to be determined by the arborist, a botanist or landscape architect.

Based on the above discussions, we propose the following revisions to the proposed mitigation measures:

A. *No* revisions ***proposed.***

B. 1. Prior to recording the Parcel Map, the owner shall sign and record a deed restriction on Parcel 2 addressing preservation of trees adjacent to the building envelope and replacement of trees removed as part of the home site development.

   a. The deed restriction shall require preservation of the four trees which are within the development envelope, but outside the building envelope: numbers 56, 60, 61, and 8A (if this tree is not proposed to be removed to protect tree number 6).

   b. The deed restriction shall require, prior to issuance of a building or grading permit, that a licensed arborist evaluate all trees impacted or removed by the proposed grading and/or construction activities. Any oak tree removed that is deemed to be contributing to the woodland canopy shall be replaced at a 1:1 ratio with the replacement species location to be determined by the arborist.

2. Prior to recording the Parcel Map, the owner shall sign and record a deed restriction on Parcel 3 addressing preservation of trees adjacent to the building envelope and driveway and replacement of trees removed as part of the driveway and home site development.

   a. The deed restriction shall require preservation of the following four trees which are within the development envelope, but outside the building envelope: numbers 46 through 55.

   b. The deed restriction shall require, prior to issuance of a building or grading permit for the private driveway, that a licensed arborist shall evaluate all trees impacted or removed by the proposed grading and/or construction activities. Any *oak* tree removed that is deemed to be contributing to the woodland canopy shall be replaced at a 1:1 ratio with the replacement species location to be determined by the arborist.

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3. Prior to scheduling the public hearing, the applicant shall revise the tentative map *as* follows:
   a. *No revisions proposed.*
   b. *No revisions proposed.*
   c. Indicate the trees to be protected via deed restriction on Parcel 2 and Parcel **3.**

4. *No revisions proposed.*

5. Replace the term "map" with "Parcel Map."

6. Replace the term "map" with "Parcel Map." *This mitigation should also be expanded to include the following text:* The arborist shall work with County staff to determine if any of the *oak* trees to *be* removed are considered to be contributing to the woodland canopy. For every significant *oak* or native tree removed, it shall be replaced at a 1:1 ratio with the replacement species location to be determined by the arborist.

7. This mitigation measure should be removed. The number of trees to be replaced and their location shall be addressed by the licensed arborist as part of the arborist report.

C. Replace the term "tentative map" with 'Parcel Map."
D. Replace the term "tentative map" with "Parcel Map."

Due to the potential impacts that the initial study will have on the land division, we would like to request **a** meeting **with** County staff prior to finalizing the proposed mitigation measures. Thank you for considering our comments and recommendations and we look forward to hearing back from you.

Sincerely,

Zachary Dahl
Senior Associate

CC: *Claudia Slater, Environmental Coordinator*
Paia Levine, Deputy Env. Coordinator
Mark Henderson, owner
Malcolm Macnaughton, owner

Environmental Review Inital Study
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APPLICATION 05-0277

Paia Levine

From: Zachary Dahl, Stephen Graves & **Asso.** [zack@sgaconsulting.us]
Sent: Friday, February 02, 2007 1:38 PM
To: Paia Levine
cc: Stephen Graves and **Asso.**; Malcolm MacNaughton
Subject: Initial **Study** Comments for #05-0277

Hi Paia,

This letter is to follow up on our comments regarding the proposed mitigation measures for MLD #05-0277. After consulting with our project biologist on the issue of oak tree removal, it appears that your originally proposed mitigation measures will be the best way to address the native trees that will be removed as part of this project.

However, we do ask that the mitigation measures be clarified as follows:

1. Change the reference to "conservation easement" to "declaration of restrictions" as the means to protect the oak trees directly adjacent to the building envelopes.

2. Change the term "recording the map" or "recording the tentative map" with "recording the parcel map" in the mitigation measures.

3. Clarify in mitigation measures that all tree replacement related to the future driveway and building site on Parcel 3 shall be incorporated into the future development permit for that parcel. This way, all tree removal specific to the final driveway and building site design can be assessed as part of the building and grading permit for Parcel 3. This would also apply to the building envelope on Parcel 2.

All tree removal that is part of the required improvements for the land division shall be addressed as part of the improvement plan that accompanies the parcel map.

Please move forward and finalize the CEQA Negative Declaration for this project. Thank *you* for working with us on these issues.

Zack

--
Zachary Dahl
Senior Associate Planner

Stephen Graves and Associates
2735 Porter Street
Soquel, CA 95073
Tel: (831) 465-0677 ext. 101
Fax: (831) 465-0678

Environmental Review Inital Study
ATTACHMENT 20 6 of 6
APPLICATION 05-0277

C2G/Civil Consultants Group, Inc.
Engineers/Planners

4444 Scotts Valley Drive • Suite 6 • Scotts Valley, CA 95066-4529
831/438-4420 • **Fax** 831/438-5829 • [name]@c2gengrs.com

March 12, 2007

Ms. Samantha Haschert
Project Planner
County of Santa Cruz
701 Ocean St.
Santa Cruz. CA 95060

Subject: Response to MacNaughton Project
APN 103-071-50
Application #05-0277

Dear Samantha :

It is the opinion of Civil Consultants Group (C2G) that the two proposed development and building envelopes are feasible. The two envelope boundaries are mandated by the follow three design constraints:

- Avoid slopes greater than 30%
- Setback from all geologic hazards or constraints as established by project geologist
- Oak Tree preservation

The resulting limits of the two development and building envelopes fall within the parameters of these three constraints.

Very truly yours,

C2G/CIVIL CONSULTANTS GROUP Inc.

C. Tyler Oxford
Project Manager

CC: Todd Creamer, P.E. - C2G
Zack Dahl - Planner

EXHIBIT E

AGREEMENT TO REALIGN 40' WIDE RIGHT-OF-WAY

This agreement, entered into on 4.7.06, 2006, between Malcom MacNaughton, the owner of the vacant property on Sundance Hill Road (APN 103-071-50), MACNAUGHTON, and Daniel and Lyanne Bertoldi, the owners of the adjacent property at 241 Sundance Hill Road (APN 103-071-48), BERTOLDI, hereby agree to the following:

1. MACNAUGHTON agrees to the following:

   A. Quit-claim interest in the 20' wide portion of the 40' wide right-of-way (ROW) located on the southern property boundary on the BERTOLDI property. The ROW to be quit-claimed, as shown on exhibit A, extends from the existing gate posts to the termination of the ROW at the property comer.

   B. Repave the existing private driveway that provides access to the BERTOLDI property from the gate posts to the residence located on the BERTOLDI property. The repaving of the driveway shall take place when the other roadway improvements are being installed following the recording of the parcel map for the MACNAUGHTON property.

   C. The sum of _____ shall be paid to BERTOLDI following the recording of the parcel map for the three-lot land division on the MACNAUGHTON property.

2. BERTOLDI agrees to the following:

   A. Support the realignment of the existing 40' wide ROW to accurately following the existing driveway as shown in Exhibit A. This shall include signing all necessary documents to facilitate the recording of the realigned 40' wide ROW.

   B. Grant a 20' ROW to MACNAUGHTON which shall provide access from the realigned 40' wide ROW to the MACNAUGHTON property as shown on Exhibit A.

   C. Sign the attached County owner-agent form (attached) to allow grading associated with the driveway widening outside th5 realigned 40' ROW.

   D.

3. The Agreement to Realign the 40' wide Right-of-way is subject to the following conditions:

   A. As understood by both MACNAUGHTON and BERTOLDI, execution of this agreement is subject to the approval of the minor land division, application # 05-0277.

   B. All conditions of this agreement shall run with the land and apply to MACNAUGHTON, BERTOLDI, and their successors.

LIST OF EXHIBITS

Exhibit A – Survey Map

EXHIBIT F

IN WITNESS WHEREOF, the undersigned parties have executed this agreement on the dates set forth:

Dated: 4.7.06

MALCOM MACNAUGHTON

By: _____
Malcolm MacNaughton

Dated: _____

DANIEL AND LYANNE BERTOLDI

By: _____
Daniel Bertoldi

By: _____
Lyanne Bertoldi

STATE OF **CALIFORNIA**)
) ss:
COUNTY OF San Mateo)

On April 7, **2006,** before me, Betine Lee, a Notary Public in and for said County and State, personally appeared Malcolm MacNaughton personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in ~~his/her/their~~ authorized capacity(ies), and that ~~his/her/their~~ signature(s) on the instrument the person(s), or the entity on behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Betine Lee
NOTARY PUBLIC

BETINE LEE
Commission # 1562137
Notary Public - California
San Mateo County
My Comm. Expires Apr 7, 2009

STATE OF CALIFORNIA)
) ss:
COUNTY OF)

On _____, 2006, before me, _____, a Notary Public in and for said County and State, personally appeared _____ personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that his/her/their signature(s) on the instrument the person(s), or the entity on behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

_____
NOTARY PUBLIC

EXHIBIT F

IN WITNESS **WHEREOF,** the undersigned **parties** have executed **this** agreement on the dates set forth:

Dated: _____ MALCOM **MACNAUGHTON**

By:_____
Malcolm MacNaughton

Dated: 4-5-06 DANIEL **AND LYANNE** BERTOLDI

By: Dan'l Bertoldi
Daniel Bertoldi

By: Lyanne Bertoldi, aka Lyanne Bertoldi
Lyanne Bertoldi

STATE OF **CALIFORNIA**)
) ss:
COUNTY OF Santa Cruz)

On Apr. 15 **2006,** before me, Peggy A. Epperly, a Notary Public in and for said County and State, personally appeared Daniel & Lyanne Bertoldi, ~~personally known to me~~ (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that ~~he/she/they~~ executed the same in ~~his/her/their~~ authorized capacity(ies), and that ~~his/her/their~~ signature(s) on the instrument the person(s), or the entity on behalf of which the person@ acted, executed the instrument.

WITNESS my hand and official seal.

Peggy A. Epperly
NOTARY PUBLIC

PEGGY A. EPPERLY
Commission # 1447793
Notary Public - California
Santa Cruz County
My Comm. Expires Oct 28, 2007

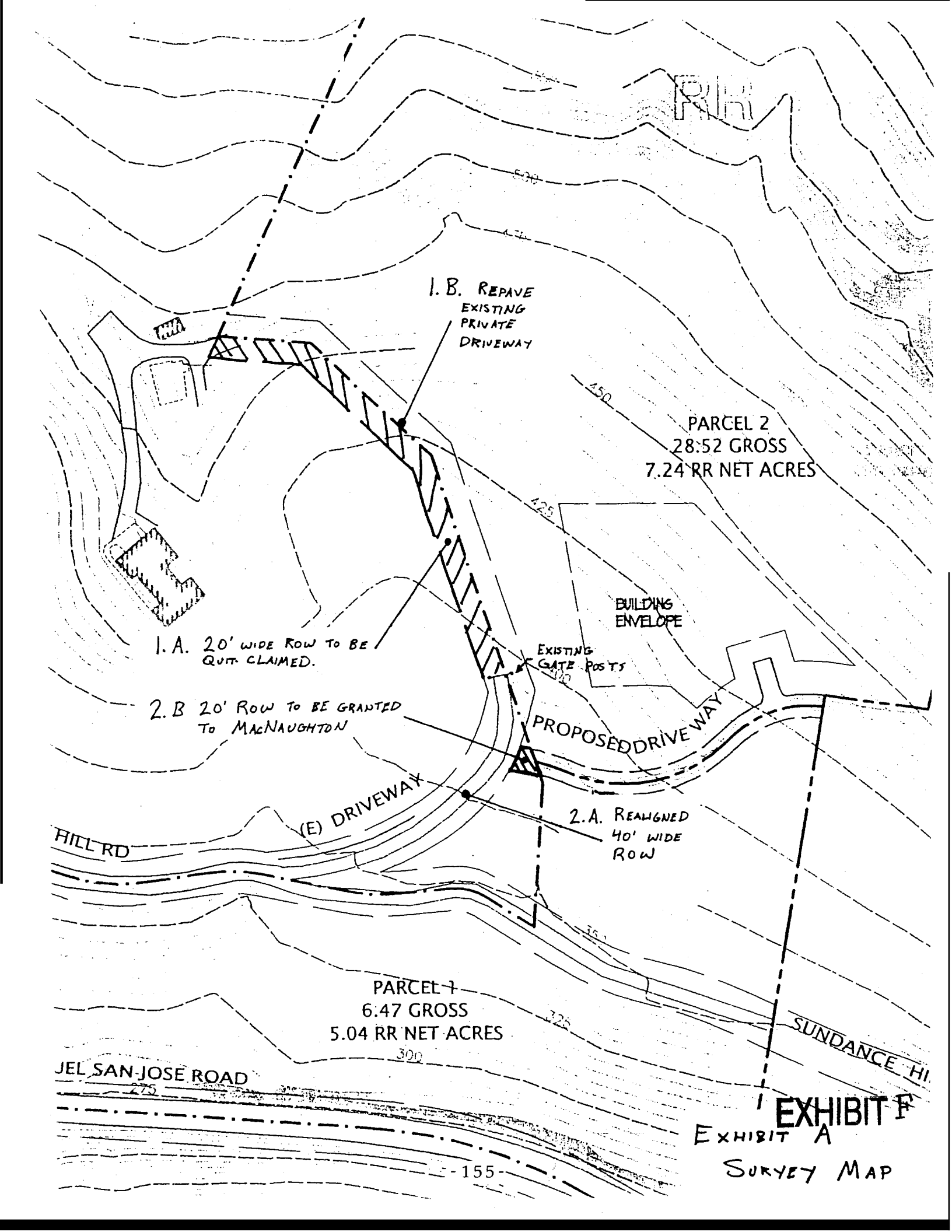
STATE OF CALIFORNIA)
) ss:
COUNTY OF)

On_____, 2006, before me,_____, a Notary Public in and for said County and State, personally appeared _____ personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that his/her/their signature(s) on the instrument the person(s), or the entity on behalf of which the person(s) acted, executed the instrument.

WITNESS my hand **and** official seal.

_____
NOTARY PUBLIC-

EXHIBIT F


1.B. REPAVE EXISTING PRIVATE DRIVEWAY
PARCEL 2
28.52 GROSS
7.24 RR NET ACRES
1.A. 20' WIDE ROW TO BE QUIT CLAIMED.
BUILDING ENVELOPE
EXISTING GATE POSTS
2.B 20' ROW TO BE GRANTED TO MACNAUGHTON
PROPOSED DRIVEWAY
(E) DRIVEWAY
2.A. REALIGNED 40' WIDE ROW
HILL RD
PARCEL 1
6.47 GROSS
5.04 RR NET ACRES
SUNDANCE HI
JEL SAN JOSE ROAD
EXHIBIT F
EXHIBIT A
SURVEY MAP

Cathleen Carr
county of santa Cruz
Planning Dept., 4th Floor
701 Ocean Street
Santa Cruz, CA 95060

Dear Ms. Carr,

Attached with this letter is a signed owner-agent form for Stephen Graves and Associates. Please note that this owner-agent form shall be used ONLY in relation to application #05-0277, the three-lot land division on APN 103-071-50. As required by the County, I, Ronald Magee have given consent to allow grading outside of the 40' right-of-way on APN 103-071-47. This consent to allow grading on the above referenced property shall be limited to the improvements shown on the engineering plans prepared by Civil Consultants Group, Inc. for this application only.

Sincerely,

Ronald Magee

EXHIBIT G

Dear Ms. Carr.

I have no opposition to the planned project to widen the rodd at/and along my property at 121 Sundance Hill.

Regards,

Ron Magee

831 477 0457

EXHIBIT G

Cathleen Carr
county of santa Cruz
Planning Dept., 4th Floor
701 Ocean Street
Santa Cruz, CA 95060

Dear Ms. Carr,

We own the property at 241 Sundance Hill Road, APN 103-071-48, which is adjacent to the vacant property owned by Malcom MacNaughton, APN 103-071-50, that is currently proposed for a three-lot land division under application #05-0277. We have reviewed the tentative map and improvement plans for this land division and are in support of this project.

Sincerely,

Daniel and Lyanne Bertoldi

EXHIBIT G

Cathleen Carr
County of Santa Cruz
Planning Dept., 4th Floor
701 Ocean Street
Santa Cruz, CA 95060

Dear Ms. Carr,

Attached with this letter is a signed owner-agent form for Stephen Graves and Associates. Please note that this owner-agent form shall be used ONLY in relation to application #05-0277, the three-lot land division on APN 103-071-50. As required by the county, I, Daniel Bertoldi have given consent to allow grading **outside** of the 40' right-of-way on APN 103-071-48. This consent to **allow** the **minimum grading** necessary on the above referenced property shall be limited to the improvements shown on the engineering plans prepared by Civil Consultants Group, Inc. for this application **only.**

Sincerely,

Daniel Bertoldi
Tyffani Bertoldi

EXHIBIT G

COUNTY OF SANTA CRUZ
DISCRETIONARY APPLICATION COMMENTS

Project Planner: Samantha Haschert
Application No.: 05-0277
APN: 103-071-50

Date: February 14, 2007
Time: 07:50:43
Page: 1

Environmental Planning Completeness Comments

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

========== UPDATED ON JANUARY 3, 2006 BY ANDREA M KOCH =========
1) Thank you for submitting an owner-agent form from the owner of APN 103-071-47. Please also submit an owner-agent form from the owner of APN 103-071-48.

========== UPDATED ON JANUARY 5, 2006 BY KENT M EDLER =========

The following comments are in addition to Andrea Koch's completeness comments dated 1/3/06:

1) The review letter from Nalan Associates must be an original wet-signed copy. Also the letter submitted does not review the most current set of plans. Nolan's letter must review the latest set of plans.

2) Hand written notes on engineered drawings are not accepted (labeling of habitable and non-habitable bui1ding envelopes). Please have the civi1 engineer revise the plans and re-submit.
========== UPDATED ON APRIL 17, 2006 BY KENT M EDLER ========== 1) The letter from Nolan and Associates is unclear as to whether or not all septic must be contained within the development envelopes or not. (Note: the plans show septic outside of the development envelopes on Lots 1 & 2). It must be clear whether Nolan approves of the "Approved Septic Location" for Parcels 1 & 2. Also note that the Parcel 1 location is partially on slopes greater than 30%.

2) The revised grading plan sheet C1.5 shows a new wall to be constructed in order to keep all grading within the easement. The 2:1 slope shown behind the wall is incorrectly drawn and will result in grading outside of the easement. The wall height either must be increased or submit an owner agent form from the adjacent property owner.

Environmental Planning Miscellaneous Comments

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

========== REVIEW ON MAY 19, 2005 BY JESSICA L DEGRASSI =========
All comments from previous application 04-0284 apply.

========== UPDATED ON SEPTEMBER 21, 2005 BY KENT M EDLER =========

1) Engineered Grading and Drainage Plans must be submitted

2) Plan review letters from the project soils engineer and engineering geologist must be submitted.

3) An erosion control plan prepared by a Certified Erosion Control Specialist must be submitted.

EXHIBIT G

4) A Landscape Plan must be submitted, which includes the number, size and species of all mature trees removed for this project as well as all replacement trees. Replacement trees will be requiredon a one-to-one basis and must be native.
========== UPDATED ON JANUARY 3, 2006 BY ANDREA M KOCH ==========
1) No additional comments.

Housing Completeness Comments

========== REVIEW ON MAY 26, 2005 BY TOM POHLE ==========
NO COMMENT

The project plans do not indicate any existing dwellings on the property which is proposed for dividing into 3 separate parcels. Based on this understanding of the proposed project, and in accordance with the terms of County Code 17.10,this project will be required to pay a Small Project In Lieu Fee of $10,000.

Housing Miscellaneous Comments

========== REVIEW ON MAY 26. 2005 BY TOM POHLE ==========
NO COMMENT

The project involves relatively large parcels of property. Any future creation of additional parcels for either the existing, or any proposed new parcels, could create an additional Affordable Housing Obligation (AHO). It is therefore recommended that conditions be recorded against the title of all (existing and new) parcels for this proposed project, providing notice that County of Santa Cruz Affordable Housing In Lieu Fees may be due should any additional land division occur in the future.

========== UPDATED ON MAY 26. 2005 BY TOM POHLE ==========

Long Range Planning Completeness Comments

========== REVIEW ON MAY 25, 2005 BY GLENDA L HILL ==========
NO COMMENT

Long Range Planning Miscellaneous Comments

========== REVIEW ON MAY 25. 2005 BY GLENDA L HILL ==========
A portion of this property is mapped Critical Fire Hazard. Ensure that the building sites are located outside of this area or the density standards of General Plan Policy 6.5.4(d) will apply.

Dpw Drainage Completeness Comments

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

========== REVIEW ON MAY 27, 2005 BY CARISA REGALADO ==========
Comments made on the first and second routing of previous application 04-0284 still need to be addressed. Until further information is submitted for those comments, a

thorough review of this application cannot be completed. Once submitted, additional items may need to be addressed before the application can be deemed complete.
========= UPDATED ON OCTOBER 3, 2005 BY CARISA REGALADO =========
2nd ROUTING, 9/30/25:

Revised drawings dated 8/25/05, a letter from Zack Dahl of Steven Graves & Associates dated 9/2/05, and letters from Rebecca Dees of Dees & Associates dated 6/23/05 & 8/31/05 have been received.

Based on the submitted information, this application is deemed complete. Please see Miscellaneous Comments for additional comments.

Dpw Drainage Miscellaneous Comments

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

========= REVIEW ON MAY 27. 2005 BY CARISA REGALADO =========
No comment. ========= UPDATED ON OCTOBER 3. 2005 BY CARISA REGALADO =========
The following items are required prior to recording the final map:

1) For Sheet C1.1, DRAINAGE NOTE, the Dees & Associates drainage letter must be specifically referenced; i.e., date and subject of letter.

2) Matchline sheet numbering was not updated from last submitted plans. Please correct.

3) Label on plans the eroded gully and catch basin that is to be protected from sediment build-up and clogging per Dees & Associates 8/31/05 letter. Specify protection proposed.

Dpw Driveway/Encroachment Completeness Comments

========= REVIEW ON MAY 16. 2005 BY RUTH L ZADESKY =========
No comment. project involves a subdivision or MLD.

Dpw Driveway/Encroachment Miscellaneous Comments

========= REVIEW ON MAY 16, 2005 BY RUTH L ZADESKY =========
No comment.

Dpw Road Engineering Completeness Comments

========= REVIEW ON MAY 27, 2005 BY GREG J MARTIN =========
========= UPDATED ON SEPTEMBER 29, 2005 BY GREG J MARTIN =========
Please label the gradient of Sundance Road at its intersection with Soquel San Jose Road. The grade appears to be approximately 35 percent. The gradient of a street entering an intersection shall not be more than three percent with a distance of 20 feet from the edge of Soquel San Jose Road. The profile shall be required to be designed by a civil engineer based upon the County-s requirements and the constraints imposed by the topography. Sundance Road from Station 8+14 to Station 10+00 is recommended to be a minimum of 18 feet wide instead of the 14 feet shown on the

EXHIBIT G

plans.

If you have any questions please call Greg Martin at 831-454-2811.
========== UPDATED ON JANUARY 18, 2006 BY GREG J MARTIN ========== The sight distance at the intersection of Sundance Hill Road and Soquel San Jose Road is recommended to be evaluated by a Traffic Engineer or qualified Civil Engineer, shown on the plans. Any mitigation measures should be incorporated into the plans. ========== UPDATED ON SEPTEMBER 13, 2006 BY GREG J MARTIN ==========
The sight distance analysis by C2G in a letter dated August 31, 2005 provides sufficient information to conclude that the recommended mitigations should provide adequate sight distance at the intersection of Sundance Hill Road and Old San Jose Road. The mitigations are below and should be made conditions of approval for the project or shown on the plans. Trimming the existing vegetation north of Sundance Hill Road and the removal of small trees and shrubs less than 6-inches in diameter. Signage for Sundance Hill Road along Old San Jose Road should be installed by the County at the applicant's cost.

Dpw Road Engineering Miscellaneous Comments

========== REVIEW ON MAY 27, 2005 BY GREG J MARTIN ==========
1. The intersection of Sundance Hill Road and Soquel San Jose road is recommended to be improved. The Sundance Hill Road intersection approach is recommended to be 24 feet in width and no less than 18 feet wide minimum. The returns on the intersection are recommended to be 20 feet in radius. A profile of the Sundance Hi11 Road should be provided and meet county standards for intersections. The transition in plan view from a 24 foot width to a 17 foot width does not meet engineering design standards. part of the improvements, the sight distance at this intersection is recommended to be evaluated by a Traffic Engineer or qualified Civil Engineer and any mitigation measures incorporated into the plans. The minimum structural section for a road is 3 inches of asphalt concrete over inches of aggregate base.

2. For any portion of road which serves three or more parcels the width is recommended to be 24 feet and no less than 18 feet wide minimum. The minimum structural section for a road is 3 inches of asphalt concrete over inches of aggregate base.

3. Access roads (driveways) serving two parcels are recommended to be 24 feet in width and no less than 18 feet wide minimum. The structural section shall meet driveway requirements.

4. Please show driveways and profiles for each new parcel.

5. Roads that extend through the property should indicate how many parcels the road serves. Place this information on the plans.

If you have any questions please contact Greg Martin at 831-454-2811. ========== UPDATED ON MAY 27, 2005 BY GREG J MARTIN ==========
========== UPDATED ON SEPTEMBER 29, 2005 BY GREG J MARTIN ==========
========== UPDATED ON JANUARY 18, 2006 BY GREG J MARTIN ==========
========== UPDATED ON SEPTEMBER 13, 2006 BY GREG J MARTIN ==========

Environmental Health Completeness Comments

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

========== REVIEW ON MAY 25, 2005 BY JIM G SAFRANEK ========== Preliminary septic testing results were positive for the 3 proposed parcels. Completeness for EHS has been satisified for this proposal.

Environmental Health Miscellaneous Comments

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

========== REVIEW ON MAY 25. 2005 BY JIM G SAFRANEK ==========
NO COMMENT

EXHIBIT G

Samantha Haschert

From: Joan Vanderhoeven
Sent: Tuesday, January 23,2007 7:53 AM
To: Samantha Haschert
Subject: FW: **Applic.** # 05-0277

Joan Van der Hoeven, AICP
Planner IV
454-5174

-----Original Message-----
From: Zachary Dahl, Stephen Graves and Asso. [mailto:zack@sgaconsulting.us]
Sent: vrijdag **19** januari **2007 10:49**
To: Paia Levine
Cc: Joan Vanderhoeven
Subject: Re: Applic. # **05-0277**

Hi Paia,

We have retained Maureen Hamb, certified arborist, to provide an evaluation of the oak woodland and tree impacts. We would like to schedule a meeting with you, Claudia Slater, and Maureen to discuss the project and how best to address and mitigate for oak tree removal. Please let me know what dates work for you and Claudia. Thank you.

Zack

--
Zachary Dahl
Senior Associate Planner

Stephen Graves and Associates
2735 Porter Street
Soquel, CA **95073**
(831)465-0677 ext. **101**
(831)465-0678 fax
www.SGAconsulting.us

on **1/18/071:09** PM, Paia Levine at **PLN456@co.santa-cruz.ca.us** wrote:

> Hello Zak,
> We have taken your comments under consideration and will be revising
> the Intial Study to add clarifying information in several places. As
> you know, CEQA does not allow determinations to be based on
> conclusionary statements that are not supported by facts. As I
> understand one of your central points, you are asserting that oak
> trees that are smaller, and /or not part of a contiguous canopy,
> and/or are on the edge of the contiguos canopy do not provide habitat
> or other environmental benefit. In order for us to engage that
> assertion please provide the scientific information that supports this
> assertion. This will help us respond to your comments. Thank you, Paia

EXHIBIT G

> Levine
>
> -----Original Message----
> From: Zachary Dahl, Stephen Graves and **Asso.**
> [mailto:zack@sgaconsulting.us]
> Sent: Wednesday, January **17,2007**4:04 PM
> To: Paia Levine
> Cc: Joan Vanderhoeven
> Subject: Applic. # **05-0277**
>
>
> Hi Paia,
>
> Wanted to check in regarding the initial study for the Sundance Hill
> MLD. What is the status of the project mitigation measures and your
> response to our proposed mitigation measures? We would like to setup
> a meeting with you to discussed these issues. Thanks
>
> Zack

EXHIBIT G

STEPHEN GRAVES & ASSOCIATES
Environmental and Land Use Consulting

January 10, 2007

Joan Van der Hoeven
County of Santa Cruz
Planning Dept., 4th Floor
701 Ocean Street
Santa Cruz, CA 95060

RE: Negative Declaration Comments for Application #05-0277, APN 103-071-50.

Dear Ms. Van der Hoeven,

Our office has reviewed the Initial Study and Negative Declaration for the three-lot land division off of Old San Jose Road and we have the following comments and suggested revisions:

To start, we would like to point out that the County does not have any regulations or restrictions on tree removal when a property is located outside of the Coastal Zone, not within a riparian comdor, or not considered habitat for rare, endangered or locally unique species. In essence, that means that any of the *oak* trees on this property could have been removed without a permit, without being replaced and without any mitigation measures. That being said, the property owner, Malcolm MacNaughton, purposely chose to maintain all of the subject *oak* trees on the property in hopes of preserving as many as possible during the land division and development process. However, because of Mr. MacNaughton's choice to not remove any *oak* trees before submitting a development application, it now appears that the County of Santa Cruz is unduly penalizing him for trying to do the right thing.

This land division has been designed to minimize oak tree removal and loss of the existing oak woodland by locating all three building sites within natural clearings (mixed grasslands). We are concerned that the initial study inaccurately overstates the impacts of tree removal. The report states that 23 to 26 oaks will be removed, which is incorrect. A total of ten oak trees are proposed to be removed as part of the land division and future Parcel 3 driveway. In addition 12 trees located within the proposed building envelopes may or may not be impacted by future development. The report fails to distinguish between trees that are to be removed in order to construct improvements necessary for the land division and those trees that could be impacted by future development.

Future development impacts also need to distinguish between trees that will need to be removed adjacent to the existing driveway (Parcel 3) and those trees that *could* be impacted depending on the size and location of the proposed residences on Parcels 2 and 3. The initial study proposes mitigation measures that include a conservation easement to protect individual trees. A conservation easement is not the appropriate mechanism in this case. Conservation easements are usually reserved for sites that contain habitat for rare, endangered and/or locally unique species. These easements have significantly adverse impacts on property values and cloud title, and

2735 Porter Street
Soquel, CA 95073
Phone (031) 4[illegible]-167- Fax (031) 465-0670

EXHIBIT G

should not be used indiscriminately. In addition, the **initial** study should recognize the context of the project as follows:

- There are thousands of oaks on this 40+-acre parcel.
- Many of the trees that are proposed for removal are either isolated oaks, and/or smaller scrub type trees, that **will** not impact the **oak** canopy or woodland.
- Removal of certain trees of poor structure **may** actually improve the overall health of the oak woodland (this can be verified by an arborist) by reducing overcrowding and enhancing the health of larger more established *oaks*.

Here is a breakdown of the *oak* trees that **will** be removed as part of this project. **This** information is consistent with the plans prepared by Civil Consultants Group. The total is broken up into four sections, the shared access road to Parcel 2, the private driveway to Parcel **3,** the development envelope for Parcel 2 and the development envelope for Parcel 3.

The Shared Access Road to Parcel 2 – This work will be designed and constructed as part of the land division process. ***As*** shown on the plans there three trees proposed to be removed: Tree #5, a 10" oak, and Tree **#3.** a scrub oak cluster **will** be removed. Tree #32, a cluster of three oaks, 7". 7", and 9". may be removed. **This is a total of three (3) trees removed, none of which are part of an *oak* woodland. Therefore, there should be no mitigation measures required for removal of these smaller isolated trees.**

The Private Driveway to Parcel **3** – This driveway has been preliminarily designed, however, as defined by County Code, a grading permit for this work will not be issued unless accompanied by a building permit. Rural land divisions do not require that house designs be included with the tentative map. Therefore, this **will** not be work that is completed as part of the land division. This driveway **will** be developed at some future date when the property owner wished applies for **a** permit to construct a residence on Parcel **3. As** shown on the plans there are seven trees that will need to be removed when the driveway is constructed: Tree #7, a 9" **oak,** Tree #9, a 15" oak, Tree #11, a 16" oak, Tree #16 and #17, **two** 9" oaks, Trees #21 and #22, a 10" and 17" **oak. This is a total of seven (7) trees removed. The removal of the trees would only have a minimal impact the existing woodland canopy.**

Parcel 2 Development Envelope – There are no trees proposed to be removed **within** this development envelope. There are three **oak** trees, ranging from 11" to 26" dbh. **within** the building envelope, which could be impacted by future development. However, since these oaks are located in the area designated as annual/mixed grasslands, they should not be considered as part of the oak woodland. Due to the configuration of the meadow, the trees have been included **within** the building envelope but they should not be considered as being removed. **Total number of trees removed is zero (0).**

Parcel 3 Development Envelope – There are no trees proposed to be removed **within** this development envelope. There are nine trees, ranging from 9" to 17" dbh. **within** the building envelope, that could be impacted by future development. The building envelope includes the upper portion of the meadow and an area of

EXHIBIT G

transitional oak woodland. The building envelope is relatively small in proportion to the size of Parcel 3, 7.5 acres, and was designed to offer flexibility for future home and site design. Some of these trees within the building envelope will most likely be removed, but it is not correct to assume that all trees within the building envelope will be removed. **Therefore, the number of trees to be removed is zero (0), but up to nine (9) trees could be proposed for removal as part of a future building permit.**

As discussed above, there will be a total of three oaks removed as part of this land division. The remaining oaks will be removed as part of grading and building permits that will be applied for after the Parcel Map has been recorded. Here is the breakdown:

Activity	Parcel 2	Parcel 3	Total
Trees removed by Land Division Improvements Plan.	3	0	3
Trees removed by future driveway.	0	7	7
Potential tree removals by future home site development.	up to 3	up to 9	up to 12

Land Division Improvement Plan – As part of the land division improvement plans, there will be 3 oak trees removed. However, due to the small sizes of these oaks, a scrub oak cluster and two small multi-trunk trees, and their location on the edge of the established woodland these oaks should not have to be replaced. This is a 40+-acre parcel and under any other circumstances, removal of these oaks would be considered standard property maintenance with no permits or tree replacement required.

Future Driveway Development – As shown in the conceptual driveway design to Parcel 3, seven oak trees will need to be removed. However, this construction will not be taking place as part of the land division. The County will not issue a grading permit for a driveway on an undeveloped parcel without a building permit for a residence included. Therefore, any mitigation measures proposed for this aspect of the project should be included in a deed restriction that will apply when the property owner moves forward with a building and grading application.

The requirement of a 3:1 replacement ratio for any *oak* or native tree removed appears excessive given the fact that under any other circumstance, the property owner would not need a County permit or need to plant replacement trees if he or she desired to remove oak trees. In addition, given the small trunk size and limited canopy of many of the oak trees to be removed, this should be considered as tree thinning that could improve the overall quality of the *oak* woodland, rather then as a loss of oak woodland. With an *oak* woodland of this nature, preserving the canopy is the most important element to maintaining the viability and health of the woodland. **We recommend that a deed restriction be recorded on Parcel 3 that requires a licensed arborist to evaluate all trees impacted or removed by the construction of the driveway and building site. Any *oak* tree removed that is deemed to be contributing to the woodland canopy shall be replaced at a 1:1 ratio with the location to be determined by the project arborist.**

EXHIBIT G

Future Tree Removal **within** Building Envelopes – **As** noted above, there are *oak* trees located within the building envelopes for Parcel 2 and Parcel **3.** While it is the intent of the current property owner to preserve all of these ***oak*** trees, it may be necessary to remove some of these trees as part of the future development of the home site. Therefore, a deed restriction should be recorded on Parcel 2 and Parcel **3** that requires a licensed arborist to evaluate **all** trees impacted or removed by the construction of the home site. Any oak tree removed that is deemed to be contributing to woodland canopy shall be replaced at a 1:1 ratio with the replacement species location to be determined by the arborist, a botanist or landscape architect.

Based on the above discussions, we propose the following revisions to the proposed mitigation measures:

A. *No* revisions ***proposed.***

B. **1.** Prior to recording the Parcel Map, the owner shall sign and record a deed restriction on Parcel 2 addressing preservation of trees adjacent to the building envelope and replacement of trees removed as part of the home site development.

a. The deed restriction shall require preservation of the four trees which are within the development envelope, but outside the building envelope: numbers 56, 60, **61,** and **8A** (if this tree is not proposed to be removed to protect tree number **6).**

b. The deed restriction shall require, prior to issuance of a building or grading permit, that a licensed arborist evaluate **all** trees impacted or removed by the proposed grading and/or construction activities. **Any** *oak* tree removed that is deemed to be contributing to the woodland canopy shall be replaced at a **1:1** ratio with the replacement species location to be determined by the arborist.

2. Prior to recording the Parcel Map, the owner shall sign and record a deed restriction on Parcel **3** addressing preservation of trees adjacent to the building envelope and driveway and replacement of trees removed as part of the driveway and home site development.

a. The deed restriction shall require preservation of the following four trees which are within the development envelope, but outside the building envelope: numbers **46** through 55.

b. The deed restriction shall require, prior to issuance of a building or grading permit for the private driveway, that a licensed arborist shall evaluate **all** trees impacted or removed by the proposed grading and/or construction activities. Any oak tree removed that is deemed to be contributing to the woodland canopy shall be replaced at a **1:1** ratio with the replacement species location to be determined by the arborist.

EXHIBIT G

3. Prior to scheduling the public hearing, the applicant shall revise the tentative map as follows:
   a. *No revisions proposed.*
   b. *No revisions proposed.*
   c. Indicate the trees to be protected via deed restriction on Parcel 2 and Parcel 3.

4. *No revisions proposed.*

5. Replace the term 'map" with 'Parcel Map."

6. Replace the term 'map" with 'Parcel Map." This mitigation should also be expanded to include the following text: The arborist shall work with County staff to determine if any of the oak trees to be removed are considered to be contributing to the woodland canopy. For every significant oak or native tree removed, it shall be replaced at a 1:1 ratio with the replacement species location to be determined by the arborist.

7. This mitigation measure should be removed. The number of trees to be replaced and their location shall be addressed by the licensed arborist as part of the arborist report.

C. Replace the term 'tentative map" with 'Parcel Map."
D. Replace the term 'tentative map" with 'Parcel Map."

Due to the potential impacts that the initial study will have on the land division, we would like to request a meeting with County staff prior to finalizing the proposed mitigation measures. Thank you for considering our comments and recommendations and we look forward to hearing back from you.

Sincerely,

Zachary Dahl
Senior Associate

CC: *Claudia Slater, Environmental Coordinator*
Paia Levine, Deputy Env. Coordinator
Mark Henderson, owner
Malcolm Macnaughton, owner

EXHIBIT G

Joan Vanderhoeven

From: Zachary Dahl, Stephen Graves and Asso. [zack@sgaconsulting.us]
Sent: Thursday, September 21, 2006 9:35 AM
To: Joan Vanderhoeven
Subject: Response to Beautz Letter

05-0277

Hi Joan,

Thanks for the two comment letters from Jan Beautz.. However, if she had reviewed our most recent set of plans, she would have seen that we have addressed all of her concerns. In summary:

- Her comments re: the road and turnouts were made before we proposed a 18' wide road €or all access serving more then two residences. We are now widening Sundance Hill to 24' wide for the first 75' off of Soquel-SJ Rd. The rest of the road, up to the road to serve 2 and 3 is 18' wide, which meets County standards.

- We have already discussed the dead-end road issue. Otherwise, we are proposing a fire turn-around at both Parcels 2 and 3.

- Re; drainage, Civil Consultants Group did evaluate drainage, along with our soils engineer Becky Dees. All additional impervious surfaces have been addressed. The new access road has drainage improvements included into the design, drainage calculations for both the roads and future residences were reviewed and approved by the Drainage Dept.

- The landslide issue was addressed in Nolan's geologic report, no part of the building site for parcel 3 is on or adjacent to a landslide.

- As is standard practice with the County, since rural land divisions do not require any design review, information on proposed residences or dwellings to be built is not required as part of the approval process.

- A certified biologist has reviewed the property and found not sensitive biotic resources. 13.11.040(d) says design review is required for MLDs outside the urban services area which affect sensitive sites. Clearly, this project is not affecting any sensitive sites.

- Parcel 2 has a 40' setback from the property line and a minimum 20' setback from the edge of ROW. The front yard setback is measured from the property line, additionally, code requires a minimum 20' setback from all rights-of-way.

Hopefully, this clarifies all of the issues that are of concern to Supervisor Beautz. Thanks

Zack

--
Zachary Dahl
Senior Associate Planner

Stephen Graves and Associates
2735 Porter Street
Soquel, CA 95073
(831) 465-0677 ext. 101
(831) 465-0678 fax
www.SGAconsulting.us

EXHIBIT G

COUNTY OF SANTA CRUZ
Inter-Office Correspondence

DATE: May 25, 2005

TO: Tom Burns, Planning Director
Kathleen Carr, Planner
Tom Bolich, Director, Public Works

FROM: Supervisor Jan Beautz

RE: COMMENTS ON APP. 05-0277, APN 103-071-50, OLD SAN JOSE ROAD, MLD

Please consider the following areas of concern in your evaluation of the above minor land division application to create three parcels:

The existing sloping parcel proposes to improve a 17 foot wide existing road within a 40 foot right-of-way by adding two turn-out areas and a wider connection with Old San Jose Road. Are these improvements adequate or should additional roadway improvements be constructed along the existing roadway? A new section of roadway is proposed off this existing roadway that is shown to be 15 feet in width within a narrower 20 foot right-of-way. This new extended roadway lacks turnouts along its 438 foot length. This narrow width may become problematic for vehicles attempting to pass each other to reach the adjacent lots. Should additional width or turnouts be provided?

Sundance Hill Road is the sole access for these three proposed lots, as well as several existing dwellings on adjacent parcels. As measured from Old San Jose Road, this access road is roughly 1,460 feet in length. This is far greater than the 500 foot length requiring secondary access for safety reasons. Additionally, County Code Section 16.20.180(k) requires that any dead end roadway or driveway greater than 300 feet long provide a turn-around area with a minimum 32 foot radius. This required feature also appears lacking. How will these issues be addressed so that this development complies with all County standards?

The proposed improvements to the existing roadway as well as the new road segment appear to be a paved roadbed at grade without drainage improvements. This roadway traverses significant slopes for its entire length. Code Section 16.20.180(h)(i) requires asphalt, concrete berms or their equivalent to control drainage. Discharge from the roadway is required to be at points of natural drainage courses and to have energy dissipaters where necessary to prevent erosion. Is such a storm runoff system required for this roadway to prevent erosion impacts, and if so, how will this be designed?

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The mapped County Cooper Clark Landslide areas appear to identify a landslide area which is either overlaid on a portion of the proposed building envelope for Parcel 3 or directly adjacent to this envelope. Will this be clarified and the envelope amended accordingly so that it conforms to all restrictions relative to identified landslide areas?

This routed information for this application lacks any information regarding the type of dwellings to be constructed on these lots. Are these lots to be developed concurrently? The County mapping system indicates that there is a mapped biotic resource area along the majority of this parcel's front area adjacent to Old San Jose Road. Code Section 13.11.040(d) indicates that this proposal may be required to comply with the requirements of Design Review due to the presence of sensitive areas within the sites which may be impacted by this development. How will this issue be addressed?

While this parcel has an SU overlay, I would assume that this minor land division would be required to comply with the development standards of the RA zone district which abuts it on at least two sides. Code Section 13.10.323(b) requires that a minimum 40 foot front yard be provided. While the building envelope for Parcel 2 does note a 40 foot setback on the eastern side adjacent to the proposed roadway, this setback has been measured to the center of the roadway instead of to the edge of the proposed 20 foot right-of-way.

JKB:lg

2299A1

EXHIBIT G

COUNTY OF SANTA CRUZ

INTER-OFFICE CORRESPONDENCE

DATE: September 21,2005

TO: Cathleen Carr, Planning Department

FROM: Carl Rom, Department of Public Works

SUBJECT: APPLICATION 05-0227, APN 103-071-50, HENDERSON, SOQUEL-SAN JOSE ROAD

This submittal addresses my comments from the first submittal.

Given the extent of work shown on the improvement plans in this submittal, including work within the Soquel-San Jose Road right-of-way, it might be best if the project conditions require that the review and approval of the improvement plan be done by Public Works prior to map recordation.

If that is the case, upon approval of the plans and prior to recording the map, the developer will have to sign a subdivision agreement and submit securities to guarantee the construction of all work shown on the plans.

If you have any questions or would like to discuss these comments, please call me at extension 2806.

CDR:cdr

EXHIBIT G

CENTRAL
FIRE PROTECTION DISTRICT
of Santa Cruz County
Fire Prevention Division

930 17th Avenue, Santa Cruz, CA 95062
phone (831) 479-6843 fax (831) 479-6847

Date:	September 13,2005
To:	Vanessa Henderson
Applicant:	**Stephen Graves and Assoc.**
From:	Tom Wiley
subject:	**05-0277**
Address	
APN:	103-071-50
OCC	10307150
Permit:	20050269

We have reviewed plans for the above subject project.

Please ensure designer/architect reflects equivalent notes and requirements on velums as appropriate when submitting for **Application for Building Permit.**

When plans are submitted for multiple lots in a tract, and several standard Floor Plans are depicted, include Fire District Notes on the small scale Site Plan. For each lot, submit only sheets with the following information; Site Plan (small scale, highlight lot, with District notes), Floor Plan, Elevation (roof covering and spark arrestor notes), Electrical Plan (if smoke detectors are shown on the Architectural Floor Plan this sheet is not required). Again, we must receive, VIA the COUNTY, SEPARATE submittals (appropriate site plans and sheets) FOR EACH APN!!

NOTE on the plans that these plans are in compliance with California Building and Fire Codes (2001) and District Amendment.

UWIC (Urban Wildland Interface Code) papers must be filled out for this site prior to the plan check being started, as further construction requirements may be needed in order to obtain a permit. Please obtain the form from Central Fire District, and make an appointment with the Central Fire Protection District for review.

NOTE on the plans the OCCUPANCY CLASSIFICATION, BUILDING CONSTRUCTION TYPE-FIRE RATING and either SPRINKLERED or NON-SPRINKLERED as determined by the building official and outlined in Chapters 3 through 6 of the 2001 California Building Code (e.g., R-3, Type V-N, Sprinklered).

Since this property is above the Urban Services Line, the fire flow and fire hydrant requirements are mitigated by the requirements outlined in the District rural Water Storage Requirements.

SHOW on the plans, DETAILS of compliance with District rural Water Storage Requirements. Please refer to and comply with the diagram on Page 5.

NOTE ON PLANS: New/upgraded hydrants, water storage tanks, and/or upgraded roadways shall be installed PRIOR to and during time of construction (CFC 901.3).

EXHIBIT G

SHOW on the plans DETAILS of compliance with the District Access Requirements outlined on the enclosed handout. No roadway may be less than 12 feet in width, please be specific for the roadway width at the end of the road where it is indicated "14' easement".

The roadway profile with grade percentages shall be shown on the plans. These plans shall be wet stamped and signed by the Engineer/Designer/Survey of the roadway. The Central Santa Cruz Fire District must be notified and given to opportunity to inspect the finished grade prior to the installation of the permanent driving surface.

NOTE on the plans that the building shall be protected by an approved automatic sprinkler system complying with the edition of NFPA 13D currently adopted in Chapter 35 of the California Building Code.

NOTE that the designer/installer shall submit three (3) sets of plans and calculations for the underground and overhead Residential Automatic Sprinkler System to this agency for approval. Installation shall follow our guide sheet.

Show on the plans where smoke detectors are to be installed according to the following locations and approved by this agency as a minimum requirement:

- One detector adjacent to each sleeping area (hall, foyer, balcony, or etc).
- One detector in each sleeping room.
- One at the top of each stairway of 24" rise or greater and in an accessible location by a ladder.
- There must be at least one smoke detector on each floor level regardless of area usage.
- There must be a minimum of one smoke detector in every basement area.

NOTE on the plans where address numbers will be posted and maintained. Note on plans that address numbers shall be a minimum of FOUR (4) inches in height and of a color contrasting to their background.

NOTE on the plans the installation of an approved spark arrestor on the top of the chimney. Wire mesh not to exceed ½ inch.

NOTE on the plans that the roof coverings to be no less than Class "**B**" rated roof.

NOTE on the plans that a 100-foot clearance will be maintained with non-combustible vegetation around all structures.

Submit a check in the amount of $100.00 for this particular plan check, made payable to Central Fire Protection District. **A** $35.00 **Late Fee** may be added to your plan check fees if payment is not received within 30 days of the date of this Discretionary Letter. INVOICE MAILED TO APPLICANT. Please contact the Fire Prevention Secretary at (831) 479-6843 for total fees due for your project.

If you should have any questions regarding the plan check comments, please call me at (831) 479-6843 and leave a message, or email me at tomw@centralfDd.com. All other questions may be directed to Fire Prevention at (831)479-6843.
CC: File & County
As a condition of submittal of these plans, the submitter, designer and installer certify that these plans and details comply with applicable Specifications, Standards, Codes and Ordinances, agree that they are solely responsible for compliance with applicable Specifications, Standards, Codes and Ordinances, and further agree to correct any deficiencies noted by this review, subsequent review, inspection or other source. Further, the submitter, designer, and installer agrees to hold harmless from any and all alleged claims to have arisen from any compliance deficiencies, without prejudice, the reviewer and the Central FPD of Santa Cruz County.
Any order of the Fire Chief shall be appealable to the Fire Code Board of Appeals as established by any party beneficially interested, except for order affecting acts or conditions which, in the opinion of the Fire Chief, pose an immediate threat to life, property, or the environment as a result of panic, fire, explosion or release.
Any beneficially interested party has the right to appeal the order served by the Fire Chief by filing a written "NOTICE OF APPEAL" with the office of the Fire Chief within ten days after service of such written order. The notice shall state the order appealed from, the identity and mailing address of the appellant, and the specific grounds upon which the appeal is taken.
10307150-091305

EXHIBIT G

Right of Way
340 PAJARO ST
SALINAS, CA 93901
831-754-8165

Memorandum

To: Cathleen Carr, Public Works Department
cc:
From: Roxie Tossie, Right of Way Mgr (831) 754-8165
Date: **Wednesday, June 01,2005**
Re: **MLD # 05-0277**
Malcom MacNaughton & Vanessa Henderson
Location: Soquel San Jose Road, Soquel
APN: 103-071-50

Message:

Per your request our SBC Engineer's Chris Barraza (831-728-0160) has reviewed the MLD for the proposed minor land division and has determined the following:

- SBC has existing Joint Poles along the northerly property line of APN 103-071-34 @ the northerly point of Sundance Hill Road which will be our service point.
- **SBC will require a Public Utility Easement within the boundary of Sundance Hill Road.**
- Call USA before you dig on 800-642-2444.

Please call me if you require any additional information on 831-754-8165

Thank You,
Roxie

EXHIBIT G