COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
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TOM BURNS, PLANNING DIRECTOR

NOTICE OF ENVIRONMENTAL REVIEW PERIOD

SANTA CRUZ COUNTY

APPLICANT: **Charlie Eadie of Hamilton Swift, for Robert Hartman**

APPLICATION NO.: **07-0619**

APN: **106-211-27**

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 Matt Johnston, Environmental Coordinator at (831) 454-3201, 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: **June 30, 2008**

Lawrence Kasparowitz
Staff Planner

Phone: **454-2676**

Date: **June 4, 2008**

NAME: Hartman – Old Hazel Del
APPLICATION: 07-0619
A.P.N: 106-211-27

NEGATIVE DECLARATION MITIGATIONS

A. In order to mitigate impacts from lighting on a ridge top, prior to approval of building permits, applicant shall submit details showing all site, building, security and landscape lighting directed onto the site and away from adjacent properties and the view shed. Landscaping, structure, fixture design or other physical means can shield light sources. Building and security lighting shall be integrated into the building design.

Environmental Review
Initial Study

Application Number: 07-0619

Date: June 3, 2008
Staff Planner: Lawrence Kasparowitz

I. OVERVIEW AND ENVIRONMENTAL DETERMINATION

APPLICANT: Hamilton / Swift **APN:** 106-211-27

OWNER: Robert Hartman **SUPERVISORAL DISTRICT:** Fourth

LOCATION: 195-Z Old Hazel Dell Road, Watsonville

SUMMARY PROJECT DESCRIPTION:

Proposal to construct a 7,465 square foot Single Family Dwelling (including covered areas), a 2,283 square foot 3-story 30.5 foot high guest house with bathrooms and a 1,221 square foot garage, both attached to the dwelling by covered walkways and grading to include 1,390 cubic yards of cut and 1,401 cubic yards of fill.

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
____	Hydrology/Water Supply/Water Quality	____	Air Quality
____	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
____	Transportation/Traffic		

DISCRETIONARY APPROVAL(S) BEING CONSIDERED

____ General Plan Amendment	____ Grading Permit
____ Land Division	____ Riparian Exception
____ Rezoning	____ Other:
__X__ Development Permit	____
____ Coastal 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.

Matt Johnston

6/3/08
Date

For: Claudia Slater
Environmental Coordinator

II. BACKGROUND INFORMATION

EXISTING SITE CONDITIONS

Parcel Size: approx. 17 acres
Existing Land Use: vacant
Vegetation: Oak woodland and grassland
Slope in area affected by project: __X__ 0 - 30% ___ 31 – 100%
Nearby Watercourse: Not applicable
Distance To:

ENVIRONMENTAL RESOURCES AND CONSTRAINTS

Groundwater Supply: none mapped
Water Supply Watershed: none mapped
Groundwater Recharge: none mapped
Timber or Mineral: none mapped
Agricultural Resource: no recent ag. activity
Biologically Sensitive Habitat: none existing
Fire Hazard: none mapped
Floodplain: none mapped
Erosion: none mapped
Landslide: none mapped
Liquefaction: none mapped
Fault Zone: SFZ and CFZ
Scenic Corridor: none
Historic: none
Archaeology: none
Noise Constraint: none mapped
Electric Power Lines: none
Solar Access: good
Solar Orientation: good
Hazardous Materials: none

SERVICES

Fire Protection: Pajaro F.P.D.
School District: PVUSD
Sewage Disposal: private septic
Drainage District: none
Project Access: Old Hazel Dell Road
Water Supply: private well

PLANNING POLICIES

Zone District: Agriculture
General Plan: Agriculture
Special Designation: none

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

PROJECT SETTING AND BACKGROUND:

The project will be accessed from an existing driveway located off Old Hazel Dell Road. The parcel is relatively open and vegetated with grasses with some clusters of live oak, madrone and coyote bush. The proposed building site is located near the property line on the 17-acre parcel at an elevation of approximately 1,020 ft. There are slopes of over 30% on each of three sides of the building site. The site contains a small, permitted garage (building permit no. 00104148).

DETAILED PROJECT DESCRIPTION:

The project includes the construction of a 7,465 sq. ft., one-story main house, a 2,283 sq. ft., three story guest quarters and a 1,462 sq. ft. garage. Included are terraces, a 1,572 sq. ft. pool, access drive and turn around. The majority of the ± 1,000 ft. long driveway to the site will be oiled and screened. The entry, a steep curve in the middle of the drive and the approach to the house are proposed to be asphalt concrete.

The pad for the residence is cut into the top of the knoll. Cut and fill are approximately balanced at about 1,400 cu. yds., respectively (this includes approximately 1,000 cu. yds for the residence and approximately 400 cu. yds. for the roadwork). The house steps down to reduce the amount of cut and fill and retaining walls that would be required. Retaining walls are used at the entry drive as it meets the garage and turnaround area. The lower retaining wall is 145 ft. long, with a maximum height of 8 ft. in the middle and tapering toward each end. The upper retaining wall is approximately 120 ft. long with a maximum height of 4 ft.

Drainage is achieved through solid piping to detention piping then to level spreaders at the lowest level.

III. ENVIRONMENTAL REVIEW CHECKLIST

A. Geology and Soils

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. 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	____
B. Seismic ground shaking?	____	____	X	____
C. Seismic-related ground failure, including liquefaction?	____	____	X	____
D. Landslides?	____	____	X	____

A geologic investigation for the project was prepared by Nolan Associates, dated August 3, 2005 (Attachment 6), and a geotechnical investigation was prepared by Haro, Kasunich and Associates, dated February 6, 2008 (Attachment 8). These reports have been reviewed and accepted by the Environmental Planning Section of the Planning Department (Attachment 7 & 9). The reports conclude that the primary geotechnical concerns at the site include strong seismic shaking, adequate bearing for foundations and appropriate control of surface runoff. Seismic shaking can be managed by constructing with a structural mat slab or a grid system foundation. The foundation should be constructed on an engineered building pad.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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 geotechnical report cited above did not identify a significant potential for damage caused by any of these hazards.

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

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

5. Be located on expansive soil, as defined in section 1802.3.2 of the California Building Code (2007), creating substantial risks to property?			X	

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

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

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.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
7. Result in coastal cliff erosion?				X

B. Hydrology, Water Supply and Water Quality

Does the project have the potential to:

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

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

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

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

3. Be inundated by a seiche or tsunami?				X

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

The project will rely on a private well for water supply. The project is not located in a mapped groundwater recharge area.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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 household contaminants. No commercial or industrial activities are proposed. The project is not within a water supply watershed and the water supply, septic system and drainage system are all contained on-site.

6. Degrade septic system functioning?			X	

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

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

The proposed project is not located near any watercourses, and 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. The project is not within a water supply watershed and the water supply, septic system and drainage system are all contained on-site.

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

There are no natural watercourses on this site and the project is not within a water supply watershed. Runoff from the entry road is dispersed by sheet flow and the discharge of storm water from the house and terraces is detained and then dispersed through level spreaders.

10. Otherwise substantially degrade water supply or quality?			X	

C. Biological Resources

Does the project have the potential to:

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

According to the California Natural Diversity Data Base (CNDDB), maintained by the California Department of Fish and Game, there are no known special status plant or animal species in the site vicinity, and there were no special status species observed in the project area. The County of Santa Cruz GIS does not show any mapped biotic resources of concern on this parcel.

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 sensitive biotic communities on or adjacent to the project site.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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 subject property is located in a rural area. The project is located on ridge top and nighttime lighting may be an issue if not mitigated. According to the County of Santa Cruz GIS, there are no sensitive animal habitats mapped within or adjacent to the project site.

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

The project will not conflict with any local policies or ordinances.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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. However, the project will not affect the resource or access to harvest the resource in the future. The timber resource may only be harvested in accordance with California Department of Forestry timber harvest rules and regulations.

2. Affect or be affected by lands currently utilized for agriculture, or designated in the General Plan for agricultural use?			X	

While the project site is zoned Agricultural with a General Plan designation of Agriculture, the 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

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

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 shed area including, but not limited to, trees, rock outcroppings, and historic buildings?				X

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

3. Degrade the existing visual character or quality of the site and its surroundings, including substantial change in topography or ground surface relief features, and/or development on a ridge line?			X	

The site is on a ridgeline and very visible from some vantage points. The project has been designed as a primarily one-story structure. The site for the proposed residence was selected for the least amount of grading. The existing visual setting will be affected, however, the proposed project is designed to step into the sloping site and will be landscaped so as to fit into the setting.

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. A mitigation measure has been added which would require all external lighting should be directed away from views from below the site.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
5. Destroy, cover, or modify any unique geologic or physical feature?				X

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

F. Cultural Resources

Does the project have the potential to:

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

There are no existing structures 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. 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 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.

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

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

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 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.

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

See response H-1 above.

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

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	

Per County policy, average hourly noise levels shall not exceed the General Plan threshold of 50 L_{eq} during the day and 45 L_{eq} during the nighttime. Impulsive noise levels shall not exceed 65 db during the day or 60 db at night.

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 and the relative isolation of the site, 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.

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

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-1 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 services:				
	a. Fire protection?			X	
	b. Police protection?			X	
	c. Schools?			X	

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
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 the local fire agency or California Department of Forestry, as applicable, 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	
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.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
5. Create a situation in which water supplies are inadequate to serve the project or provide fire protection?			X	

The local fire agency or California Department of Forestry, as appropriate, 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 the local fire agency or California Department of Forestry, as appropriate.

One lane will remain open at all times. Fire trucks, ambulances and other emergency vehicles will not be blocked from using the road at any time.

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 does not conflict with any policies adopted for the purpose of avoiding or mitigating an environmental effect.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
2. Conflict with any County Code regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	

The proposed project does not conflict with any regulations adopted for the purpose of avoiding or mitigating an environmental effect.

3. Physically divide an established community?			X	

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

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

The proposed project is designed at the density and intensity of development allowed by the General Plan and zoning designations for the parcel. Additionally, the 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.

The proposed project will not extend the road or increase its capacity.

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

1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant, animal, or natural community, or eliminate important examples of the major periods of California history or prehistory? Yes ____ No X

2. Does the project have the potential to achieve short term, to the disadvantage of long term environmental goals? (A short term impact on the environment is one which occurs in a relatively brief, definitive period of time while long term impacts endure well into the future) Yes ____ No X

3. Does the project have impacts that are individually limited, but cumulatively considerable ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, and the effects of reasonably foreseeable future projects which have entered the Environmental Review stage)? Yes ____ No X

4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? Yes ____ No X

TECHNICAL REVIEW CHECKLIST

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

Attachments:

1. Location Map, General Plan Map, Zoning Map
2. Aerial View
3. Project Plans (reduced)
4. Shadow Analysis and Visual Simulations
5. Discretionary Application Comments
6. Geologic Report Recommendations, prepared by Nolan Associates, dated August 3, 2005.
7. Review of Engineering Geology Report, prepared by Joseph Hanna, dated November 16, 2005.
8. Geotechnical Report Recommendations prepared by Haro, Kasunich and Associates, dated February 6, 2008.
9. Review of Geotechnical Investigation, prepared by Carolyn Banti, dated October 31, 2007.

Location Map

LEGEND

- APN: 106-211-27
- Assessors Parcels
- Streets

Environmental Review Inital Study

ATTACHMENT 1, 1 of 3

APPLICATION 07-0619

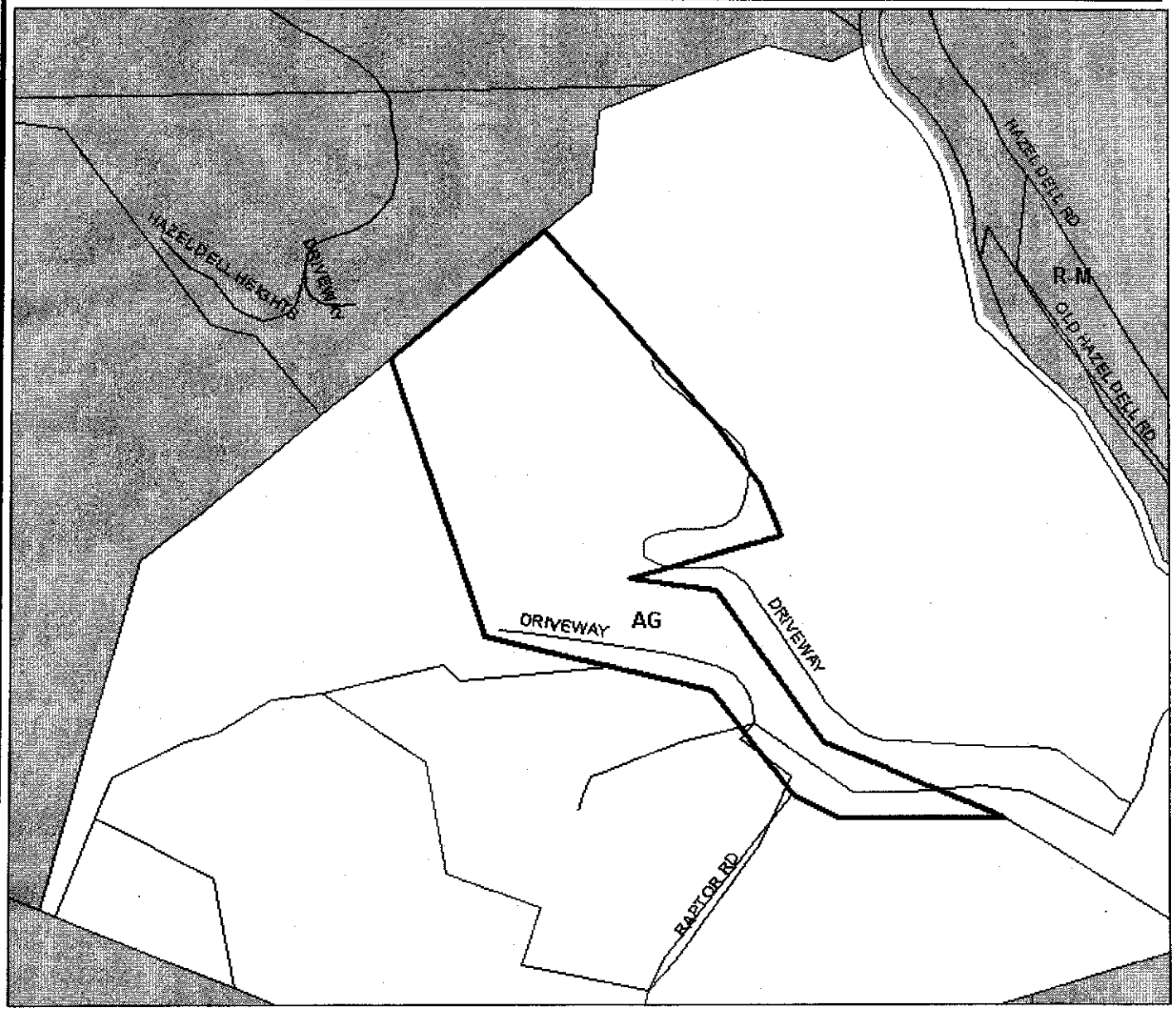
N

W E

S

Map created by
County of Santa Cruz
Planning Department
August 2007

General Plan Designation Map



0 340 660 1,360 2,040 2,720 Feet

LEGEND

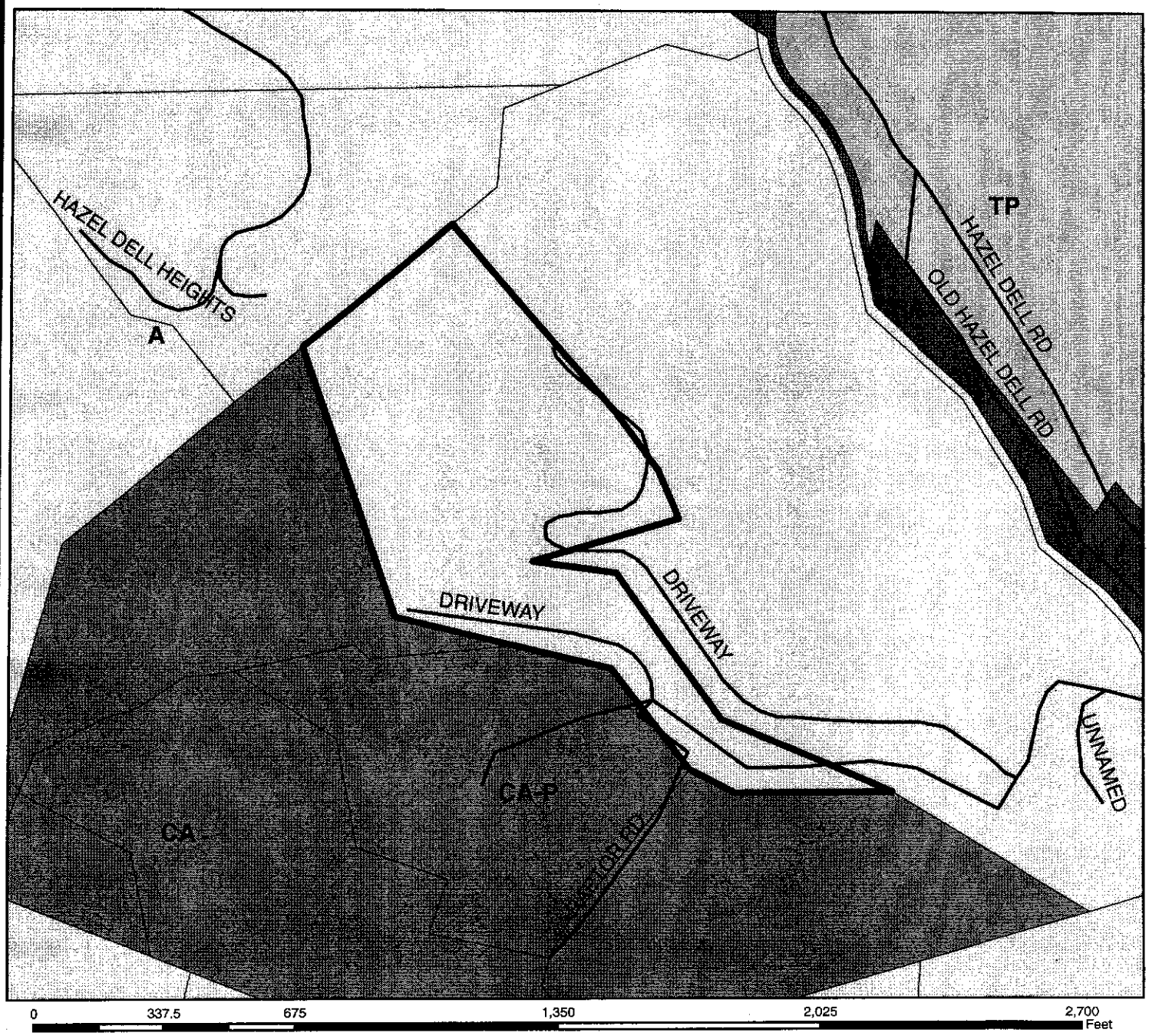
- APN: 106-21[illegible]
- Assessors Parcels
- Streets
- Agriculture
- Residential-Mountain

Environmental Review Inital Study
ATTACHMENT 1, 2 of 3
APPLICATION 07-0619

N
W E
S

Map created by
County of Santa Cruz
Planning Department
August 2007

Zoning Map



LEGEND

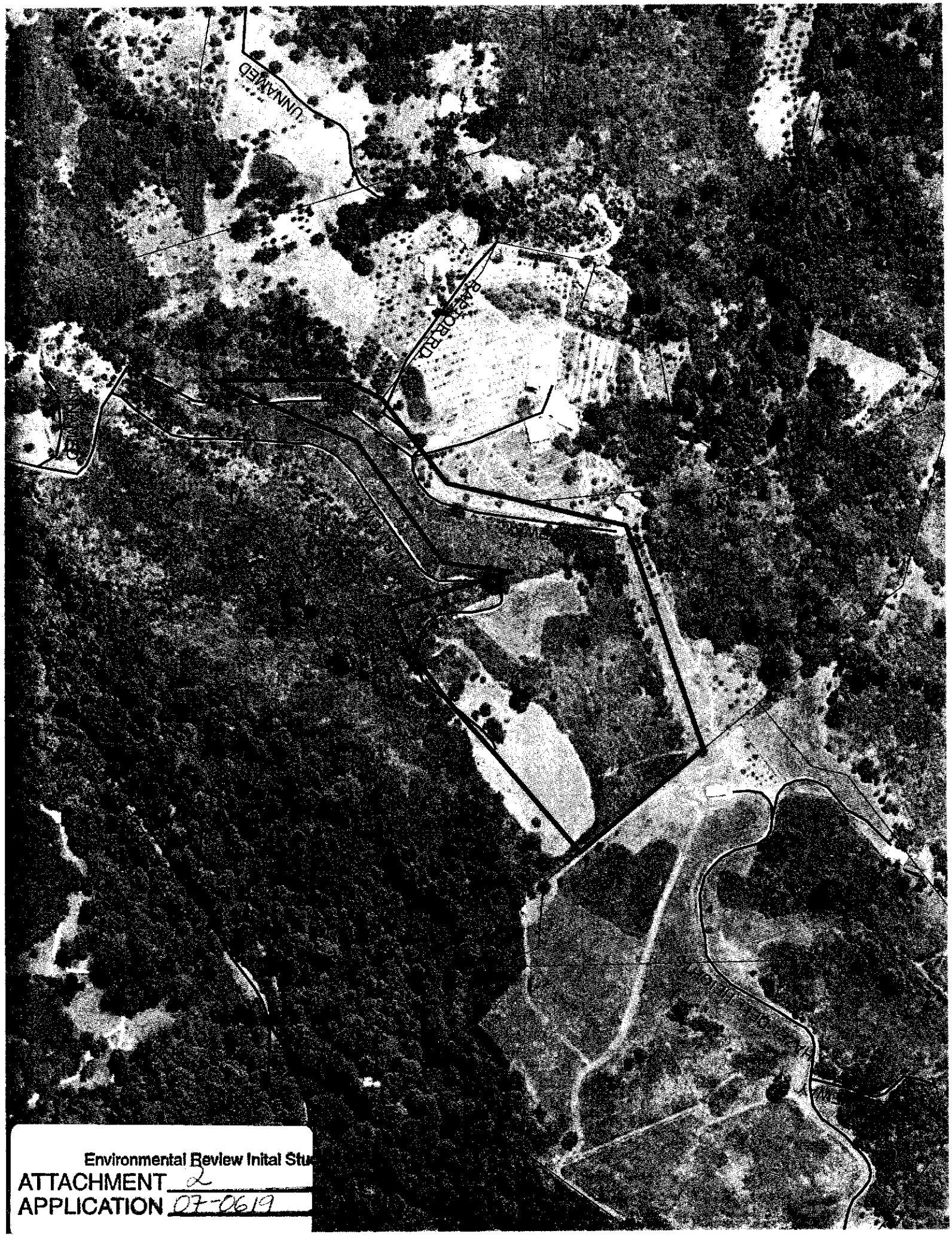
- APN: 106-211-27
- Assessors Parcels
- Streets
- AGRICULTURE
- AGRICULTURE COMMERCIAL
- AGRICULTURE RESIDENTIAL
- TIMBER PRODUCTION

Hatching

Environmental Review Inital Study
ATTACHMENT 1, 3 of 3
APPLICATION 07-0619

N
W E
S

Map Created by
County of Santa Cruz
Planning Department
April 2008



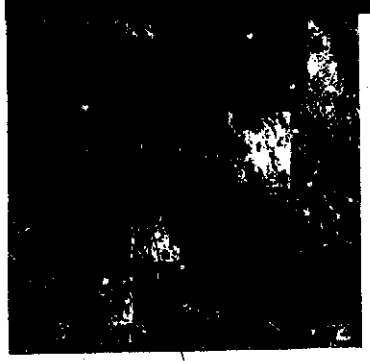
Environmental Review Inital Stu
ATTACHMENT 2
APPLICATION 07-0619

HARTMANN RESIDENCE

195Z OLD HAZEL DELL ROAD PARCEL B, 45 PM 52, SALSIPUEDES RANCHO , SANTA CRUZ COUNTY CA

DESIGNER	SURVEYOR	CIVIL ENGINEER	GEOLOGIST	STRUCTURAL	LANDSCAPE ARCHITECT	GEOTECHNICAL ENGINEER
SANBA, INC Arizona Office: 2675 W. HWY 89A, STE 449 SEDONA, AZ 86336 tel (928)282-3755 fax (928)282-4083 New York Office: 341 Lafayette Street Suite 767 New York, NY 10012 (646) 943-0404	MID COAST ENGINEERS Jeff Nelson 70 PENNY LANE, SUITE A WATSONVILLE, CA 95076 tel (831) 724-2580	RI ENGINEERING, INC Richard Irish 393 Potrero Street Suite 42-202 Santa Cruz, CA 95060 tel (831) 426-3901 ext 11 fax (831) 426-1522	NOLAN ASSOCIATES Jeff Nolan 1509 Seabright Ave Suite A2 Santa Cruz, CA 95062 tel (831) 423-7006 fax (831) 423-7008	G. REYNOLDS & ASSOCIATES George Reynolds 111 Younglove Ave Santa Cruz, CA 95060 tel (831) 426-3831	JANET POLLOCK 521 Swift Street Santa Cruz, CA 95060 tel (831) 426-9340 fax (831) 426-9308	HARO, KASUNICH & ASSOC. INC. 116 E Lake Ave. Watsonville, CA 95076

VICINITY MAP



SUBJECT PROPERTY

PROJECT INFO

COUNTY:	SANTA CRUZ
APN #	APN-108-211-27
LOT #:	45PM 52 PARCEL B
ACRES:	16.5 ACRES
LOT SQ. FT:	718,740 SQ. FT.
SECTION:	33,T17NR5E
BOOK:	48
PAGE:	11

PLANNING DEPARTMENT APPROVAL NO. 06-0078

FIRE DISTICT: CAL FIRE / SANTA CRUZ FIRE MARSHALL

NOTES:
- SWIMMING POOL TO COMPLY WITH 2001 CA BLDG CODE AND SANTA CRUZ COUNTY BUILDING CODE

BUILDING INFO

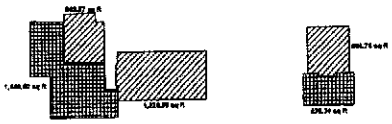
CONST. TYPE:	TYPE-V
STORIES:	3
HEIGHT:	30'-4"
PARKING SPACES:	

Environmental Review Initial Study
ATTACHMENT 3, Lt 25
APPLICATION 03-0619

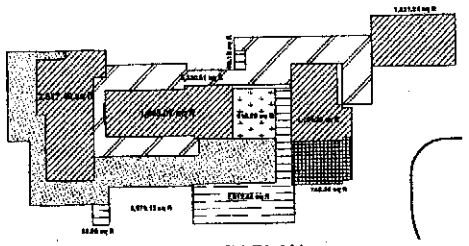
Abbreviations

A/C	Air Conditioning(ed)
A.D.	Area Drain
A/E	Architect/Engineer
A.F.F.	Above Finish(ed) Floor
A.F.S.	Above Finish(ed) Surface
ALUM.	Aluminum
ALT.	Alternative
AMT.	Amount
∠	Angle(s)
ANOD.	Anodize(d)
APPROX.	Approximate(ly)
ARCH.	Architect(s)
ASPH.	Asphalt
BD.	Board(s)
BIT.	Bituminous
BLDG.	Building
BLK(G.)	Block(ing)
BU.(R.)	Built-up (Roofing)
C.B.	Catch Basin
C.F.	Cubic Feet (Feet)
C.J.	Control Joint
C.L.	Centerline
CLG.	Ceiling
C.L.L.	Contract Limit Line
CLR.	Clear(ance)
C.M.U.	Concrete Masonry Unit(s)
C.O.	Clean Out
COL.	Column
CONC.	Concrete
CONST	Construction
CONT.	Contractor
CORR.	Corridor, Corrugate(d)
C.T.	Ceramic Tile
CTR.	Counter
D.	Drain
DEMO.	Demolish
D.F.	Drinking Fountain
DIA.	Diameter
DIM.	Dimension
DISP.	Dispenser, Disposal
DN.	Down
DR.	Door
D.S.	Downspout
D.T.	Drain Tile
DTL.	Detail
DRWG.	Drawing
EA.	Each
E.J.	Expansion Joint
EL.	Elevation (Grade)
ELEC.	Electric(al)
ELEV.	Elevator, Elevator
EMER.	Emergency
EQUIP.	Equipment
E.W.C.	Electrical Water Cooler
EXH.	Exhaust
EXTG.	Existing
EXP.	Expand(sion), Exposed
F.A.	Fire Alarm
F.D.	Fire Damper, Floor Drain
F.E.	Fire Extinguisher
F.E.C.	Fire Extinguisher Cabinet
F.F.	Finished Floor
F.H.	Fire Hose
F.H.C.	Fire Hose Cabinet
F.H.R.	Fire Hose Rack
F.HYD.	Fire Hydrant
F.SP.	Fire Standpipe
FIN.	Finish(ed)
FLASH.	Flashing
FL.	Floor
FND.	Foundation
F.O.C.	Face of Concrete
F.O.F.	Face of Finish
F.O.M.	Face of Masonry
F.O.S.	Face of Studs
FT.	Foot, Feet
FTG.	Footing
G.A.	Gauge
GALV.	Galvanized
G.C.	General Contractor
GL.	Glass/Glazing
GR.	Grade
GRD.	Guard
G.W.B.	Gypsum Wall Board
GYP.	Gypsum

THIRD FLOOR AREA KEY PLAN



SECOND FLOOR AREA KEY PLAN

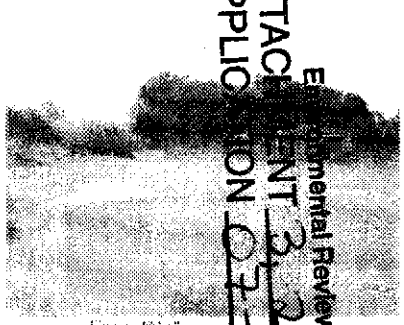


FIRST FLOOR AREA KEY PLAN

FIRST FLOOR	5024.84
SECOND FLOOR	2356.31
THIRD FLOOR	552.26
GARAGE	1221.24
FLOOR AREA	**9154.65**
FIRST FLOOR COVERED WALKWAYS	3320.61
FIRST FLOR TERRACE:	4315.46
POOLS:	1790.62
SECOND FLOOR TERRACE	2672.78
TOTAL CONSTRUCTION AREA:	**21,254.12**

SHEET SCHEDULE

Environmental Review Initial Study
ATTACHMENT 3 Page 2
APPLICATION 07-0614


From Well


By Big Oak

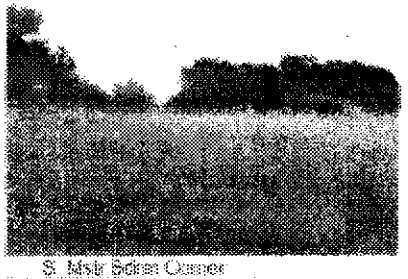

Below Mstr. Bdrm Corner

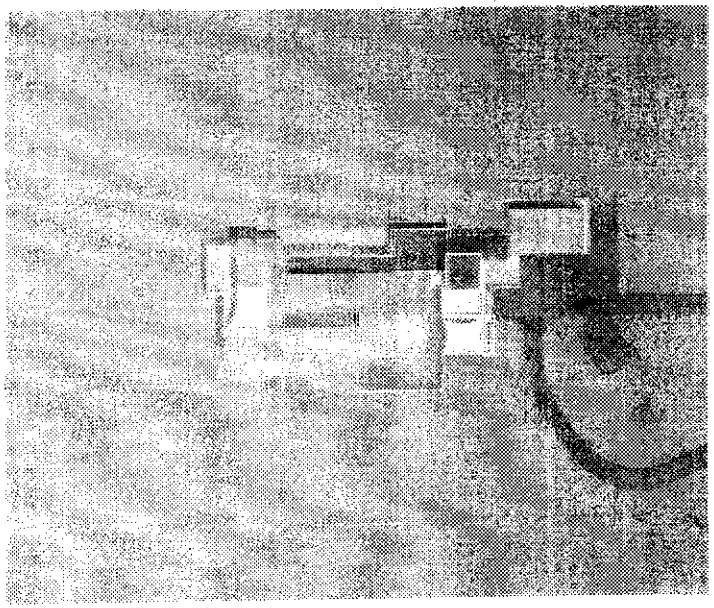

Stake almost in rd


Stake pool car


Stake Below Well


Stake below Pool Car


S. Mstr Bdrm Corner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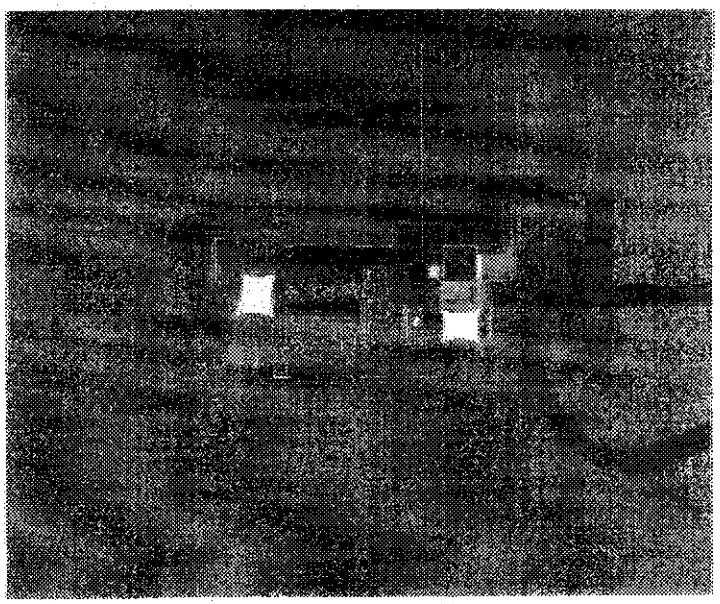
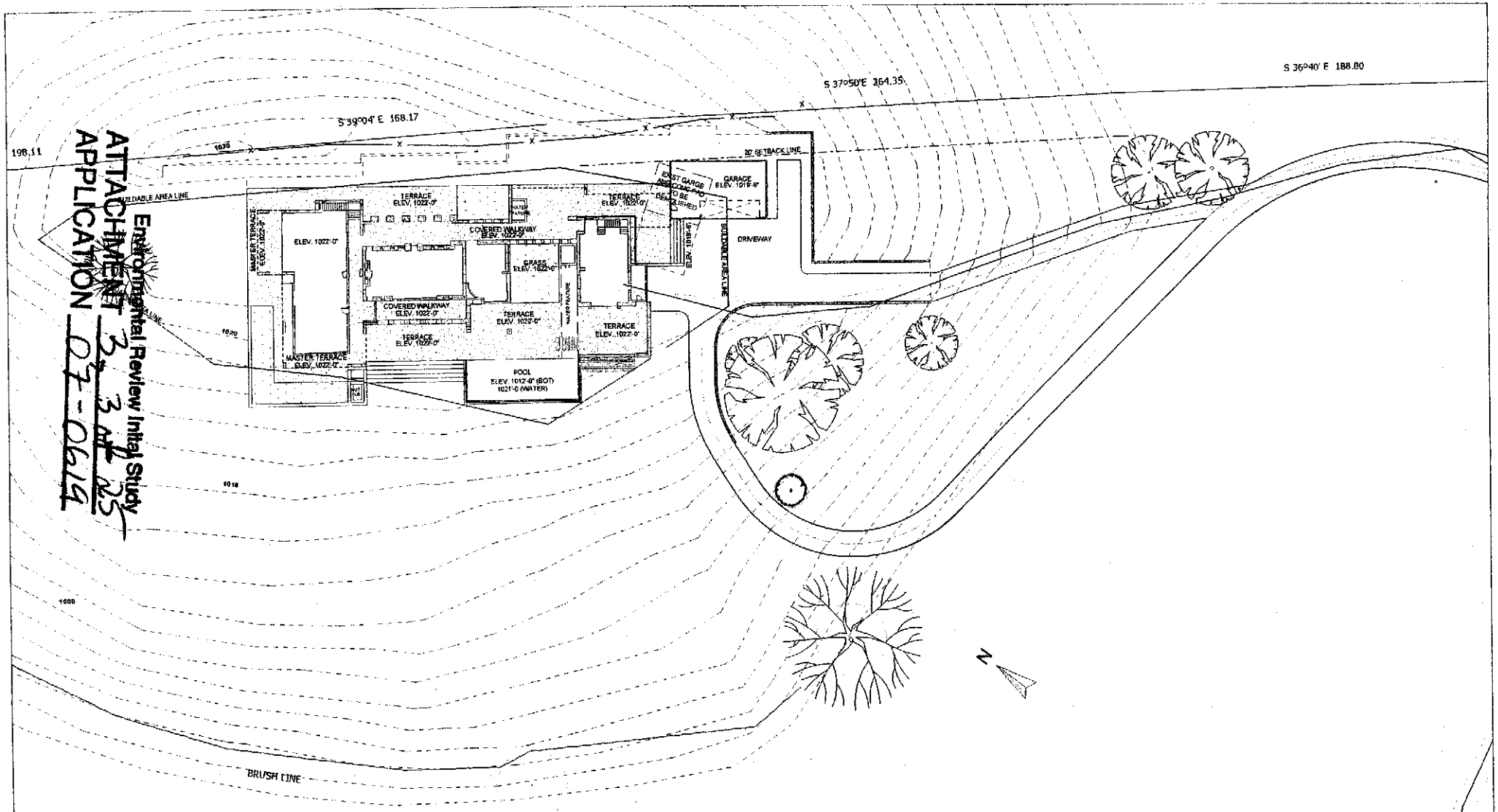

hartmann sun_study_dec21

sanba

HARTMANN RESIDENCE
195Z OLD HAZEL DELL ROAD
PARCEL B, 45 PM 52
SALSIPUEDES RANCHO
SANTA CRUZ COUNTY CA, 95076

SITE PHOTOS
SUN STUDIES

07-0101 A-02



Site Plan (1)
SCALE: 1" = 20'-0"

ATTACHMENT 3 pg 25
APPLICATION 07-0674

Environmental Review Initial Study

sanba
DESIGNER ALDO ANDREOLI

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INFO@SANBA.COM

HARTMANN RESIDENCE

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SANTA CRUZ COUNTY CA, 95076

DESCRIPTION OF CONSTRUCTION: NOT FOR CONSTRUCTION

TITLE: ARCH SITE PLAN

SCALE: AS NOTED
DRAWN BY: K.C.
CHECKED BY: A.A.

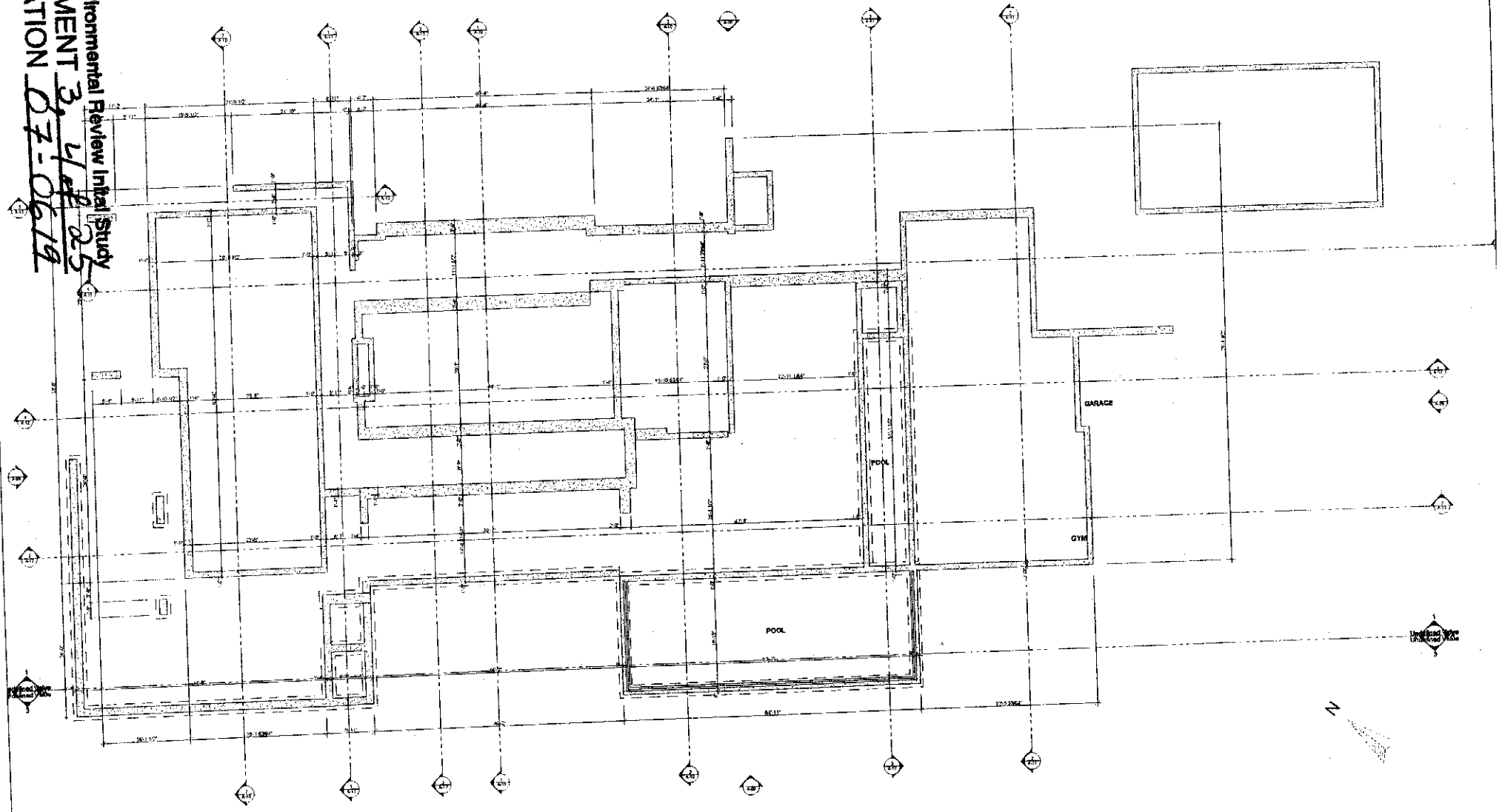
DATE	DESCRIPTION
10/3/2007	PERMIT SET

2007

070101 | A-03

ATTACHMENT 3, 4 of 25
APPLICATION 07-0648

Environmental Review Initial Study



Foundation Plan (1)
SCALE: 1/8" = 1'-0"

sanba
DESIGNER ALEX MORFOU

NEW YORK
341 LAFAYETTE ST., STE 767
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TELEPHONE (646) 510-0404

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HARTMANN RESIDENCE
195Z OLD HAZEL DELL ROAD
PARCEL B, 45 PM 52
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SANTA CRUZ COUNTY CA, 95076

DESIGNATION OF CONSTRUCTION: NOT FOR CONSTRUCTION
FILE: Foundation Plan

DATE	DESCRIPTION
SCALE: AS NOTED	
DRAWN: K.C.	CHECKED: A.A.
10/3/2007	PERMIT SET

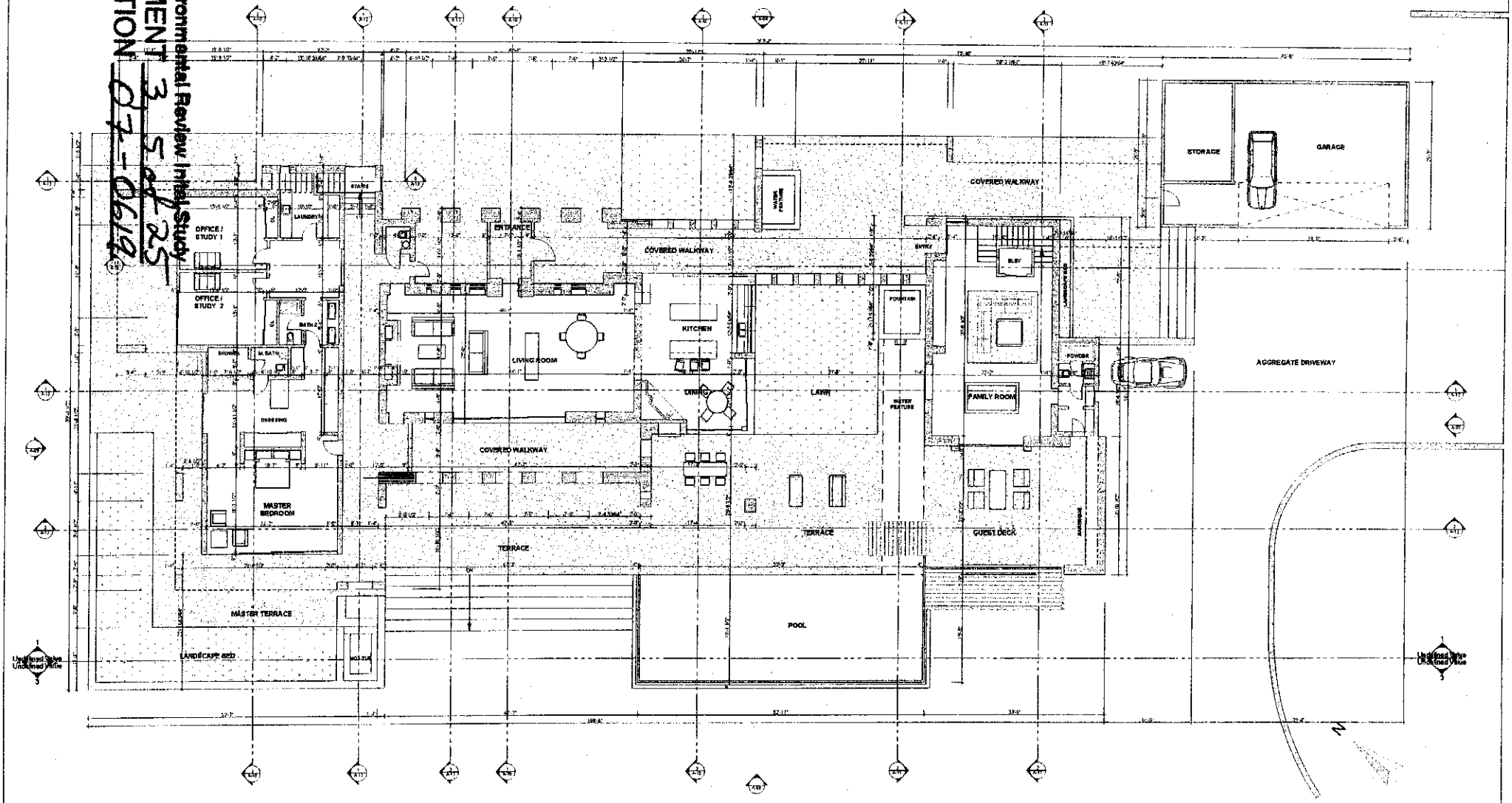
2007

070101 A-(

PAGE 4 OF 14

ATTACHMENT 3 EA 25
APPLICATION 07-0612

Environmental Review Initial Study



1st Floor Plan (1)
SCALE: 1/8" = 1'-0"

sanba
DESIGNER: ALDO ANDREOLI

NEW YORK
341 LAFAYETTE ST. STE #7
NEW YORK, NEW YORK 10012
TELEPHONE (646) 943-0434

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HARTMANN RESIDENCE

195Z OLD HAZEL DELL ROAD
PARCEL B, 45 PM 52
SALSIPUEDES RANCHO
SANTA CRUZ COUNTY CA, 95076

NOT FOR CONSTRUCTION

FIRST FLOOR PLAN

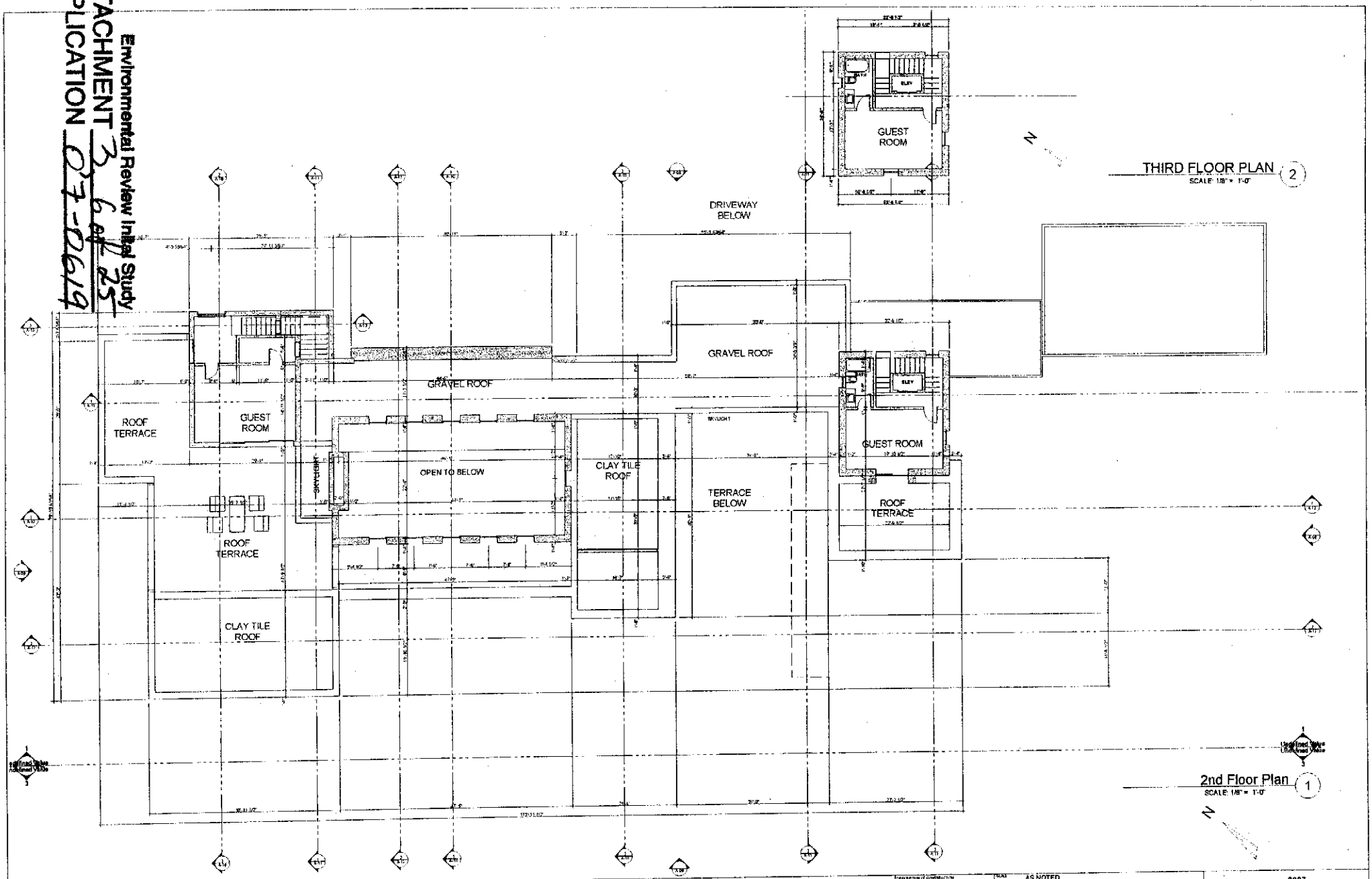
AS NOTED
DRAWN: K.C. REVIEWED: A.A.
DATE: 10/3/2007 DESCRIPTION: PERMIT SET

2007

070101 A-05

5 14

Environmental Review Initial Study
ATTACHMENT 3 6 of 25
APPLICATION 07-0619



sanba
DESIGNER ALDO ANDREOLI

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541 LAFAYETTE ST., STE 707
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HARTMANN RESIDENCE

195Z OLD HAZEL DELL ROAD
PARCEL B, 45 PM 52
SALSIPUEDES RANCHO
SANTA CRUZ COUNTY CA, 95076

DESCRIPTION OF CONSTRUCTION: NOT FOR CONSTRUCTION

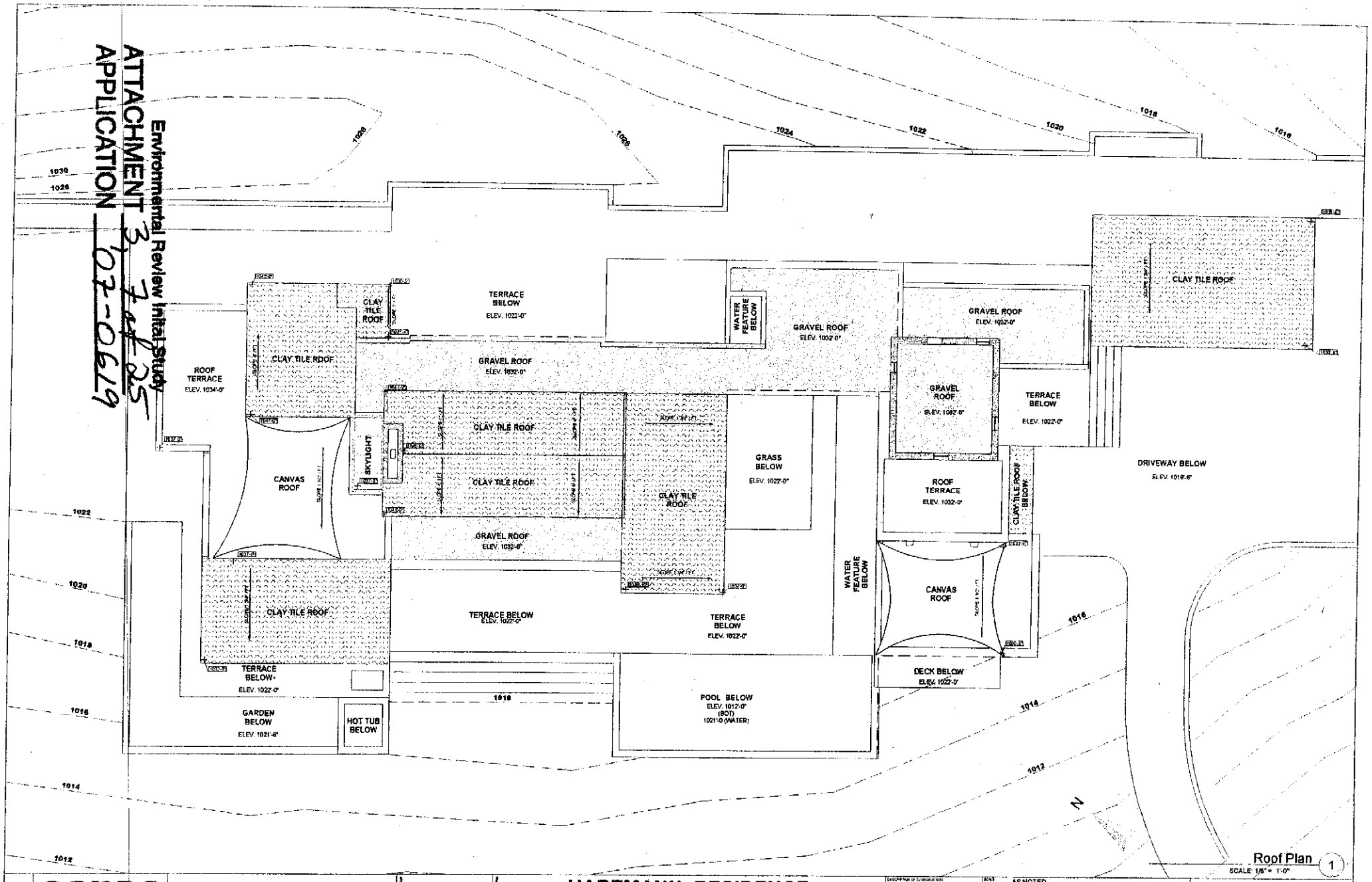
TITLE: Second Floor Plan

SCALE: AS NOTED
DRAWN: K.C.
CHECKED: A.A.
DATE: 10/3/2007
DESCRIPTION: PERMIT SET

2007

070101 | A-06

Environmental Review Initial Study
ATTACHMENT 3, 7 of 25
APPLICATION 102-0679



Roof Plan (1)
SCALE: 1/8" = 1'-0"

sanba
DESIGNER: ALDO ANDREOLI

NEW YORK
241 LAFAYETTE ST., STE 702
NEW YORK, NEW YORK 10012
TELEPHONE: (917) 640-0834

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HARTMANN RESIDENCE

195Z OLD HAZEL DELL ROAD
PARCEL B, 45 PM 52
SALSIPUEDES RANCHO
SANTA CRUZ COUNTY CA, 95076

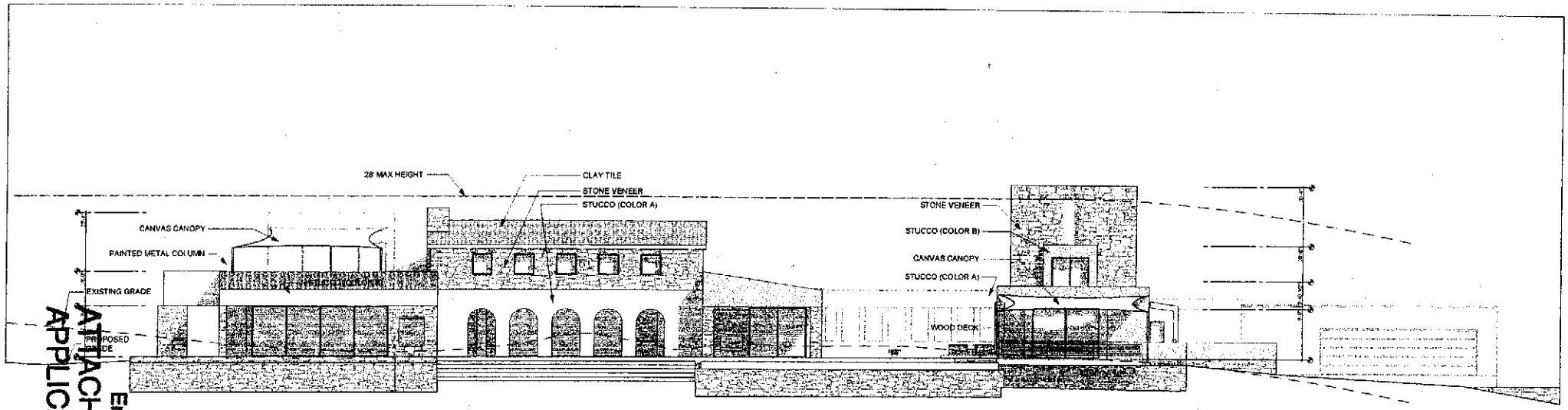
NOT FOR CONSTRUCTION

ROOF PLAN

AS NOTED
K.C. A.A.
10/3/2007 PERMIT SET

2007

070101 A-07



South Elevation (1)
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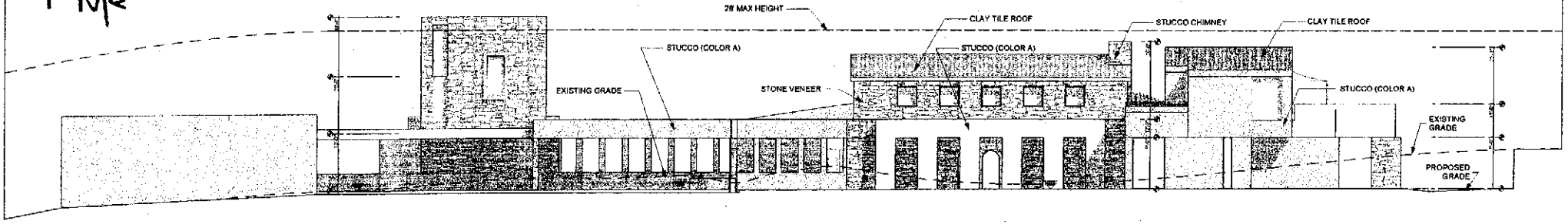

North Elevation (2)
SCALE: 1/8" = 1'-0"

Environmental Review Initial Study
ATTACHMENT 3 Page 25
APPLICATION 07-0619

sanba
DESIGNER: ALDO ANDREOLI

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HARTMANN RESIDENCE

195Z OLD HAZEL DELL ROAD
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SANTA CRUZ COUNTY CA, 95076

DESCRIPTION OF ISSUE/REVISION: NOT FOR CONSTRUCTION

TITLE: NORTH / SOUTH ELEVATIONS

SCALE: AS NOTED
DRAWN BY: K.C. REVIEWED BY: A.A.
DATE: 10/3/2007 PERMIT SET

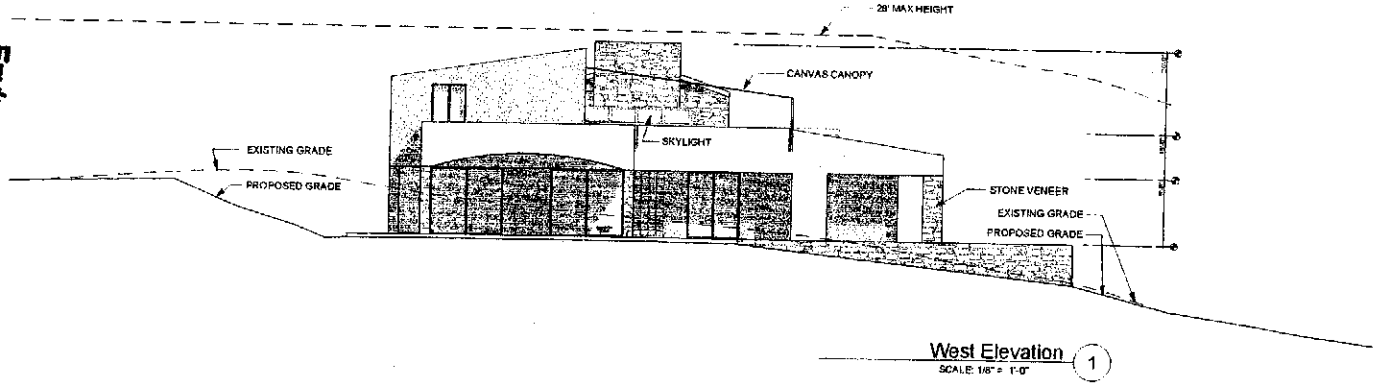
2007

070101 A-08

PAGE 8 OF 14

ATTACHMENT 3
APPLICATION 02-0419

Environmental Review Initial Study



West Elevation (1)
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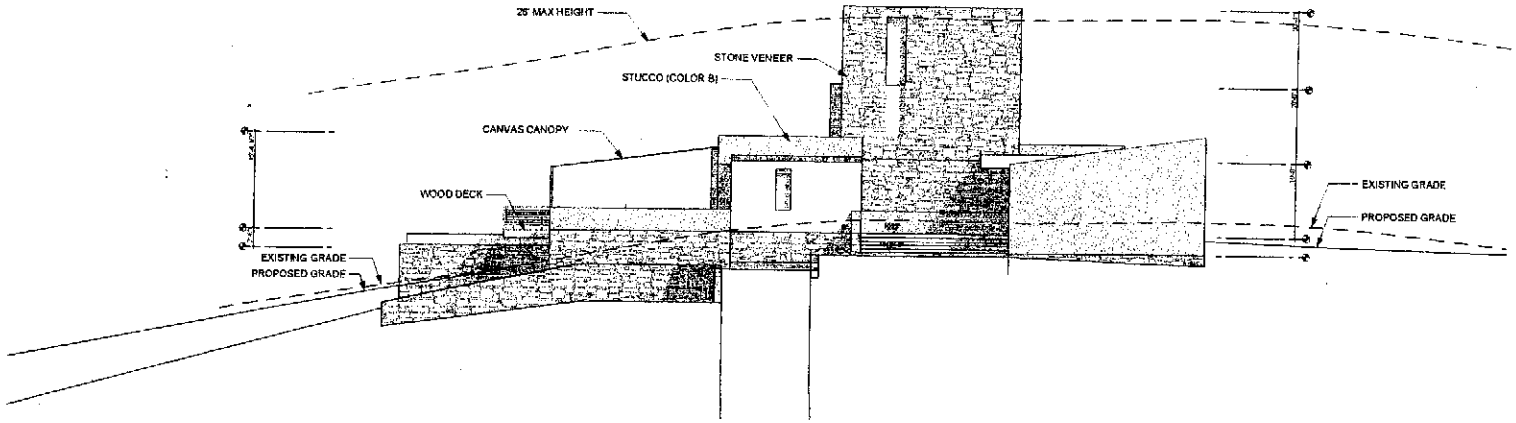

East Elevation (2)
SCALE: 1/8" = 1'-0"

sanba
ARCHITECTURE & DESIGN
NEW YORK
ATTN: LAFAYETTE ST., STE 207
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HARTMANN RESIDENCE

195Z OLD HAZEL DELL ROAD
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SALSIPUEDES RANCHO
SANTA CRUZ COUNTY CA, 95076

NOT FOR CONSTRUCTION

EAST / WEST ELEVATIONS

SCALE	AS NOTED
DRAWN BY	K.C.
REVIEWED BY	A.A.
DATE	10/3/2007
REVISION	PERMIT SET

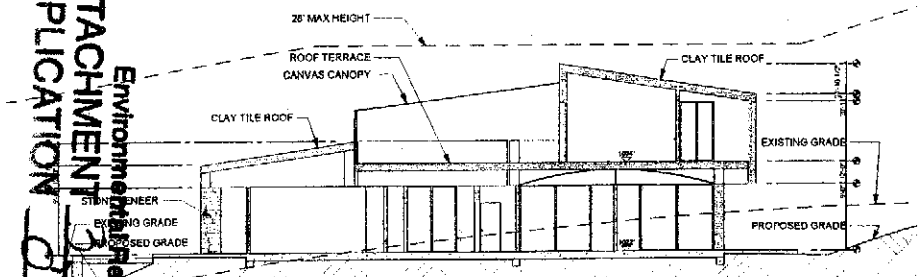
2007

070101 | A-09

PAGE 9 OF 14

ATTACHMENT 3 to EA
APPLICATION 07-0617

Environmental Review Initial Study



SECTION THRU MASTER BEDROOM (2)
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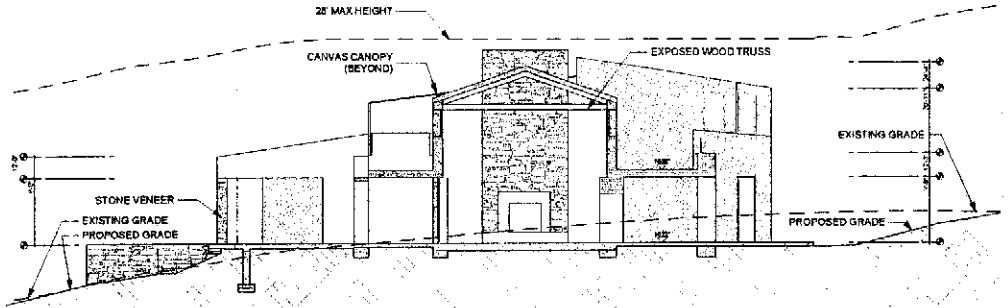

SECTION THRU LIVING ROOM (1)
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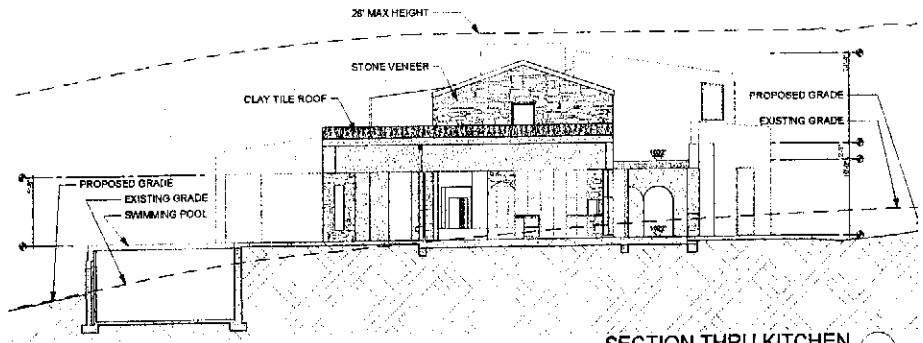

SECTION THRU KITCHEN (3)
SCALE: 1/8" = 1'-0"

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DESIGNER ALDO ANDRIANI
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241 LAFAYETTE ST., STE 2A7
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TELEPHONE (646) 845-0202
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HARTMANN RESIDENCE

195Z OLD HAZEL DELL ROAD
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SALSIPUEDES RANCHO
SANTA CRUZ COUNTY CA, 95076

DESCRIPTION OF CONSTRUCTION: NOT FOR CONSTRUCTION

TITLE: BUILDING SECTIONS

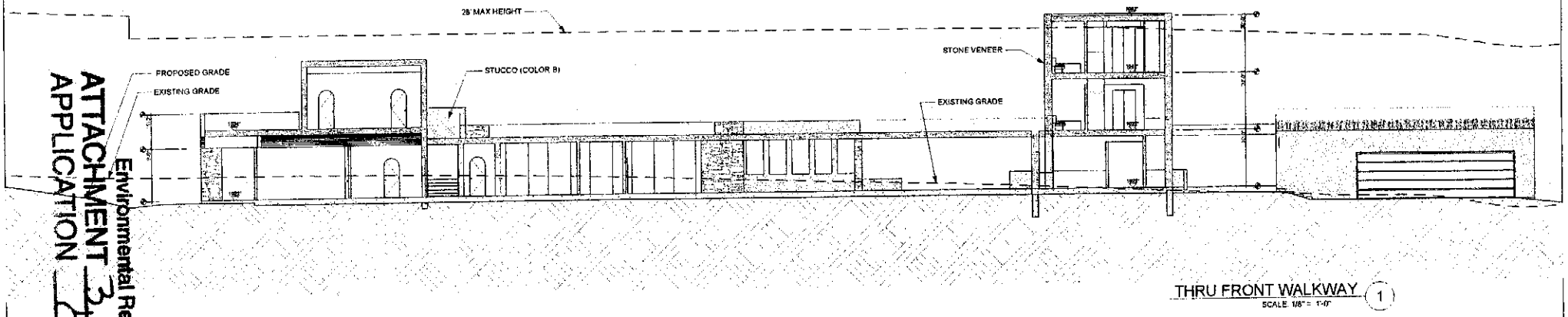
SCALE	AS NOTED	
DRAWN BY	K.C.	CHECKED BY A.A.
DATE	10/3/2007	DESCRIPTION PERMIT SET

2007

070101 | A-10

PAGE 10 OF 14

Environmental Review Initial Study
ATTACHMENT 3, 11 of 22
APPLICATION 07-0619



THRU FRONT WALKWAY (1)
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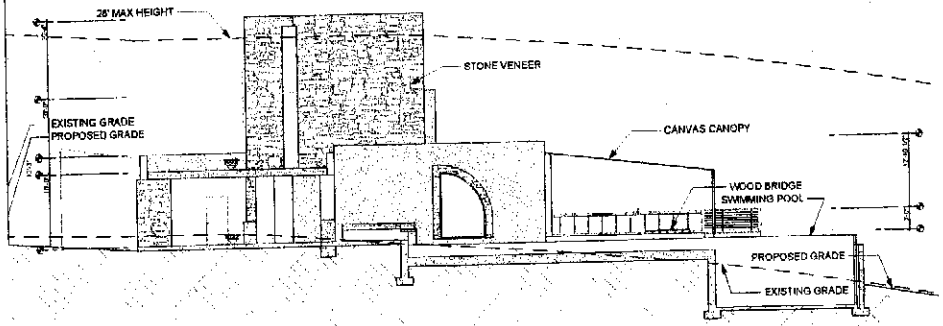

SECTION THRU POOL (3)
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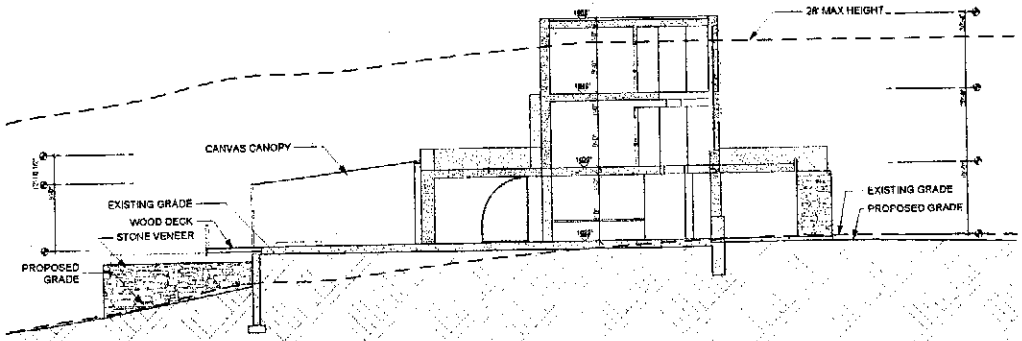

SECTION THRU TOWER (2)
SCALE: 1/8" = 1'-0"

sanba
DESIGNER: ALDO ANDREOLI

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FAX (928) 204-0183

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HARTMANN RESIDENCE

195Z OLD HAZEL DELL ROAD
PARCEL B, 45 PM 52
SALSIPUEDES RANCHO
SANTA CRUZ COUNTY CA, 95076

DESCRIPTION OF CONSTRUCTION: NOT FOR CONSTRUCTION

TITLE: BUILDING SECTIONS

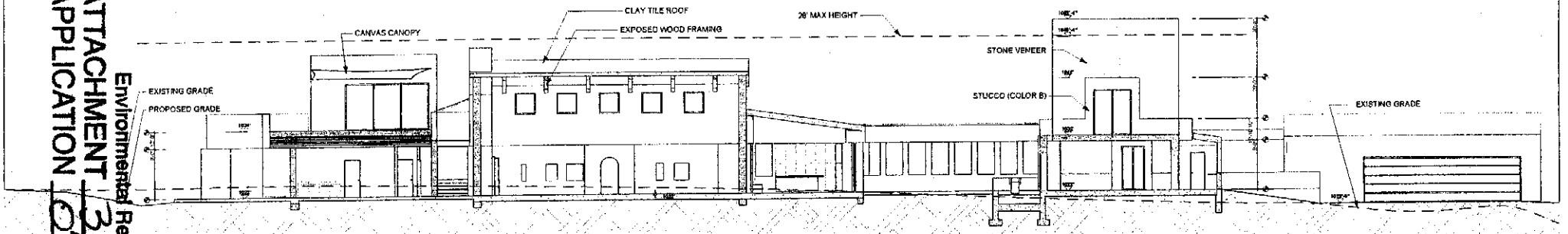
SCALE	AS NOTED
DRAWN	K.C.
APPROVED	A.A.
DATE	10/3/2007
DESCRIPTION	PERMIT SET

2007

070101 A-11

PAGE 11 OF 14

ATTACHMENT 3 to Exhibit 25
APPLICATION 07-0614
Environmental Review Initial Study



SECTION THRU CENTER LIVING ROOM (1)
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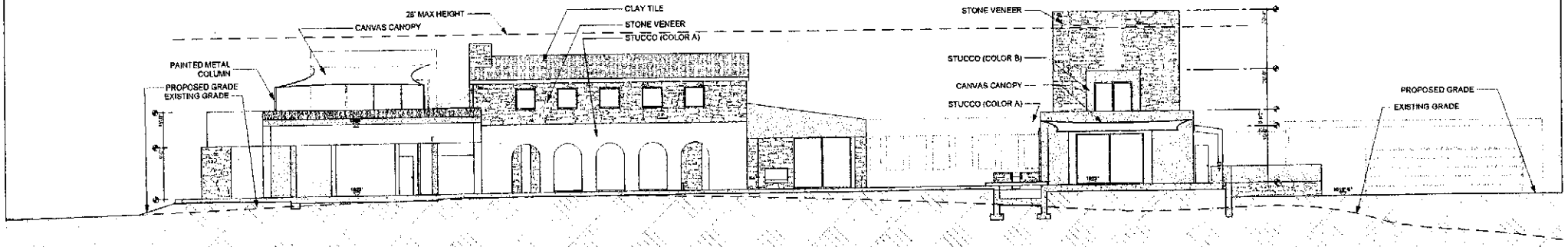


SECTION THRU REAR WALKWAY (2)
SCALE: 1/8" = 1'-0"

sanba
DESIGNER: ALDO ANDREOLI

NEW YORK
341 LAFAYETTE ST., STE 701
NEW YORK, NEW YORK, 10012
TELEPHONE: (646) 345-0454

ARIZONA
2975 W. HWY 89A, STE 140
SEDONA, AZ 86336
TELEPHONE: (928) 203-3494
FAX: (775) 832-4480

WWW.SANBA.COM
INFO@SANBA.COM

HARTMANN RESIDENCE
195Z OLD HAZEL DELL ROAD
PARCEL B, 45 PM 52
SALSIPUEDES RANCHO
SANTA CRUZ COUNTY CA, 95076

DESCRIPTION OF CONSTRUCTION: NOT FOR CONSTRUCTION

TITLE: BUILDING SECTIONS

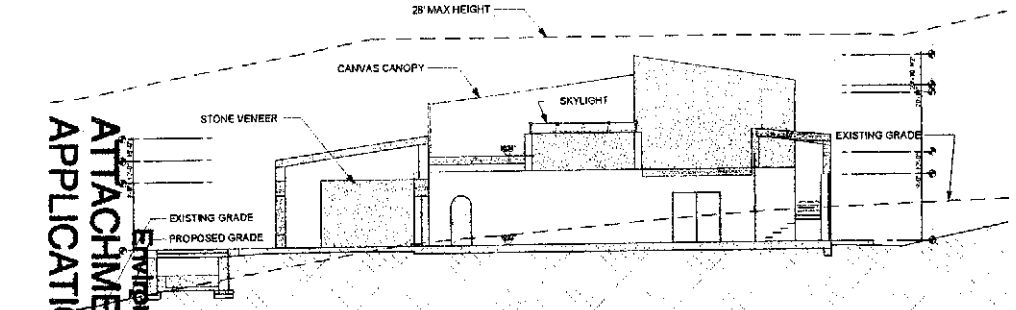
SCALE: AS NOTED
DRAWN: K.C. CHECKED: A.A.
DATE: 10/3/2007 DESCRIPTION: PERMIT SET

2007

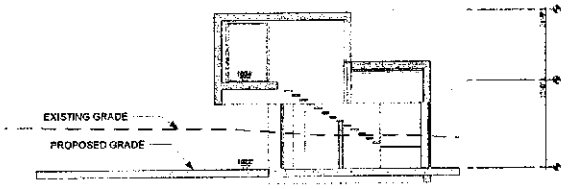
070101 A-12

PAGE 12 OF 14

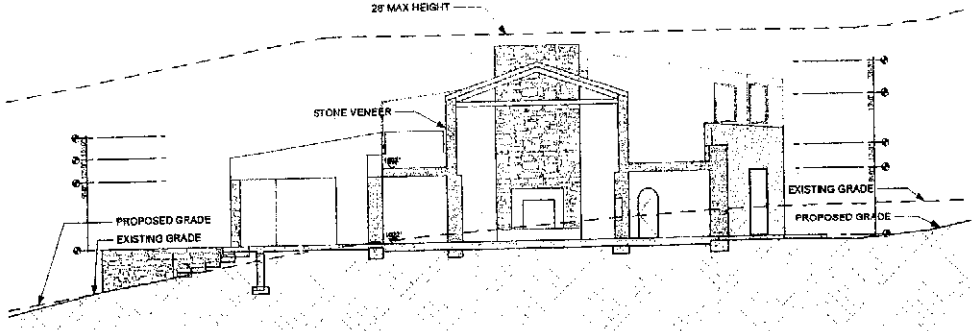
ATTACHMENT 3, 13 of 25
APPLICATION 07-0619
Environmental Review Initial Study



SECTION THRU HALL /STAIR (1)
SCALE: 1/8" = 1'-0"



HORZ SECTION THRU STAIR (3)
SCALE: 1/8" = 1'-0"



SECTION THRU LIVING ROOM TRUSS (2)
SCALE: 1/8" = 1'-0"

sanba
DESIGNER: ALDO ANDREOLI

NEW YORK
541 LAFAYETTE ST., STE 7B7
NEW YORK, NEW YORK, 10012
TELEPHONE (646) 943-0404

ARIZONA
2675 W. HWY 89A, STE 418
SEDONA, AZ 86336
TELEPHONE (928) 282-0755
FAX (928) 282-0765

WWW.SANBA.COM
INFO@SANBA.COM

HARTMANN RESIDENCE

195Z OLD HAZEL DELL ROAD
PARCEL B, 45 PM 52
SALSIPUEDES RANCHO
SANTA CRUZ COUNTY CA, 95076

NOT FOR CONSTRUCTION

BUILDING SECTIONS

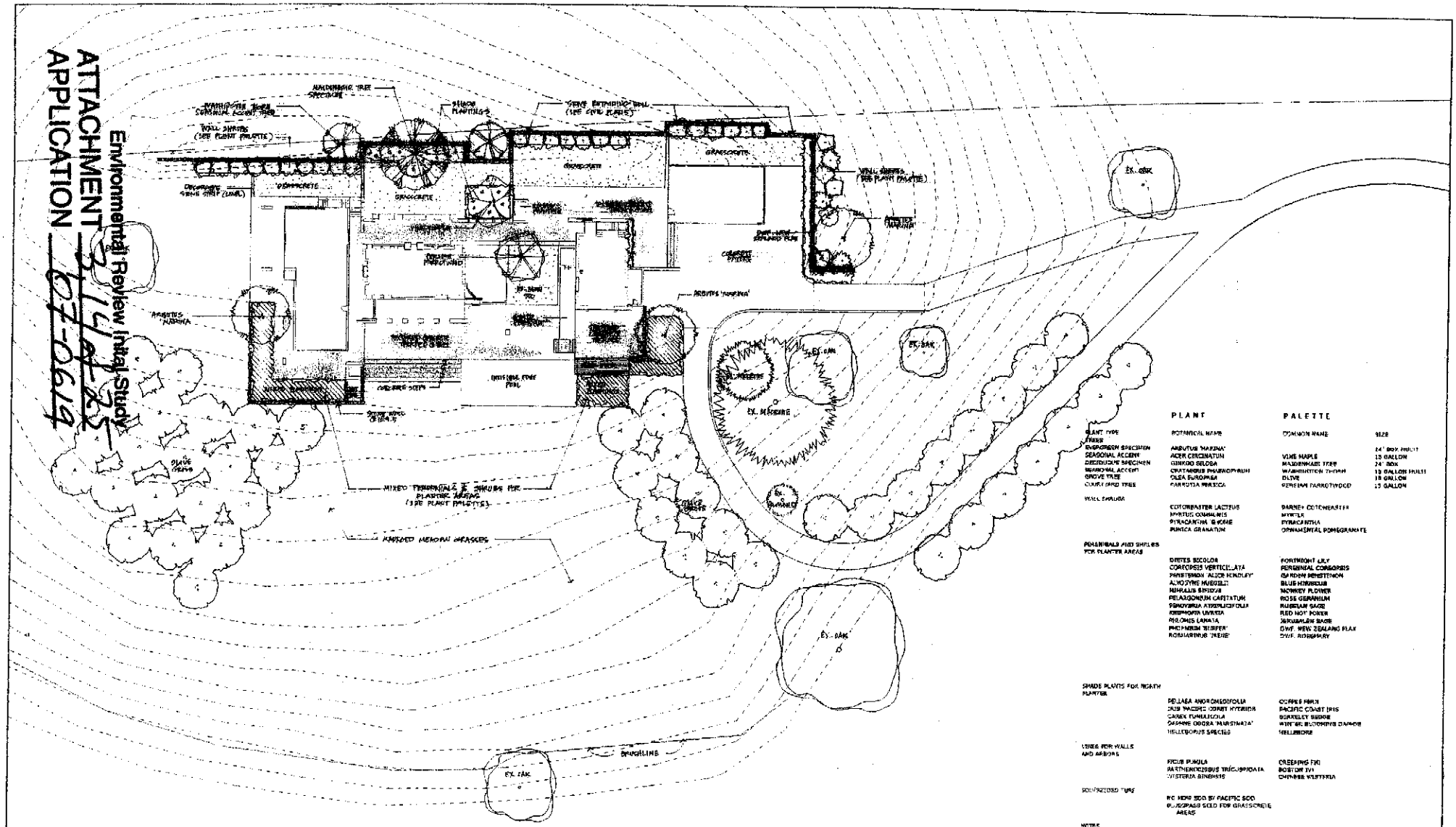
SCALE	AS NOTED
DESIGNED BY	K.C.
REVIEWED BY	A.A.
DATE	10/3/2007
DESCRIPTION	PERMIT SET

2007

070101 A-13

PAGE 13 OF 14

Environmental Review Initial Study
ATTACHMENT 3 (1 of 2)
APPLICATION 07-0619



PLANT PALETTE

PLANT TYPE	BOTANICAL NAME	COMMON NAME	SIZE
TREES			
EVERGREEN SPECIMEN	ARBUTUS MARINA'		24" BOX FRUIT
SEASONAL ACCENT	ACER CIRCINATUM	VINE MAPLE	15 GALLON
DECIDUOUS SPECIMEN	GINKGO BILOBA	MAIDENHAIR TREE	24" BOX
SEASONAL ACCENT	CRATAEGUS PHAENOPYRUM	WASHINGTON THORN	15 GALLON MULTI
GROVE TREE	OLEA EUROPAEA	OLIVE	15 GALLON
COAST LAND TREE	PARROTIA PERSICA	PERSIAN PARROTWOOD	15 GALLON
WALL ESPALIER			
	COTONEASTER LACTEUS	PARNEY COTONEASTER	
	MYRTUS COMMUNIS	MYRTLE	
	PYRACANTHA 'GOMINI'	PYRACANTHA	
	PUNICA GRANATUM	ORNAMENTAL POMEGRANATE	
PERENNIALS AND SHRUBS FOR PLANTER AREAS			
	DIETES BICOLOR	FORTNIGHT LILY	
	CORTADERIA VERTICILLATA	PERENNIAL CORDGRASS	
	PENSTEMON 'ALICE HINDLEY'	GARDEN PENSTEMON	
	ALOE SPICATA	BLUE HIBISCUS	
	MIMULUS AURANTIACUS	MONKEY FLOWER	
	PELARGONIUM CAPITATUM	ROSE GERANIUM	
	PEROVSKIA ATRIPLICIFOLIA	RUSSIAN SAGE	
	KNIPHOFIA UVARIA	RED HOT POKER	
	PHLOMIS LANATA	JERUSALEM SAGE	
	PHORMIUM 'BURGUNDY'	DWF. NEW ZEALAND FLAX	
	ROSMARINUS 'PROSTRATUS'	DWF. ROSEMARY	
SHADE PLANTS FOR NORTH PLANTER			
	BERGENIA CORDIFOLIA	COMMON BERGENIA	
	IRIS 'PACIFIC COAST HYBRIDS'	PACIFIC COAST IRIS	
	CAREX TUMULICOLA	BERKELEY SEDGE	
	DAPHNE ODORA 'MARGINATA'	WINTER BLOOMING DAPHNE	
	HELLEBORUS SPECIES	HELLEBORE	
VINES FOR WALLS AND ARBORS			
	FICUS PUMILA	CREEPING FIG	
	PARTHENOCISSUS TRICUSPIDATA	BOSTON IVY	
	WISTERIA SINENSIS	CHINESE WISTERIA	
SOD/SEEDED TURF			
	RC HOWE SOD BY PACIFIC SOD		
	BLUEGRASS SOD FOR GRASSCRETE AREAS		

NOTES

AN AUTOMATIC IRRIGATION SYSTEM SHALL BE INSTALLED CONSISTING OF DRIP IRRIGATION IN ALL PLANTER AREAS AND OVERHEAD SPRINKLERS FOR GRASSCRETE AND SOD AREAS.

ALL SURFACE WATER ON PAVED TERRACES SHALL BE COLLECTED IN STRIP DRAINS OR AREA DRAINS AS NEEDED.

NORTH

REVISIONS

HARTMANN RESIDENCE

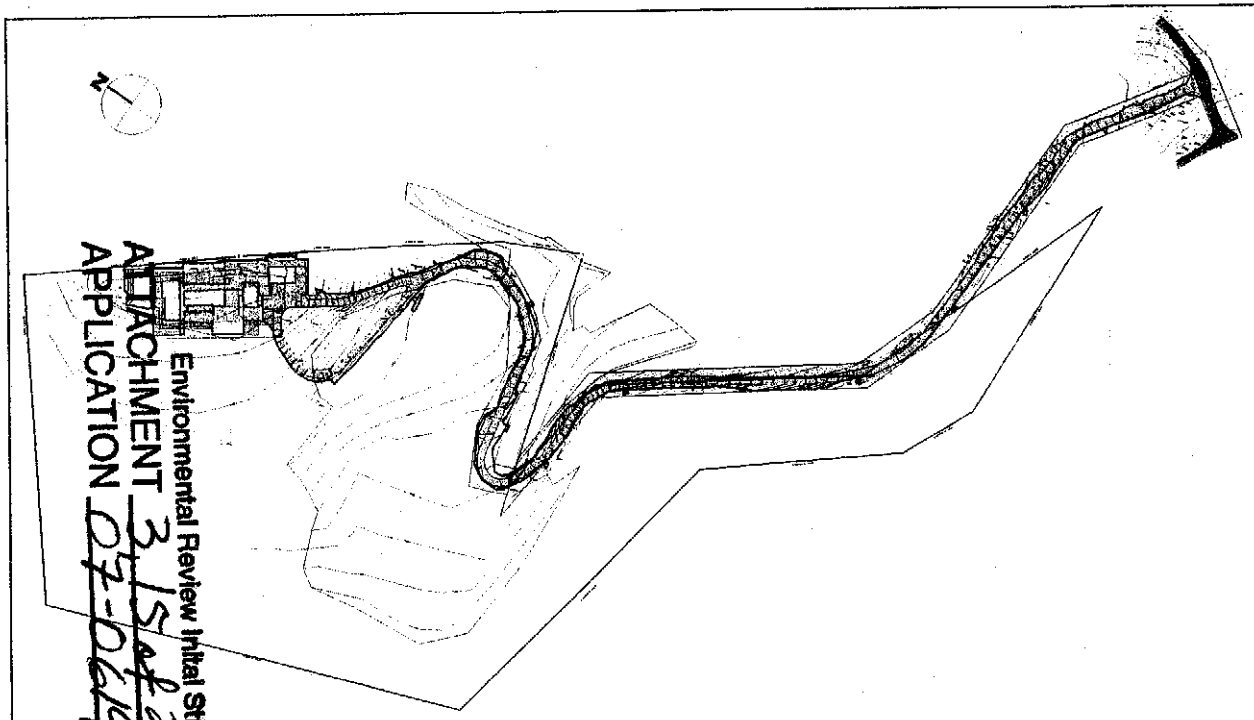
SEPTEMBER 19, 2007

PRELIMINARY LANDSCAPE PLAN

SC: 1" = 20'-0"

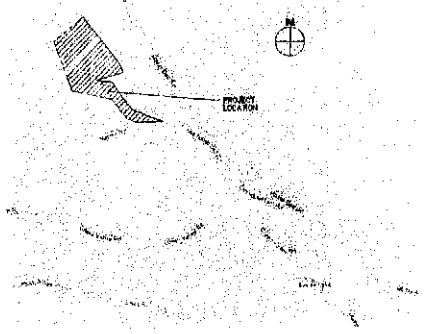
JANET POLLOCK
LANDSCAPE ARCHITECT
CA LIC NO 1587

Environmental Review Initial Study
ATTACHMENT 3 Sept 25
APPLICATION 07-0649



PLAN

1 INCH = 100 FEET



VICINITY MAP
NTS

Project Data

Owner
MR. ROBERT HARTMANN
339 VIA CORONA
APTOS, CALIFORNIA 95003

Total Area of Site
738,386 SF/ 16.97 ACRES

Landscape Architect
JANET POLLOCK
321 SWIFT STREET
SANTA CRUZ, CA 95060
TEL (831) 426-9340
FAX (831) 426-9308

Geotechnical Engineer
HARO, KASUNICH AND ASSOCIATES, INC.
116 EAST LAKE AVENUE
WATSONVILLE, CA 95076
TEL (831) 722-4175
FAX (831) 722-3202
PROJECT NO. SCR#65

Surveyor
MID COAST ENGINEERS
70 PENNY LANE, SUITE A
WATSONVILLE, CA 95076
TEL (831) 724-2880

Civil Engineer
RJ ENGINEERING, INC.
303 POTRERO ST SUITE 42-202
SANTA CRUZ, CA 95060
TEL (831) 425-3901
FAX (831) 425-1823

Design & Development Consultant
SAHRA, INC.
2870 S. HWY 89A STE 449
SEDONA, AZ 86336
TEL (928) 282-3795
FAX (928) 282-4083

Geologist
NOLAN ASSOCIATES
1500 SEABRIGHT AVE SUITE 42
SANTA CRUZ, CA 95062
TEL (831) 423-7006
FAX (831) 423-7008

Benchmark
BENCHMARK = TOP OF 1/2" PIPE
ELEVATION = 1000
DATUM ASSUMED

TOPOGRAPHIC SURVEY
THE TOPOGRAPHIC SURVEY AND BOUNDARY INFORMATION PROVIDED HEREON WAS CONFLICTED BY MID COAST ENGINEERS. RJ ENGINEERING INC MAKES NO GUARANTEE AS TO THE ACCURACY OF BOTH. THE CONTRACTOR SHALL VERIFY THE BOUNDARY LOCATION AND TOPOGRAPHIC INFORMATION PRIOR TO COMMENCING WORK.

SHEET INDEX

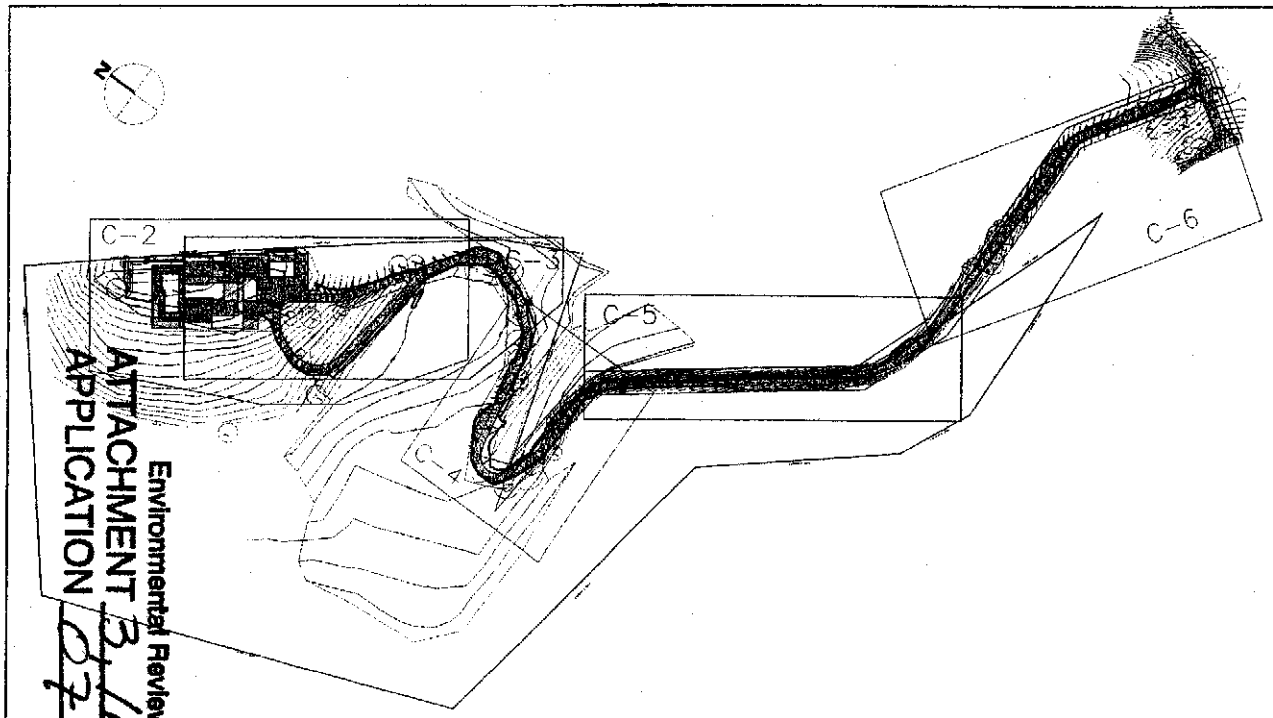
RJ Engineering, Inc.
303 Potrero St., Suite 42-202, Santa Cruz, CA 95060
831-425-3901 www.rjengineering.com

HARTMANN RESIDENCE
FOR:
ROBERT HARTMANN
195 OLD HAZEL DELL ROAD
WATSONVILLE, CALIFORNIA
APN: 106-211-27

SITE PLAN AND GENERAL NOTES

project no. # 07-033-1
date SEPTEMBER 2007
scale AS SHOWN
dwg name CIVIL.dwg

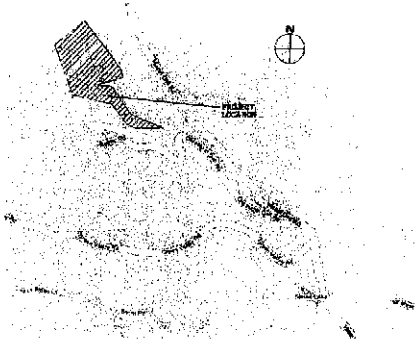
C-0



PLAN

100' 0 100' 200'

1 INCH = 100 FEET



VICINITY MAP
N.T.S.

Environmental Review Initial Study
ATTACHMENT 3 to EA
APPLICATION 07-0614

Project Data

Owner
MR. ROBERT HARTMANN
335 VIA CONCHA
APTOS, CALIFORNIA 95003

Total Area of Site
739,166 S.F./ 16.97 ACRES

Landscape Architect
JANET POLLOCK
321 SWIFT STREET
SANTA CRUZ, CA 95060
TEL (831) 466-9340
FAX (831) 426-9306

Geotechnical Engineer
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116 EAST LAKE AVENUE
WATSONVILLE, CA 95076
TEL (831) 722-4175
FAX (831) 722-3202
PROJECT NO. SC0486

Surveyor
MID COAST ENGINEERS
70 POPPY LANE, SUITE A
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Civil Engineer
RI ENGINEERING, INC.
303 POTRERO ST SUITE 42-202
SANTA CRUZ, CA 95060
TEL (831) 425-3901
FAX (831) 425-1522

Design & Development Consultant
SAMBA, INC.
2675 N. MAY AVE, STE 449
SEDONA, AZ 86336
TEL (928) 282-3753
FAX (928) 282-4082

Geologist
HOLAR ASSOCIATES
1500 SEABRIGHT AVE SUITE #2
SANTA CRUZ, CA 95062
TEL (831) 423-7000
FAX (831) 423-7008

Benchmark
BENCHMARK = TOP OF 1/2" PIPE
ELEVATION = 1000
DATUM ASSUMED

TOPOGRAPHIC SURVEY
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SHEET INDEX

HENRY A. HOH No. 43830 Exp. 12-31-08 CIVIL

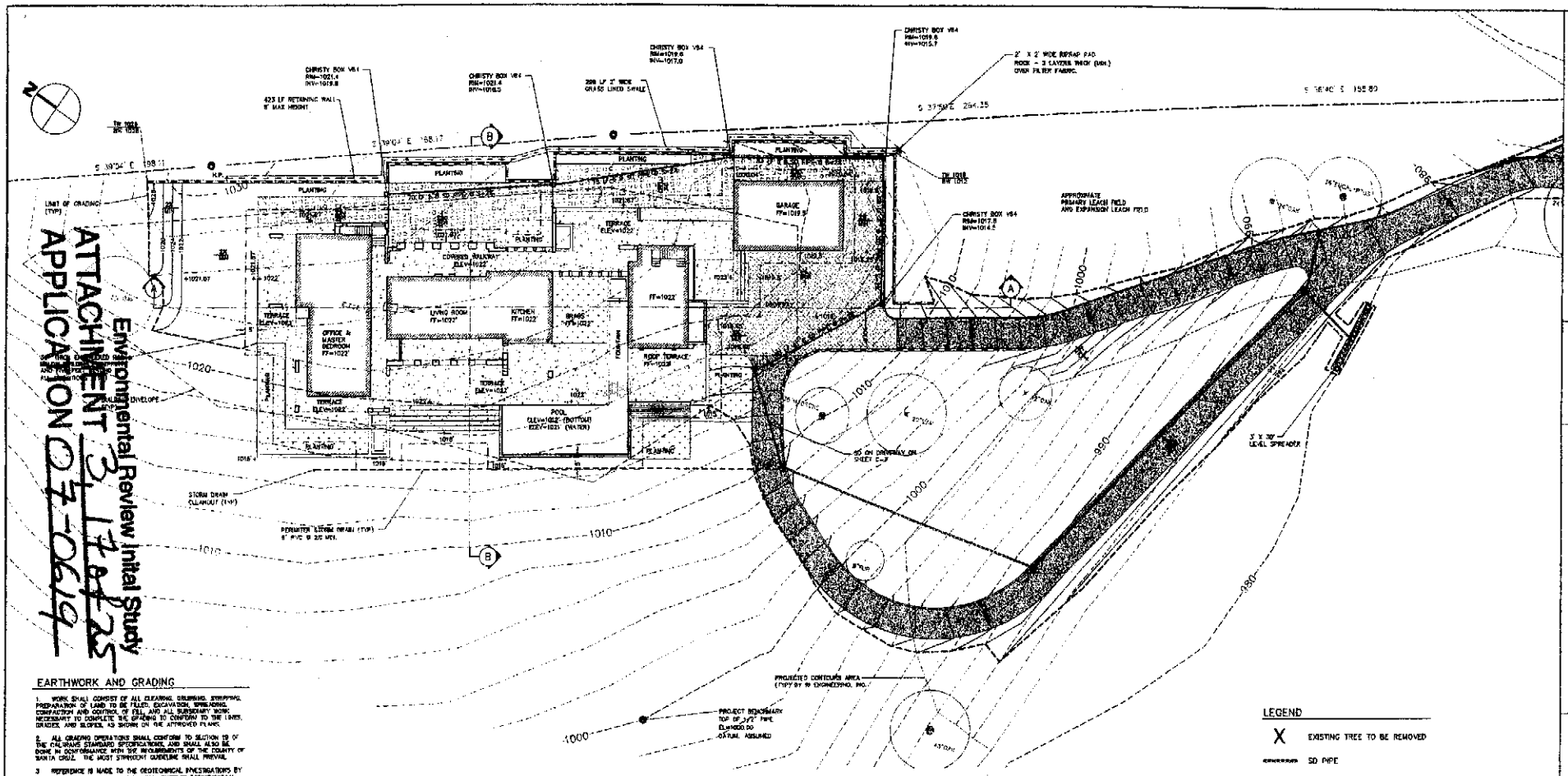
RI Engineering, Inc.
303 Potrero St., Suite 42-202, Santa Cruz, CA 95060
831-425-3901 www.riengineering.com

HARTMANN RESIDENCE
FOR
ROBERT HARTMANN
159 OLD HAZEL DELL ROAD
WATSONVILLE, CALIFORNIA
APN 108-211-27

SITE PLAN AND GENERAL NOTES

project no.
07-033-1
date
SEPTEMBER 2007
scale
AS SHOWN
dwg name
CIVIL.dwg

C-1



PLAN

1" = 20'-0"

1 INCH = 20 FEET

EARTHWORK AND GRADING

1. WORK SHALL CONSIST OF ALL CLEARING, GRUBBING, STRIPPING, PREPARATION OF LAND TO BE FILLED, EXCAVATION, SPREADING, COMPACTION AND CONTROL OF FILL AND ALL SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING TO CONFORM TO THE LINES, GRADES AND SLOPES AS SHOWN ON THE APPROVED PLANS.

2. ALL GRADING OPERATIONS SHALL CONFORM TO SECTION 19 OF THE CALTRANS STANDARD SPECIFICATIONS, AND SHALL ALSO BE DONE IN CONFORMANCE WITH THE REQUIREMENTS OF THE COUNTY OF SANTA CRUZ. THE MOST STRINGENT GUIDELINE SHALL PREVAIL.

3. REFERENCE IS MADE TO THE GEOTECHNICAL INVESTIGATIONS BY HARO, KASUNICH AND ASSOCIATES, INC. ENTITLED "GEOTECHNICAL INVESTIGATION FOR PROPOSED SINGLE FAMILY DWELLING 190 OLD HAZEL DELL ROAD WATSONVILLE, CALIFORNIA" PROJECT No. 607485 AND DATED JULY 2007. THE CONTRACTOR SHALL MAKE A THOROUGH REVIEW OF THIS REPORT AND SHALL FOLLOW ALL RECOMMENDATIONS THEREIN. THE CONTRACTOR SHALL CONTACT HARO, KASUNICH AND ASSOCIATES, INC. FOR ANY CLARIFICATIONS NECESSARY PRIOR TO PROCEEDING WITH THE WORK.

4. THE CONTRACTOR SHALL GRADE TO PIPE LINE AND ELEVATIONS SHOWN ON THE PLAN AND SHALL SECURE THE SERVICES OF A LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER TO PROVIDE STAKES FOR LINE AND GRADE.

5. THE GEOTECHNICAL ENGINEER SHOULD BE NOTIFIED AT LEAST FOUR (4) DAYS PRIOR TO ANY SITE CLEARING AND GRADING OPERATIONS.

6. THE UPPER 12 INCHES OF NATIVE SUBGRADE IN AREAS TO RECEIVE CONCRETE SLABS AND/OR PAVEMENTS SHOULD BE SCARIFIED, MOISTURE CONDITIONED TO PRODUCE A MOISTURE CONTENT WITHIN 3 TO 5 PERCENT ABOVE THE LABORATORY OPTIMUM VALUE, AND UNIFORMLY COMPACTED TO AT LEAST 90 PERCENT RELATIVE COMPACTION BASED ON ASTM TEST D1557. THE UPPER 8" OF CONCRETE SLAB, AND PAVEMENT SUBGRADE AND BASE SHOULD BE COMPACTED TO AT LEAST 95% RELATIVE COMPACTION UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL ENGINEER.

7. 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.

8. MATERIAL USED FOR ENGINEERED FILL SHALL MEET THE REQUIREMENTS OF THE AFOREMENTIONED REPORTS BY HARO, KASUNICH AND ASSOCIATES, INC.

9. IMPORTED FILL MATERIAL USED AS ENGINEERED FILL FOR THE PROJECT SHALL MEET THE FOLLOWING REQUIREMENTS:

ALL IMPORTED ENGINEERED FILL MATERIAL SHOULD MEET THE FOLLOWING:

a. Free of organic and deleterious materials, contain no rocks or clods greater than 6 inches in diameter, with no more than 15 percent by weight of rocks larger than 2 1/2 inches.

b. Be granular and have a Plasticity Index of less than 15, and should have sufficient binder to allow excavations to stand without caving.

ALL FILL MATERIAL SHALL BE APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER PRIOR TO JOBSITE DELIVERY AND PLACEMENT. NO EARTHWORK OPERATIONS SHALL BE PERFORMED WITHOUT THE DIRECT OBSERVATION AND APPROVAL OF THE GEOTECHNICAL ENGINEER.

STORM DRAINAGE NOTES

1. CULVERTS SHALL BE REINFORCED CONCRETE PIPE (RCP), POLYVINYL CHLORIDE (PVC), OR HIGH DENSITY POLYETHYLENE (HDPE) AND SHALL HAVE A SMOOTH INTERIOR CONFORMING TO SECTION C - STORM DRAINAGE FACILITIES OF COUNTY OF SANTA CRUZ DESIGN CRITERIA.

2. INLETS SHALL BE CHRISTY CONCRETE PRODUCTS OR APPROVED EQUAL.

3. CONNECT ALL DOWNSPOUTS TO PERIMETER STORM DRAIN.

APPROXIMATE EARTHWORK QUANTITIES

EXCAVATION	2,311	CUBIC YARDS
FILL	1,424	CUBIC YARDS
NET	887	CUBIC YARDS (CY)

NOTES:
1. EARTHWORK QUANTITIES ARE APPROXIMATE AND SHALL BE INDEPENDENTLY VERIFIED BY THE CONTRACTOR FOR BIDDING PURPOSES.
2. EARTHWORK VOLUMES INCLUDE EXCAVATION TO ROUGH GRADE FOR CONSTRUCTION OF THE PROPOSED RESIDENCE. ENTRANCE VOLUMES REQUIRED TO CONSTRUCT THE FOUNDATIONS HAVE NOT BEEN INCLUDED.
3. EXCESS SOIL SHALL BE HAULED OR PLACED IN A COUNTY APPROVED LOCATION.

APPROXIMATE VOLUME OF OVER-EXCAVATION 2,333 CY (EXCAVATION)

TOPOGRAPHIC SURVEY

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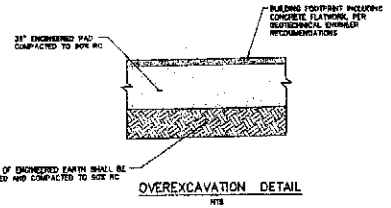


OVEREXCAVATION DETAIL

NTS

LEGEND

- X — EXISTING TREE TO BE REMOVED
- SD PIPE
- STONE RETAINING WALL
- RETAINING WALL ON DRIVEWAY
- CONCRETE HIGH CURB ON DRIVEWAY
- CONCRETE CURB
- GRASS LINED SWALE
- EXISTING ASPHALT CONCRETE
- PROPOSED IMPERVIOUS AREAS
- NEW ASPHALT CONCRETE 2" AC TYPE B ON 6" OF CLASS 2 AGGREGATE BASE COMPACTED TO 95% RC
- PAVERS LAID ON 9" OF CLASS 2 AGGREGATE SUB-BASE COMPACTED TO 95%
- 3" DEEP GRASSCRETE LAID ON 8" OF CLASS 2 AGGREGATE SUB-BASE COMPACTED TO 95% WITH A BLINDING LAYER OF SAND

Environmental Review Initial Study
ATTACHMENT 3
APPLICATION 07-0619

R.I Engineering, Inc.
303 Potrero St., Suite 42-202, Santa Cruz, CA 95060
831-425-3901 www.riengineering.com

HARTMANN RESIDENCE
FOR
ROBERT HARTMANN
190 OLD HAZEL DELL ROAD
WATSONVILLE, CALIFORNIA
APN 108-211-27

GRADING AND DRAINAGE PLAN

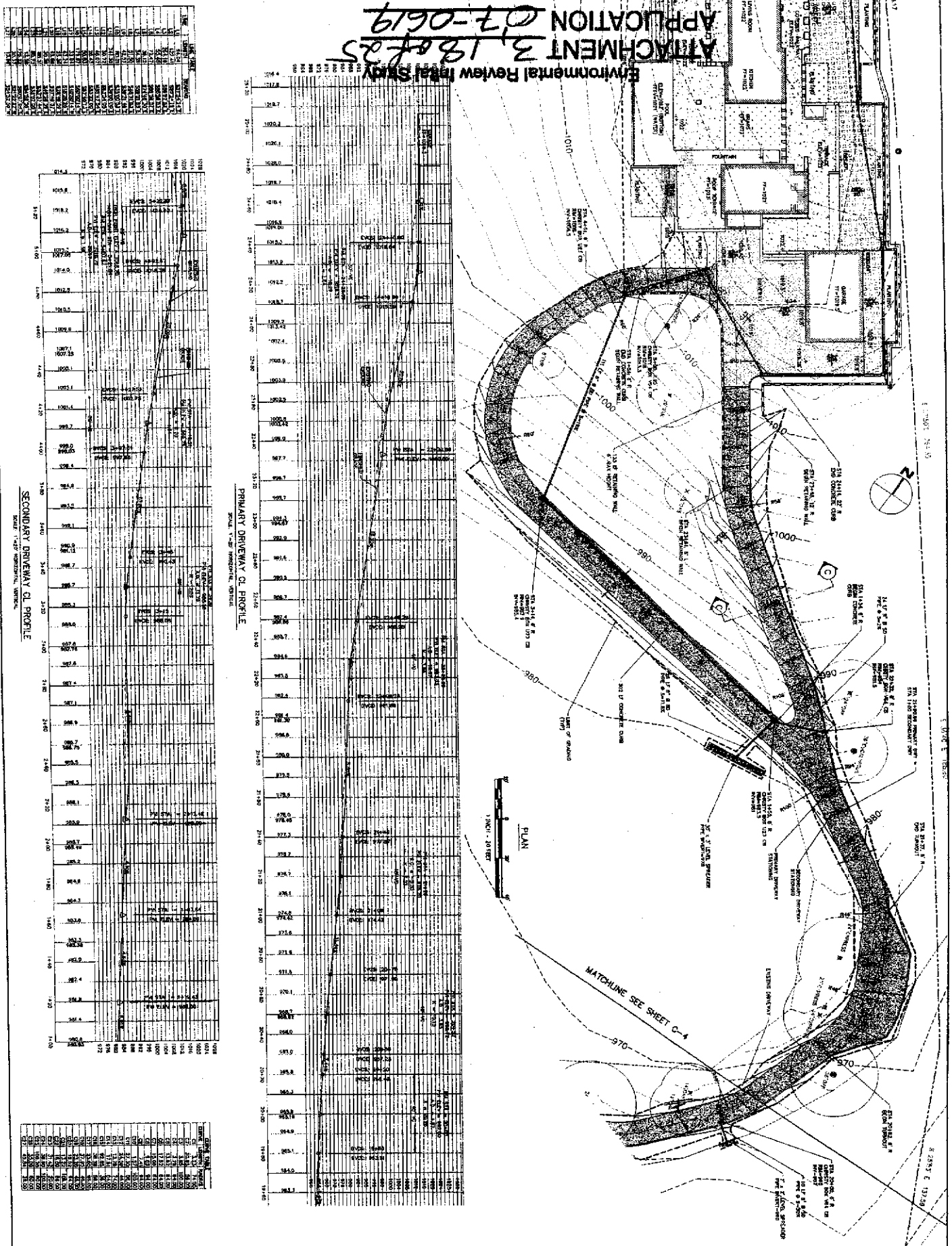
SHEET 1 OF 5

project no. # 07-033-1
date SEPTEMBER 2007
scale AS SHOWN
dwg name CIVIL.dwg

C-2

ATTACHMENT 3
APPLICATION 07-0619

Environmental Review Initial Study
EXHIBIT 1



C-3

HARTMANN RESIDENCE
FOR
ROBERT HARTMANN
195 OLD HAZEL DELL ROAD
WATSONVILLE, CALIFORNIA
APN 106-211-27

GRADING AND DRAINAGE PLAN

SHEET 2 OF 5

project no
07-003-1

date
SEPTEMBER 2007

scale
AS SHOWN

Dwg name
CIVIL.DWG

R.I Engineering, Inc.

303 Potrero St., Suite 42-202, Santa Cruz, CA 95060
831-425-3901 www.riengineering.com

GENERAL NOTES

1. THE CONTRACTOR SHALL MAKE A DETAILED AND THOROUGH STUDY OF THESE PLANS IN THEIR ENTIRETY PRIOR TO ANY WORK ON THE JOBSITE. THE CONTRACTOR IS TO VERIFY ALL EXISTING CONSTRUCTION CONDITIONS AND BE TO COORDINATE THESE DRAWINGS WITH ALL OTHER TRADE DISCIPLINES FOR THE COMPLETED WORK. THE CONTRACTOR IS ALSO TO UNDERSTAND THAT ANY FEATURE OF CONSTRUCTION NOT FULLY SHOWN OR DETAILED SHALL BE OF THE SAME TYPE AS SHOWN FOR SIMILAR CONDITIONS.

2. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY DISCREPANCY OCCURRING ON THE DRAWINGS OR FOUND IN ITS COORDINATION WORK. NO CHANGES IN APPROVED PLANS SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE PROJECT ENGINEER AND THE COUNTY OF SANTA CRUZ DEPARTMENT OF PUBLIC WORKS.

3. ANY REQUEST FOR ALTERATIONS OR SUBSTITUTIONS MUST BE PRESENTED DIRECTLY TO THE PROJECT ENGINEER, ACCOMPANIED BY A DETAILED SKETCH, FOR REVIEW, BEFORE ANY APPROVAL WILL BE GIVEN AND BEFORE PROCEEDING WITH THE WORK. ABSOLUTELY NO ALTERATIONS OF THESE DOCUMENTS OF ANY KIND WILL BE APPROVED ON ANY SHOP DRAWINGS.

4. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS (CALTRANS), LATEST EDITION, THE COUNTY OF SANTA CRUZ DESIGN CRITERIA AND ALL APPLICABLE CODES AND ORDINANCES

5. THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ON THE PLANS WERE OBTAINED FROM RECORD DRAWINGS AND MAY NOT REPRESENT TRUE LOCATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND DEPTH OF THESE UTILITIES PRIOR TO CONSTRUCTION, AND TO NOTIFY THE PROJECT ENGINEER IN CASE OF CONFLICT.

6. THE CONTRACTOR SHALL SECURE ALL REQUIRED CONSTRUCTION PERMITS FROM THE COUNTY OF SANTA CRUZ PRIOR TO THE START OF WORK.

7. CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE RESPONSIBLE TO ASSURE SAFE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD PROJECT ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE PROJECT ENGINEER.

8. GRADING SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL INVESTIGATIONS AND THE REQUIREMENTS OF THE COUNTY OF SANTA CRUZ.

9. THE CONTRACTOR SHALL NOTIFY THE COUNTY GRADING INSPECTOR, GEOTECHNICAL ENGINEER, THE COUNTY CONSTRUCTION ENGINEER AT LEAST 48 HOURS PRIOR TO TO THE START OF CONSTRUCTION.

10. WORK SHALL BE LIMITED TO 8:00 A.M. TO 5:00 P.M. WEEKDAYS. NON-NOISE PRODUCING ACTIVITIES, SUCH AS INTERIOR PAINTING, SHALL NOT BE SUBJECT TO THIS RESTRICTION.

11. ALL FIGURE (FIG.) REFERENCES, UNLESS OTHERWISE SPECIFIED, REFER TO STANDARD DRAWINGS IN THE CURRENT EDITION OF THE "COUNTY OF SANTA CRUZ DESIGN CRITERIA."

12. NO LAND CLEARING, GRADING OR EXCAVATING SHALL TAKE PLACE BETWEEN OCTOBER 15 AND APRIL 15 UNLESS THE PLANNING DIRECTOR APPROVES A SEPARATE WINTER EROSION CONTROL PLAN.

13. BETWEEN OCTOBER 15 AND APRIL 15, EXPOSED SOIL SHALL BE PROTECTED FROM EROSION AT ALL TIMES. DURING CONSTRUCTION SUCH PROTECTION MAY CONSIST OF MULCHING AND/OR PLANTING OF NATIVE VEGETATION OF ADEQUATE DENSITY. BEFORE COMPLETION OF THE PROJECT, ANY EXPOSED SOIL OR DISTURBED SLOPES SHALL BE PERMANENTLY PROTECTED FROM EROSION.

14. THE CONTRACTOR SHALL APPLY WATER TO ALL EXPOSED EARTH SURFACES AT INTERVALS SUFFICIENT TO PREVENT AIRBORNE DUST FROM LEAVING THE PROJECT SITE. ALL EXPOSED EARTH SHALL BE WATERED DOWN AT THE END OF THE WORK DAY.

15. WHILE IN TRANSIT TO AND FROM THE PROJECT SITE, ALL TRUCKS TRANSPORTING FILL SHALL BE EQUIPPED WITH TARPS.

16. 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 HISTORIC ARCHAEOLOGICAL RESOURCE OR A NATIVE AMERICAN CULTURAL SITE IS RECOVERED, 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.

17. ALL CONSTRUCTION STAKING FOR CURB, GUTTER, SIDEWALK, SANITARY SEWER, STORM DRAINS AND WATER LINES SHALL BE DONE UNDER THE SUPERVISION OF A LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER.

18. THE DIRECTOR OF PUBLIC WORKS, OR HIS AUTHORIZED REPRESENTATIVE, SHALL HAVE THE AUTHORITY TO "STOP WORK" IF THE WORK IS NOT BEING DONE IN ACCORDANCE WITH THE APPROVED IMPROVEMENT PLANS.

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF CONSTRUCTION QUANTITIES PRIOR TO BIDDING OR ANY FINAL QUANTITY REFERENCES SHOWN ON THESE PLANS, OR ENGINEER'S ESTIMATES ARE FOR EXTRA AND PURPORTS ONLY AND SHALL NOT BE CONSIDERED AS A BASIS FOR CONTRACTOR PAYMENT. CONSULTANT SHALL NOT BE RESPONSIBLE FOR ANY FLUCTUATIONS IN SUCH QUANTITIES AND ESTIMATES.

20. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO, OR USES OF, THESE PLANS. ALL CHANGES MUST BE IN WRITING AND MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.

21. UNDERGROUND UTILITY LOCATIONS SHOWN ARE COMPILED FROM INFORMATION SUPPLIED BY UTILITY AGENCIES AND ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY LOCATIONS OF AFFECTED UTILITY LINES PRIOR TO ANY TRENCHING OR EXCAVATING AND POTHOLE THOSE AREAS WHERE POTENTIAL CONFLICTS EXIST OR WHERE DATA IS OTHERWISE INCOMPLETE. FOR LOCATION, CALL USA 1-800-524-1444.

22. ANY EXISTING UTILITIES THAT ARE REQUIRED TO BE RELOCATED AS A PART OF THIS CONSTRUCTION SHALL BE RELOCATED AT THE DEVELOPER'S EXPENSE.

Environmental Review Initial Study
ATTACHMENT 3, 1944 25
APPLICATION 07-0619

LINE TABLE		
LINE	LENGTH	BEARING
L1	64.04	S67°54'24"E
L2	120.47	S80°39'31"E
L3	284.19	S66°32'36"E
L4	98.45	S89°29'35"E
L5	93.47	S88°39'52"E
L6	36.13	S74°58'30"E
L7	54.86	S60°04'58"E
L8	57.50	S45°31'53"E
L9	62.97	N88°37'46"E
L10	80.01	S38°59'04"E
L11	241.39	S36°05'06"E
L12	55.73	S63°36'06"E
L13	48.07	S86°43'06"E
L14	28.43	S83°31'06"E
L15	83.50	S62°46'10"E
L16	179.67	S60°04'14"E
L17	33.81	S48°06'14"E
L18	43.23	S18°28'35"E
L19	25.32	S32°49'06"E
L20	43.86	S8°19'57"E
L21	34.29	S48°38'06"E
L22	89.28	S82°27'54"E
L23	80.72	S38°27'06"E
L24	13.96	S84°33'36"E
L25	176.22	S80°09'06"E
L26	20.17	S81°42'27"E
L27	51.96	S51°52'06"E

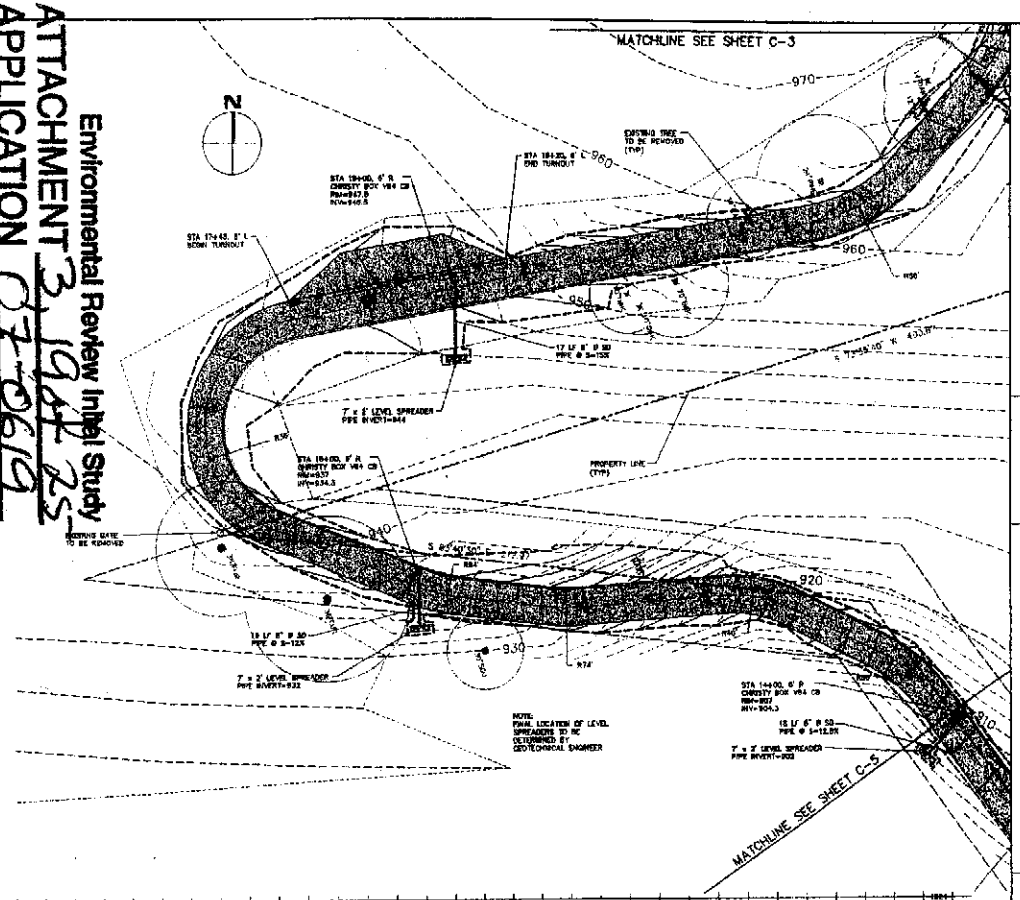
CURVE TABLE		
CURVE	LENGTH	RADIUS
C1	5.23	74.00
C2	50.86	36.00
C3	8.99	100.00
C4	4.28	142.00
C5	13.62	64.00
C6	37.62	64.00
C7	13.08	64.00
C8	8.86	64.00
C9	7.41	64.00
C10	1.50	100.00
C11	37.90	36.00
C12	24.99	46.00
C13	13.78	72.00
C14	17.81	64.00
C15	12.93	36.00
C16	36.28	36.00
C17	38.60	68.00
C18	37.65	46.00
C19	23.28	46.00
C20	18.83	64.00
C21	13.52	108.00
C22	18.01	76.00
C23	31.42	20.00
C24	35.00	100.00
C25	100.28	80.00
C26	35.09	64.00
C27	40.84	18.00

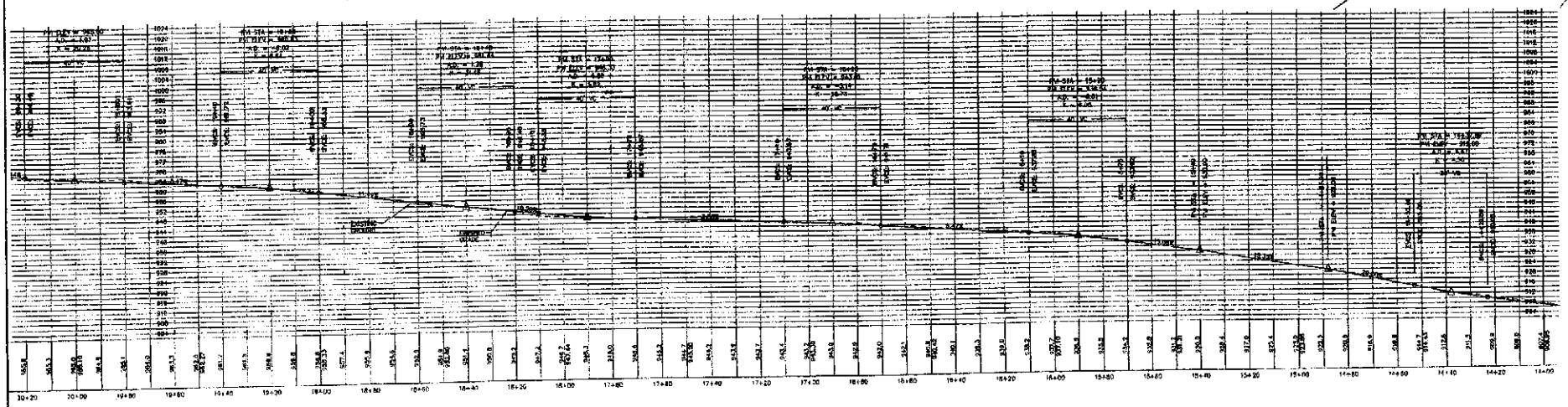
ABBREVIATIONS

BW	BOTTOM OF WALL
CB	CATCH BASIN
CONST	CONSTRUCT
DIA. ø	DIAMETER
DTL	DETAIL
DWY	DRIVEWAY
(E)	EXISTING
EL	ELEVATION
EOP	EDGE OF PAVEMENT
F.F.	FINISH FLOOR
FG	FINISH GRADE
INV	INVERT
LF	LINEAR FEET
MAX	MAXIMUM
N.T.S.	NOT TO SCALE
RIM	RIM ELEVATION
S	SLOPE
SCCO	COUNTY OF SANTA CRUZ
SSCO	SANITARY SEWER CLEANOUT
SDCO	STORM DRAIN CLEANOUT
TYP	TYPICAL
TW	TOP OF WALL

PLAN

1 INCH = 20 FEET





PRIMARY DRIVEWAY CL PROFILE

SCALE: 1"=50' HORIZONTAL, VERTICAL

RJ Engineering Inc.
303 Potrero St., Suite 42-202, Santa Cruz, CA 95060
831-425-3901 www.rjengineering.com

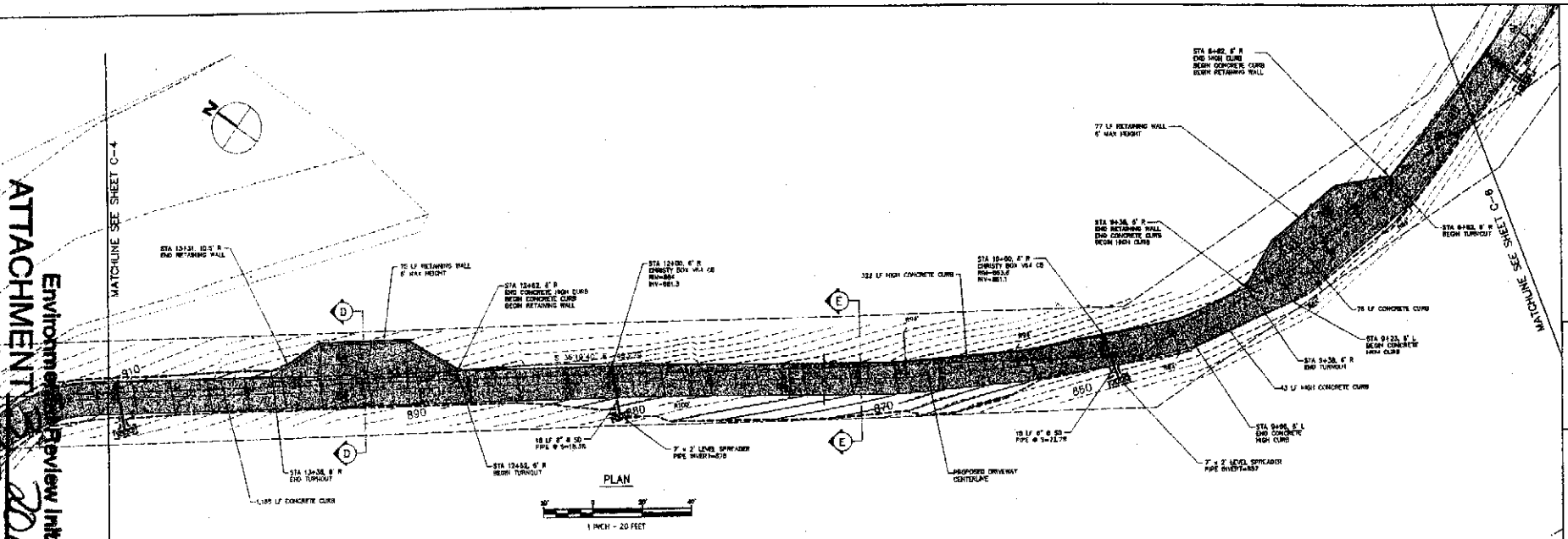
HARTMANN RESIDENCE
FOR
ROBERT HARTMANN
145 OLIVE VIEW ROAD
WATSONVILLE, CALIFORNIA
APN 106-211-27

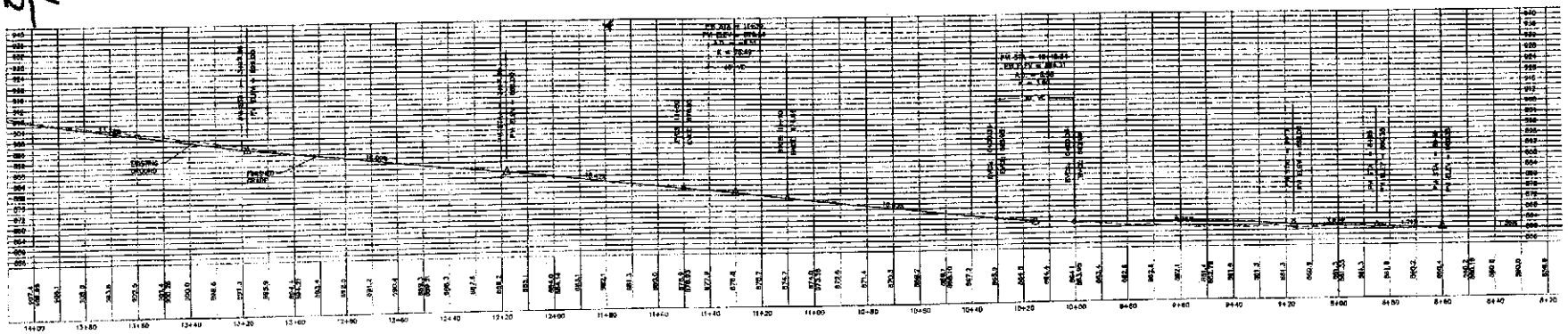
GRADING AND DRAINAGE PLAN

SHEET 3 OF 6

project no.
07-033-1
date
SEPTEMBER 2007
scale
AS SHOWN
dwg name
CIVIL.dwg

C-4





PRIMARY DRIVEWAY CL PROFILE

SCALE: 1"=20' HORIZONTAL, VERTICAL

CURVE TABLE		
CURVE	LENGTH	RADIUS
C1	1.30	74.00
C2	36.86	89.90
C3	1.50	100.00
C4	1.93	84.00
C5	13.83	84.00
C6	17.82	84.00
C7	18.08	84.00
C8	6.85	84.00
C9	7.41	84.00
C10	1.97	100.00
C11	27.30	58.00
C12	24.09	48.00
C13	13.78	74.00
C14	17.05	84.00
C15	18.85	34.00
C16	36.35	89.90
C17	35.80	74.00
C18	31.80	48.00
C19	44.39	48.00
C20	18.58	58.00
C21	14.29	100.00
C22	18.06	58.00
C23	11.30	30.00
C24	36.50	100.00
C25	100.36	80.00
C26	35.85	80.00
C27	40.75	29.00

LINE TABLE		
LINE	LENGTH	BEARING
L1	54.91	S67°34'14"E
L2	122.45	S68°24'01"E
L3	262.11	S68°07'34"E
L4	55.48	S69°36'36"E
L5	72.71	S68°56'37"E
L6	36.13	S74°44'20"E
L7	54.35	S69°01'39"E
L8	51.50	S43°21'39"E
L9	43.57	S23°21'49"E
L10	54.00	S30°00'32"E
L11	241.30	S34°05'09"E
L12	30.72	S6°23'53"E
L13	16.02	S55°13'53"E
L14	28.48	S83°27'09"E
L15	50.60	N82°40'14"E
L16	156.87	N80°00'13"E
L17	55.95	N40°00'01"E
L18	53.24	N39°01'39"E
L19	26.38	N39°46'39"E
L20	63.86	N37°45'57"E
L21	36.19	N46°01'39"E
L22	26.31	N53°21'44"E
L23	80.73	N35°07'06"E
L24	13.58	N34°52'59"W
L25	176.48	N80°07'06"E
L26	33.77	S01°11'27"W
L27	13.58	S34°52'59"E

ENVIRONMENTAL REVIEW INITIAL STUDY
ATTACHMENT 3
APPLICATION 97-2019
Sheet 25

RI Engineering, Inc.
303 Potrero St., Suite 42-202, Santa Cruz, CA 95060
831-425-3901 www.riengineering.com

HARTMANN RESIDENCE
ROBERT HARTMANN
190 OLD HAZEL DELL ROAD
WATSONVILLE, CALIFORNIA
APN 106-211-27

project no.
97-033-1
date
SEPTEMBER 2007
scale
AS SHOWN
dwg name
CIVIL.dwg

GRADING AND DRAINAGE PLAN

SHEET 4 OF 5

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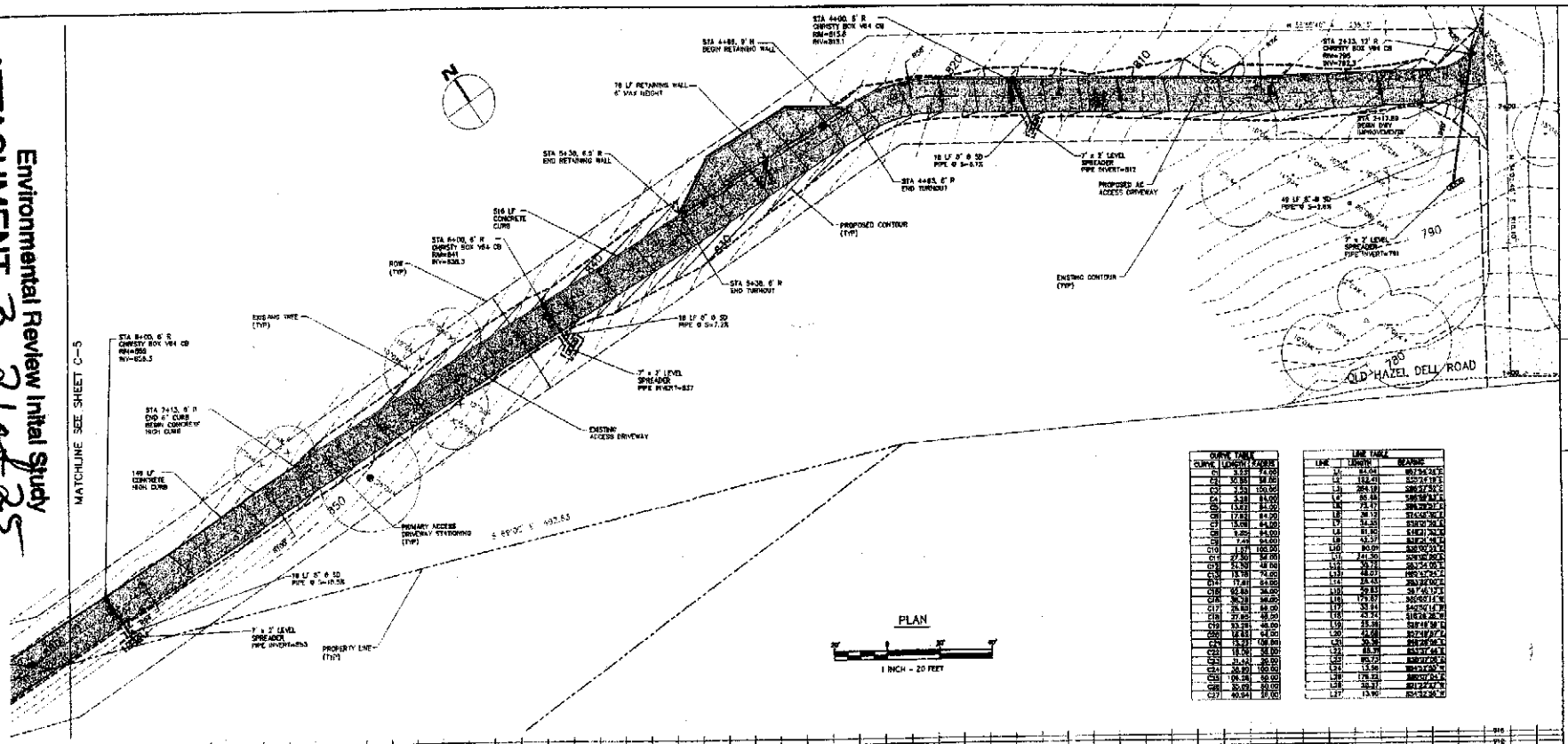
Environmental Review Initial Study
ATTACHMENT 3, 21 of 25
APPLICATION 07-0619



CURVE TABLE		
CURVE	LENGTH	RADIUS
C1	3.19	74.00
C2	30.81	74.00
C3	3.50	150.00
C4	3.38	81.00
C5	(3.62)	81.00
C6	17.51	81.00
C7	13.08	84.00
C8	9.85	84.00
C9	7.34	84.00
C10	1.67	105.00
C11	27.50	56.00
C12	51.50	48.00
C13	13.18	42.00
C14	17.81	54.00
C15	92.83	56.00
C16	96.29	56.00
C17	76.83	56.00
C18	27.65	48.00
C19	53.91	48.00
C20	14.83	54.00
C21	13.97	108.00
C22	17.06	56.00
C23	21.44	56.00
C24	36.90	150.00
C25	19.36	56.00
C26	30.09	56.00
C27	40.94	56.00

LINE TABLE		
LINE	LENGTH	BEARING
L1	84.04	N57°54'43"E
L2	152.45	S32°21'16"E
L3	264.19	S86°57'57"E
L4	56.68	S86°58'54"E
L5	19.12	S89°20'57"E
L6	58	S14°40'36"E
L7	34.30	S19°01'56"E
L8	61.80	S18°01'30"E
L9	17.57	S89°01'18"E
L10	80.09	S38°01'01"E
L11	241.56	S29°05'30"E
L12	79.73	S63°24'05"E
L13	48.01	N85°57'57"E
L14	25.44	S89°58'06"E
L15	79.83	S81°40'13"E
L16	174.60	S89°01'18"E
L17	33.91	S42°30'16"E
L18	29.52	S18°24'26"W
L19	35.36	S38°16'58"E
L20	42.88	S72°16'57"E
L21	5.00	S89°58'06"E
L22	88.38	S84°37'46"E
L23	95.72	S38°37'06"E
L24	13.96	N84°57'30"E
L25	174.73	S89°57'57"E
L26	38.37	S81°24'47"E
L27	13.90	S84°52'36"E

R.J Engineering, Inc.
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HARTMANN RESIDENCE
FOR
ROBERT HARTMANN
195 OLD HAZEL DELL ROAD
WATSONVILLE, CALIFORNIA
APN 106-211-27

GRADING AND DRAINAGE PLAN

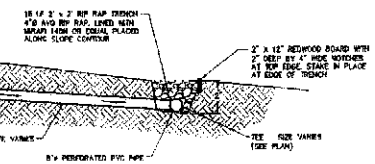
SHEET 5 OF 5

project no.
07-033-1
date
SEPTEMBER 2007
scale
AS SHOWN
dwg name
CIVIL.dwg

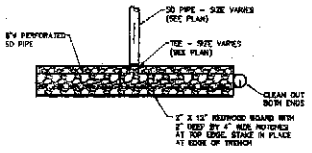
C-6

ATTACHMENT 3
APPLICATION 07-0679

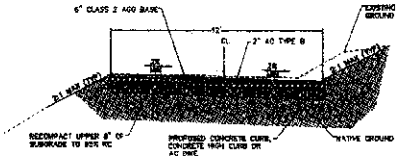
Environmental Review Initial Study
EXHIBIT 25



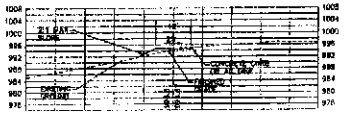
LEVEL SPREADER DETAIL–PROFILE VIEW
NTS



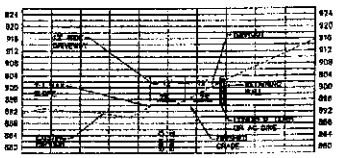
LEVEL SPREADER DETAIL–PLAN VIEW
NTS



TYPICAL ASPHALT CONCRETE DRIVEWAY CROSS SECTION
NTS



SECTION C–C
STA 23+00
SCALE: 1"=50' HORIZONTAL, VERTICAL



SECTION D–D
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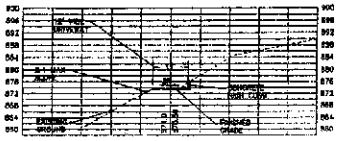

SECTION E–E
STA 11+00
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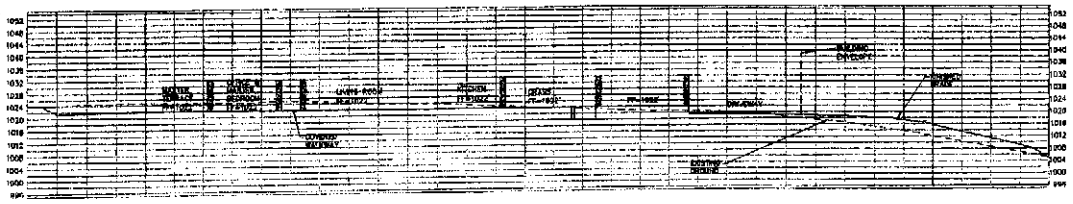
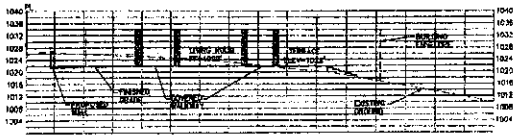


SECTION A–A
SCALE: 1"=20' HORIZONTAL, VERTICAL



SECTION B–B
SCALE: 1"=20' HORIZONTAL, VERTICAL

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831-425-3901 www.riengineering.com

HARTMANN RESIDENCE
FOR
ROBERT HARTMANN
195 OLD HAZEL DELL ROAD
WATSONVILLE, CALIFORNIA
APN 106-211-27

SITE SECTIONS AND DETAILS

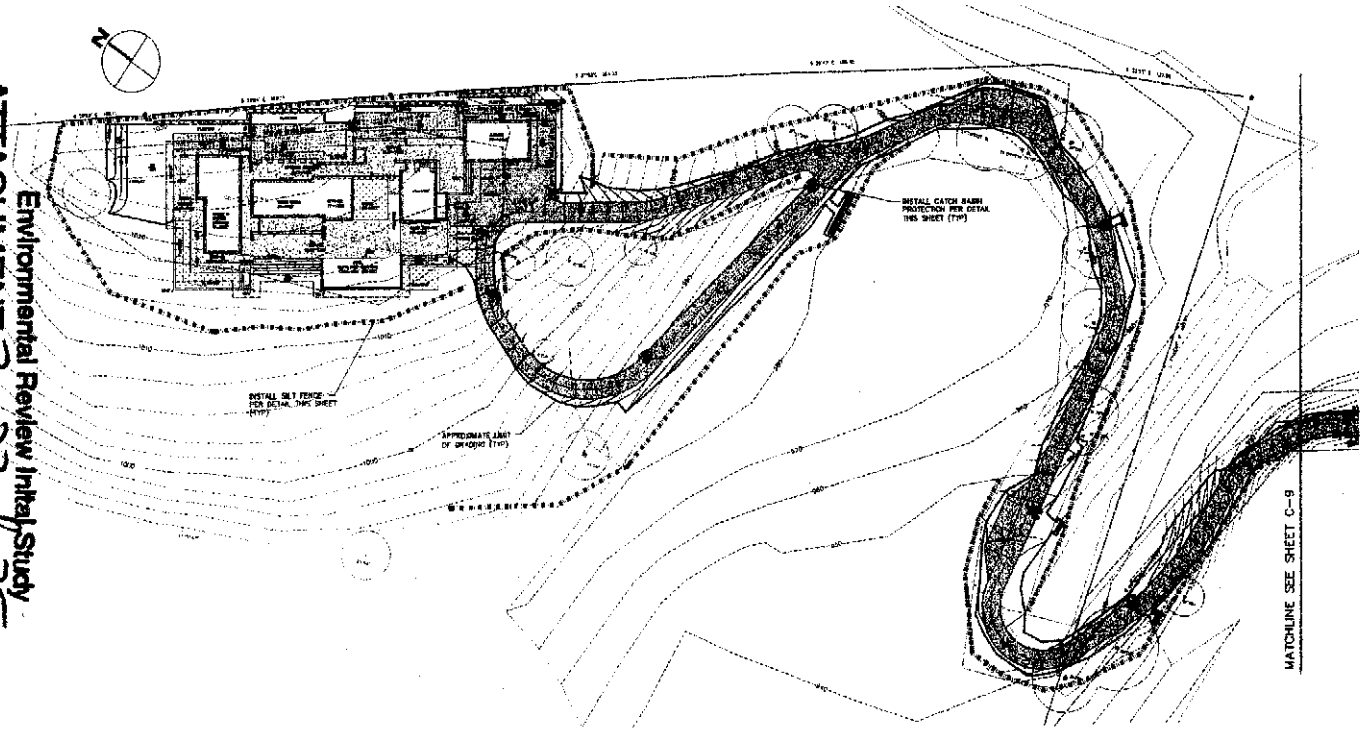
SHEET 3 OF 3

project no.
07-033-1
date
SEPTEMBER 2007
scale
AS SHOWN
dwg name
CIVIL.dwg

C-7

ATTACHMENT 3, 23 of 25
APPLICATION 07-0619

Environmental Review Initial Study

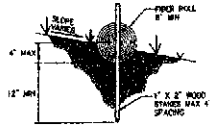


EROSION CONTROL MEASURES

1. EROSION TO TO BE CONTROLLED AT ALL TIMES. ALTHOUGH SPECIFIC MEASURES SHOWN ARE TO BE IMPLEMENTED AT A MINIMUM BY OCTOBER 15.
2. UNLESS SPECIFIC MEASURES ARE SHOWN OR NOTED ON THIS PLAN, ALL COLLECTED RUNOFF SHALL BE CARRIED TO DRAINAGE COURSES IN LINED CONDUITS. DISCHARGE SHALL BE IN THE LOCATIONS SHOWN ON THE PLANS.
3. THE DESIRED END RESULT OF THESE MEASURES IS TO CONTROL SITE EROSION AND PREVENT SEDIMENT TRANSPORT OFF THE SITE. IT SHALL BE THE DEVELOPER'S RESPONSIBILITY TO SEE THAT ANY ADDITIONAL MEASURES NECESSARY TO MEET THIS GOAL ARE IMPLEMENTED. IF RAINS RESULTING IN DIRTY RUNOFF SHOW THIS GOAL IS NOT BEING MET, ADDITIONAL MEASURES MAY BE REQUIRED.
4. ALL DISTURBED AREAS NOT CURRENTLY BEING USED FOR CONSTRUCTION SHALL BE SEEDED WITH THE FOLLOWING SEED MIXTURE:

BROMUS CARINATUS	10#/ACRE
LOLIUM PERENNIS	10#/ACRE
HORDEUM BRACHYANTHERUM	5#/ACRE

5. AFTER SEEDING, STRAW MULCH WILL BE APPLIED IN 4" (AVG.) LAYERS.
6. AMMONIUM PHOSPHATE FERTILIZER, 5-5-5, SHALL BE APPLIED AT A RATE OF 70 LBS. PER ACRE. ON SLOPES GREATER THAN 30% EROSION CONTROL BLANKET (NORTH AMERICAN GREEN) SHALL BE APPLIED.
7. SILT BARRIERS SHALL BE PLACED END TO END AND STAKED DOWN ALONG THE BOTTOM OF ALL GRADED SLOPES.



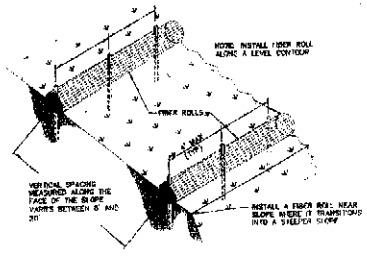
FIBER ROLL DETAIL IN SLOPE AREA
NTS

EROSION CONTROL LEGEND

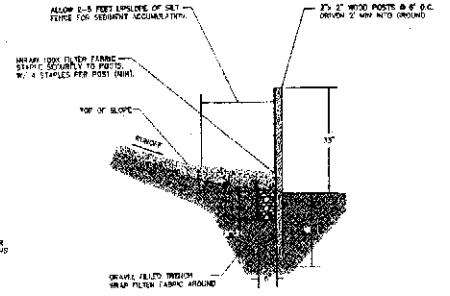
- INSTALL SILT FENCE OR FIBER ROLL PER DETAILS THIS SHEET
- INSTALL FIBER ROLL PER DETAILS THIS SHEET
- INSTALL CATCH BASIN PROTECTION PER DETAIL THIS SHEET
- INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL THIS SHEET

PLAN

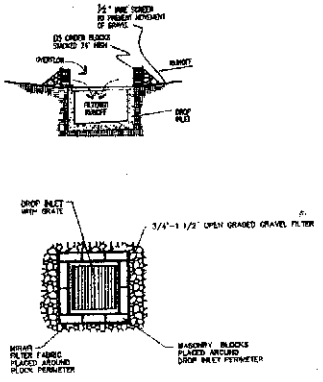
1 INCH = 40 FEET



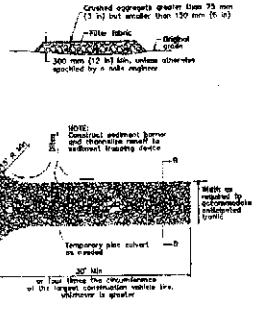
TYPICAL FIBER ROLL INSTALLATION
NTS



SILT FENCE DETAIL
NTS



BLOCK AND GRAVEL FILTER DETAIL
NTS



CONSTRUCTION ENTRANCE DETAIL
NTS

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HARTMANN RESIDENCE
FOR
ROBERT HARTMANN
156 OLD HAZEL DELL ROAD
WATSONVILLE, CALIFORNIA
APN 106-211-27

EROSION CONTROL PLAN

SHEET 1 OF 2

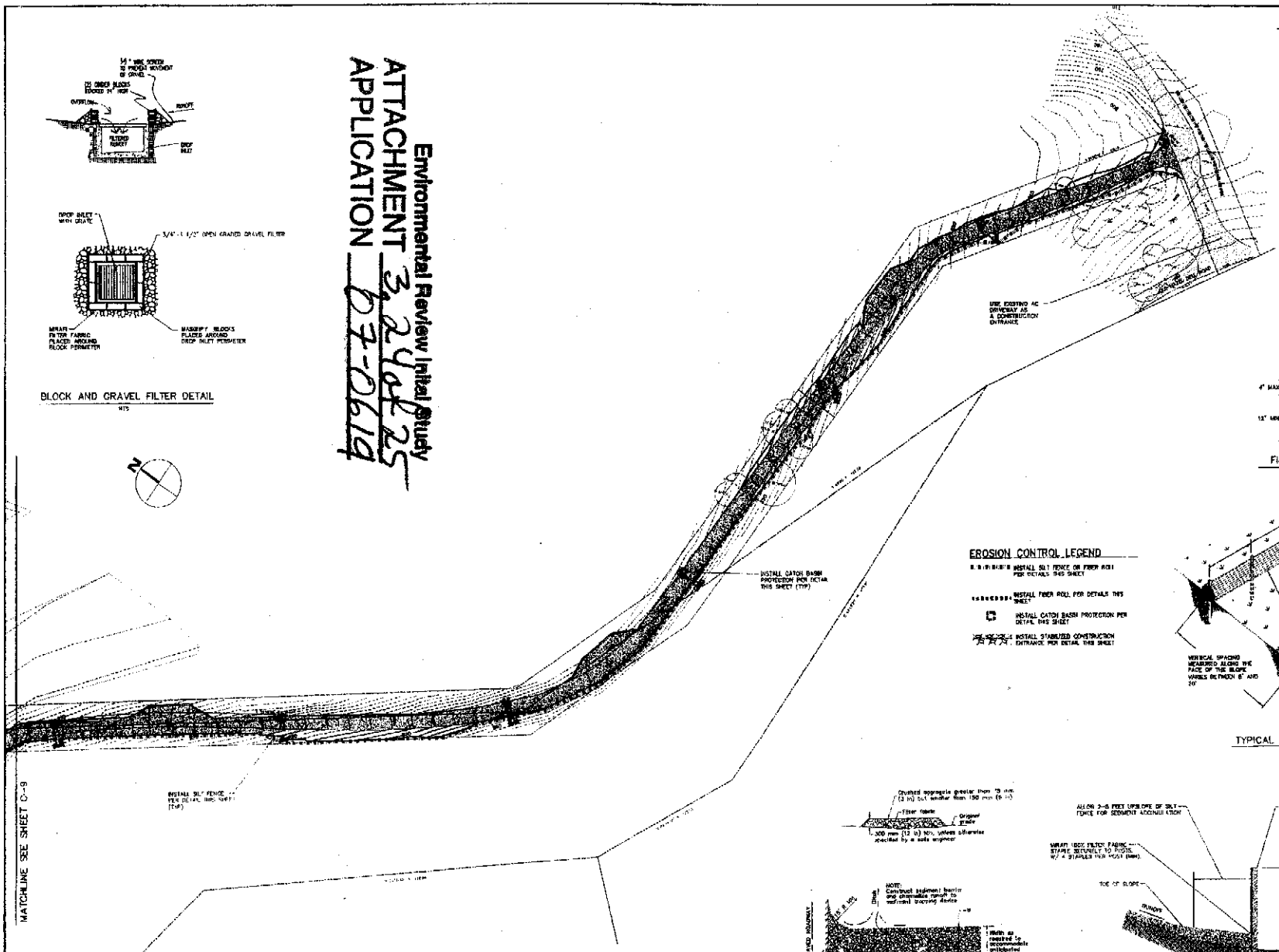
project no.
07-033-1
date
SEPTEMBER 2007
scale
AS SHOWN
dwg name
CIVIL.dwg

C-8

Environmental Review Initial Study
ATTACHMENT 3, 24 of 25
APPLICATION 07-0619

BLOCK AND GRAVEL FILTER DETAIL
NTS

MATCHLINE SEE SHEET C-9



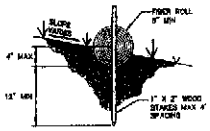
PLAN
1 INCH = 40 FEET

EROSION CONTROL MEASURES

1. EROSION IS TO BE CONTROLLED AT ALL TIMES. ALTHOUGH SPECIFIC MEASURES SHOWN ARE TO BE IMPLEMENTED AT A MINIMUM BY OCTOBER 15.
2. UNLESS SPECIFIC MEASURES ARE SHOWN OR NOTED ON THIS PLAN, ALL COLLECTED RUNOFF SHALL BE CARRIED TO DRAINAGE COURSES IN LINED CONDUITS. ENERGY DISSIPATORS SHALL BE IN THE LOCATIONS SHOWN ON THE PLANS.
3. THE DESIRED END RESULT OF ONLINE MEASURES IS TO CONTROL SITE EROSION AND PREVENT SEDIMENT TRANSPORT OFF THE SITE. IT SHALL BE THE DEVELOPER'S RESPONSIBILITY TO SEE THAT ANY ADDITIONAL MEASURES NECESSARY TO MEET THIS GOAL ARE IMPLEMENTED. IF FAILED INSPECTIONS BY CITY STAFF SHOW THIS GOAL IS NOT BEING MET, ADDITIONAL MEASURES MAY BE REQUIRED.
4. ALL DISTURBED AREAS NOT CURRENTLY BEING USED FOR CONSTRUCTION SHALL BE SEEDED WITH THE FOLLOWING SEED MIXTURE:

BROMUS CARINATUS	10#/ACRE
LOTIUS TETRACEROS	10#/ACRE
NORDEAN BRACHYANTHERIN	8#/ACRE

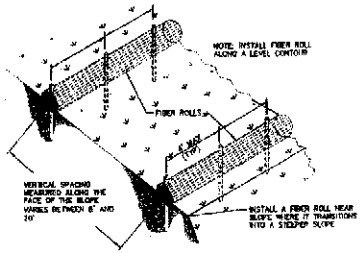
5. AFTER SEEDING, STRAW MULCH WILL BE APPLIED IN 4" (MAX.) LAYERS.
6. AMMONIUM PHOSPHATE (FERTILIZER, 6-3-3) SHALL BE APPLIED AT A RATE OF 50 LBS. PER ACRE. ON SLOPES GREATER THAN 20% EROSION CONTROL BLANKET (NORTH AMERICAN GREEN) SHALL BE APPLIED.
7. SILT BARRIERS SHALL BE PLACED END TO END AND STAKED DOWN ALONG THE BOTTOM OF ALL GRADED SLOPES.



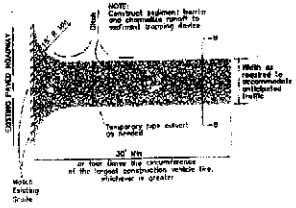
FIBER ROLL DETAIL IN SLOPE AREA
NTS

EROSION CONTROL LEGEND

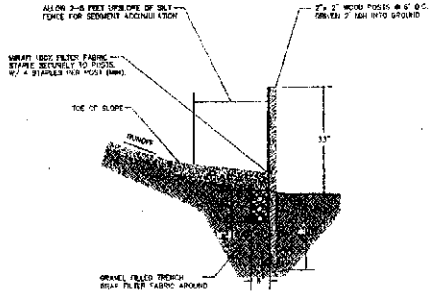
- INSTALL SILT FENCE OR FIBER ROLL PER DETAILS THIS SHEET
- INSTALL FIBER ROLL PER DETAILS THIS SHEET
- INSTALL CATCH BASIN PROTECTION PER DETAIL THIS SHEET
- INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL THIS SHEET



TYPICAL FIBER ROLL INSTALLATION
NTS



CONSTRUCTION ENTRANCE DETAIL
NTS



SILT FENCE DETAIL
NTS

HARTMANN RESIDENCE
FOR
ROBERT HARTMANN
195 OLD HAZEL DELL ROAD
WATSONVILLE, CALIFORNIA
APN 052-211-27

EROSION CONTROL PLAN

SHEET 2 OF 2

project no.
07-033-1
date
SEPTEMBER 2007
scale
AS SHOWN
dwg name
CIVIL.dwg

C-9

ROLAND A. RUSH
No. 43620
Exp. 12-31-08
CIVIL

RJ Engineering, Inc.
303 Potrero St., Suite 42-202, Santa Cruz, CA 95060
831-425-3901 www.rjengineering.com

Blueprint Express of Santa Cruz

From: "Janet Dows" <janetd@cruzio.com>
To: "blueprint express" <bpx@cruzio.com>
Sent: Thursday, October 04, 2007 3:37 PM
Attach: Wiemers REV sh.2 10-4.plt; Wiemers REV fdn sh5 10-4.plt; Wiemers REV sh.6 rf 10-4,2.plt; Wiemers REV e_m sh9.10-4plt
Subject: plots, 4 files, "Wiemers" job

Hi, Would you please make 8 bond sheets of each?

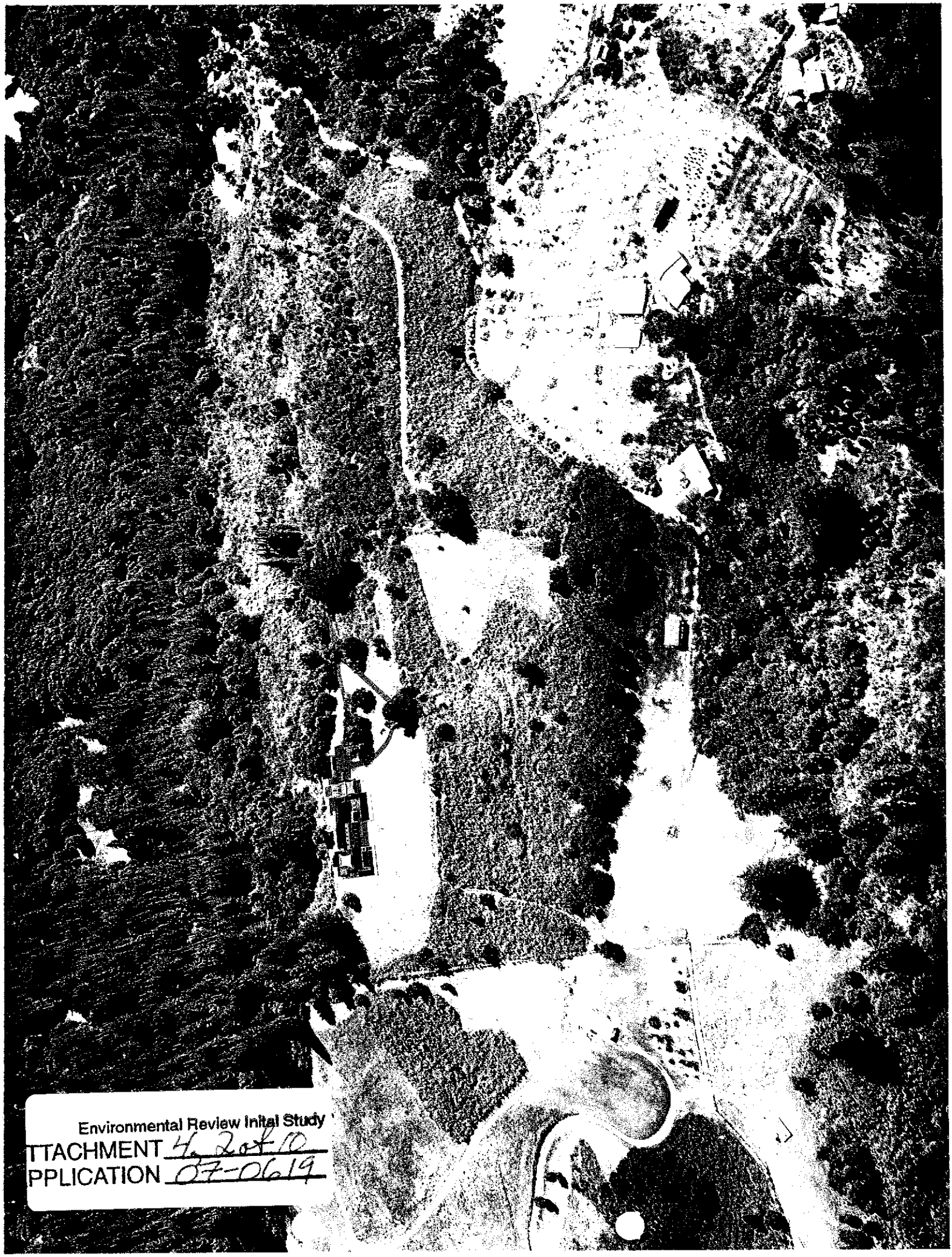
Thank you,
Janet

Environmental Review Inital Study
ATTACHMENT 3, 25 of 25
APPLICATION 07-0619

Site Analysis Diagram and Shadow Plan

Includes:

- Material and Colors Sample Plan (See photo simulations for proposed colors, stone veneer, stucco, and tile roof materials)



Environmental Review Inital Study
ATTACHMENT 4 2 of 10
APPLICATION 07-0619

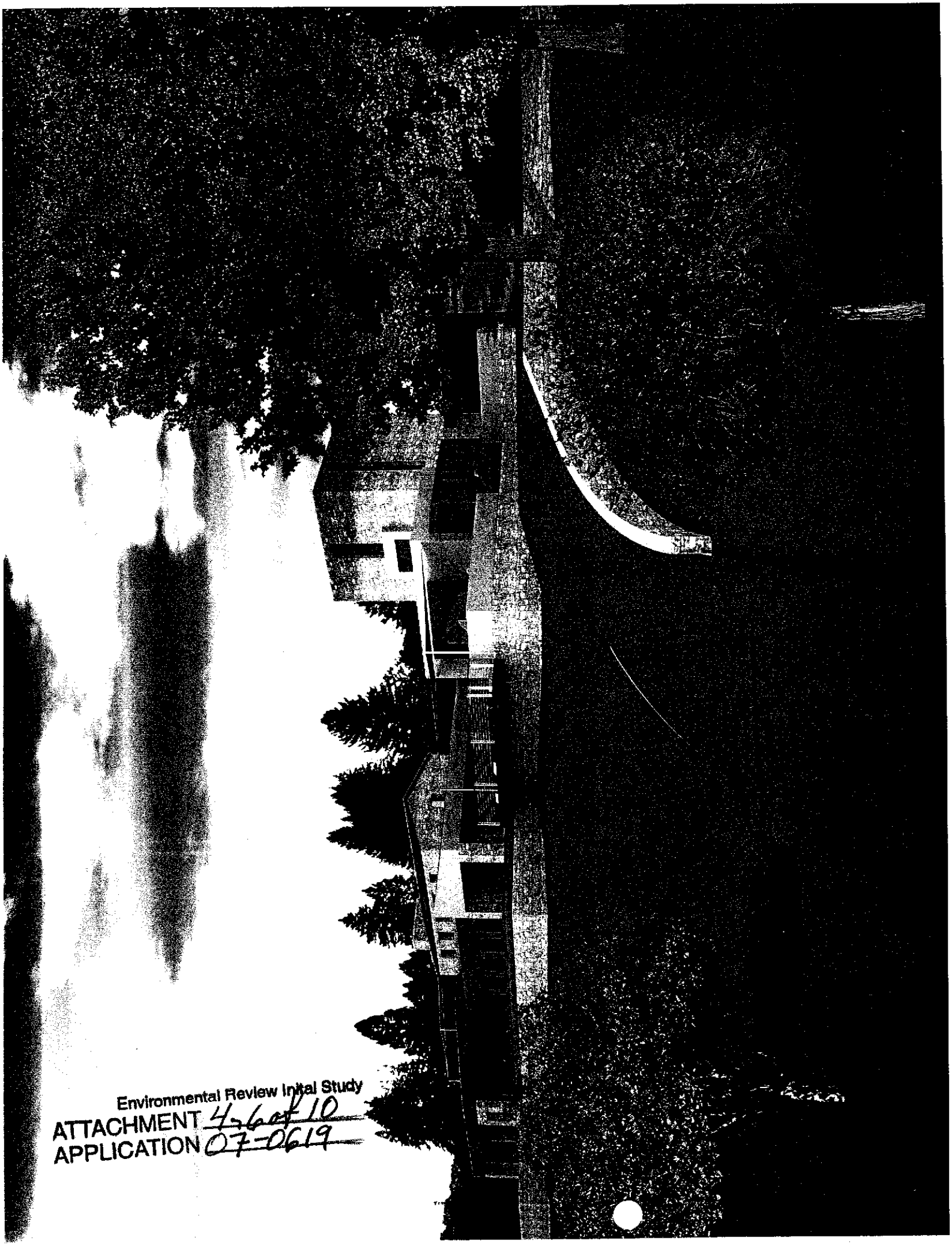
Environmental Review Inital Study
ATTACHMENT 4, 3 of 10
APPLICATION 07-0619

Environmental Review Initial Study
ATTACHMENT 4, 4 of 10
APPLICATION 07-0619

Environmental Review Inital St

ATTACHMENT 4, 5 of 10

APPLICATION 07-0619



Environmental Review Initial Study
ATTACHMENT 4 6 of 10
APPLICATION 07-0619

Environmental Review Inital Study

ATTACHMENT 4, 7 of 10

APPLICATION 07-0619

Environmental Review Initial Study

ATTACHMENT 4, 8 of 10
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Environmental Revlew Inital Study
ATTACHMENT 4, 9 of 10
APPLICATION 07-0619

Environmental Review Initial Study
ATTACHMENT 4 10 of 10
APPLICATION 07-0619

COUNTY OF SANTA CRUZ
DISCRETIONARY APPLICATION COMMENTS

Project Planner: Larry Kasparowitz
Application No.: 07-0619
APN: 106-211-27

Date: June 3, 2008
Time: 10:52:50
Page: 1

Environmental Planning Completeness Comments

========= REVIEW ON OCTOBER 31, 2007 BY CAROLYN I BANTI =========

The following are Completeness Comments in regards to soils and grading issues:

1. The soils report has been accepted. Please see letter dated 10/31/07.

2. Prior to the discretionary application being deemed complete, plan review letters from the soils engineer and geologist shall be submitted to Environmental Planning. The authors of the respective reports shall write the plan review letters. The letters shall state that the project plans conform to the recommendations of the reports.

3. Please clarify the origins of the earthwork quantities. Specifically, list each of the following separately: cut/fill for the driveway, cut/fill for the residence and site improvements, and cut/fill for overexcavation and recompaction beneath the structure.

4. Please revise the grading plans to show top of wall and bottom of wall elevations at changes in retaining wall height and angle points. This information should be provided on grading plans for both the driveway and residence. Please note that the architectural cross sections do not agree with the civil sheets; the civil sheets show retaining walls behind the residence, while the architectural sections show grading. ========= UPDATED ON MARCH 6, 2008 BY CAROLYN I BANTI =========

--- Second Review --- Completeness Comments --- Soils and Grading

Thank you for the submittal of a geotechnical plan review letter. Please note that there are additional comments regarding the driveway drainage described in the letter in the Miscellaneous Comments section that should be addressed at the time of building application submittal.

All other completeness comments have been addressed.

Environmental Planning Miscellaneous Comments

========= REVIEW ON OCTOBER 31, 2007 BY CAROLYN I BANTI =========
The following are Compliance Comments in regards to soils and grading issues:

1. It appears that grading for the residence, accessory structure and garage may be minimized by utilizing alternate foundation and site layout approaches that would not require major grading, as required by Code Section 16.22.050(a) and General Plan Section 6.3.9. Please revise plans accordingly. Note: The secondary driveway approach does not appear to be a necessary site disturbance.

2. The driveway and turnouts may not cross slopes greater than 30 percent per Code Section 16.22.050(c) and General Plan section 6.3.9(b). Please revise plans accordingly.

3. Drainage from the driveway is being directed to dissipators located on slopes up to 100 percent. Please submit review letters from the soils engineer and geologist stating that the location of these dissipators will not cause slope stability issues.

The following are Miscellaneous Comments/Conditions of Approval in regards to soils and grading issues:

1. Prior to building permit issuance, a Declaration of Geologic Hazards shall be recorded on this parcel. A copy of this declaration will be provided after the discretionary application 07-0619 has been deemed complete.

2. Prior to building permit issuance, plan review letters from the soils engineer and geologist shall be submitted to Environmental Planning. The authors of the respective reports shall write the plan review letters. The letters shall state that the project plans conform to the recommendations fo the reports, and shall reference each reviewed sheet by both drawing and revision dates. Please note that this letter should be prepared after all agency comments have been addressed to ensure that the letter references the final plan set. ========= UPDATED ON OCTOBER 31, 2007 BY CAROLYN I BANTI =========
========= UPDATED ON MARCH 6, 2008 BY CAROLYN I BANTI =========

Second Review --- Compliance Comments --- Soils and Grading

The second submittal shows some reduction in grading, but the quantities are such that Environmental Review will still be required (>1000 CY of cut/fill)

Other compliance comments have been addressed.

Second Review --- Miscellaneous Comments/Conditions --- Soils and Grading

This building application will be reviewed for conformance with the 2007 California Building Code (CBC). Please submit an addendum to the soils report providing seismic parameters in accordance with the 2007 CBC at the time of building permit application submittal.

The current application shows driveway drainage sheetflowing off the driveway and over the slopes below. The soils report shows approximately 2-3 feet of fill on the driveway which may be assumed to be present downslope, and the slopes below are mapped as uncertain landslide deposits. As such, letting drainage flow over the edge of the roadway is not advised. Please either include additional technical information at the time of building application addressing these concerns or revise the driveway drainage. ========= UPDATED ON MARCH 6, 2008 BY ROBERT S LOVELAND =========

Condition of Approval:

1. Two small trees (Sheet C4) are proposed for removal as part of this project. There are numerous trees shown along the road alignment and near the home site that will need to be protected during construction activities. Please submit a detailed

tree protection detail prior to building permit issuance. The trees to be protected will need to have tree protection in place prior to grading activities commencing.

Dpw Drainage Completeness Comments

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

========= REVIEW ON OCTOBER 30, 2007 BY DAVID W SIMS =========
1st Review Summary Statement:

The present development proposal does not adequately control stormwater impacts. The Stormwater Management section cannot recommend approval of the project as proposed.

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

Policy Compliance Items:

Item 1) The project must hold runoff levels to pre-development rates, effective for a broad range of storms up through the 10-year event by use of best management practices (BMPs). Due to the development exceeding one acre, detention is required to the extent that these BMPs are unable to fully control runoff rates for the larger storms. The proposal contains mitigation measures, but review of the design indicates that the level spreaders are likely significantly undersized to the point of not achieving sufficient mitigation by the approach used. Additionally the level spreaders were designed for only a 2-year event and mitigation must be shown to be successful for higher storm levels as well. Please see information items below.

Item 2) The project is required to minimize impervious surfacing. While the proposal does include application of porous pavements to minimally meet policy, the proposed extents are limited compared to the paved development extents, and significant areas of impervious surfacing remain that must be otherwise fully mitigated, which has not been demonstrated.

Information Items:

Item 3) Incomplete. County Design Criteria requires topography be shown a minimum of 50 feet beyond the project work limits. This is not provided behind the home or along most of the driveway length. Topography must be tied to the County vertical datum and not assigned arbitrary elevation.

Item 4) Incomplete. Provide detailed topography on the slopes around and below the level spreaders to support the claimed slope uniformity and resulting large design estimates for sheet flow length. If the slopes are not highly uniform then sheet flow lengths should be reduced significantly. Fully describe all other land conditions around and below the level spreaders as detailed in the design criteria for this mitigation measure. Please check the slopes below the level spreaders against the permissible velocities determined by figures SWM-19a and SWM-19b of the design criteria and include this check in the calculation package. See items 5 and 6.

Item 5) Incomplete. Several of the locations for the level spreaders appear to occur

on the mapped Nisene-Aptos soil complex (156) which has permeability much lower than the 4 inches per hour assumed for soil 114 in design. It appears difficult to locate these spreaders on better soils. If the lower permeability of soil 156 were used, it is much more difficult to mitigate runoff up through the 10-year event with the level spreaders proposed. Please review and clarify or revise.

Item 6) Incomplete. Many of the locations for the driveway level spreaders are on land slopes that exceed 25% and are as much as 56%, perhaps creating feasibility issues. Landslides are mapped in the vicinity. Review and a letter of approval from a geotechnical engineer specifically stating feasibility of the mitigation proposal is required.

Item 7) Incomplete. Calculations contain a number of errors. The P60 intensity value used is set as both 1.4 and 1.6. Time of concentration should be shown to vary between the pre-existing and developed conditions due to the extensive paving and piping of runoff. The soil permeability and sheet flow distance values discussed earlier, if not supportable by the additional information requested, will need adjustment that will result in a very different design outcome. Pre-existing pervious C-value is set at 0.3, which is the maximum range value for rural grassed/forested conditions. Given the moderately permeable soils a lesser value would seem warranted rather than a value typical of clay soils. Please explain this usage if retained.

Item 8) Incomplete. Specify the type of paver product in the legend and note it as pervious. Also provide a sub-grade design detail on the plans that clearly indicates the pervious construction.

Item 9) Incomplete. Clarify if the existing driveway is gravel over its entire length or remains as dirt along some stretches. Indicate and add plan notes regarding the extents of widening and areas of new road.

Please see miscellaneous comments. ========= UPDATED ON FEBRUARY 15, 2008 BY GERARDO VARGAS =========
========= UPDATED ON MARCH 18, 2008 BY DAVID W SIMS =========
4th Review Summary Statement:

Some informational and policy items remain incomplete. However, the Stormwater review section has no objection to the application proceeding to building application stage, so long as the Planner fully conditions the remaining items to be addressed.

Policy Compliance Items:

Item 1) Mitigation proposals were revised to include system capability to control smaller and larger storms up through the 10-year event. Two significant design problems were found, one involving peak verses average rainfall intensities in the calculations, and the other being differing assumptions for the detention operational configuration between the calculations and that shown on the plans, involving drainage areas and orifice sizing. These issues would prevent proper functioning. for revision.

Item 2) Impervious surfacing has been somewhat reduced by elimination of the circular turn-around of the upper driveway. However, the development still proposes excessive covered patio areas, and parking and turn-around space at the top of the driveway, and the proposal for pervious pavers in this parking area has been eliminated in preference of impervious stamped concrete. The stamped concrete area could be built of pervious materials as previously proposed. A pervious, stamped, architectural quality concrete of fine surface texturing is available through local contractor. See http://www.percocrete.com/ for examples of the product. Submitted letters from the project Geotechnical firm and the Geologist do not specifically address and support with data and explanation the non-feasibility issue of porous pavements, so a waiver cannot be supported. claim of non-feasibility shall adhere to the requirement stated in Part 3, Section H, 11, c, of the CDC.

Information Items:

Item 3) Complete. Based on design revisions, sufficient topographic data has now been provided.

Items 4, 5 and 6) Complete. Based on design revisions eliminating the steepest level spreader locations, this item is no longer essential for discretionary review. Designer is to assure for the remaining sites that the final building plans conform to Design Criteria for slope method dispersal of runoff.

Item 7) Incomplete. Based on design revisions, mitigation methods and calculations have significantly changed. Problems were discussed with the engineer by phone and it is not anticipated that correction would lead to feasibility problems with achieving needed mitigations.

Item 8) Incomplete. See item 2 this routing. See prior comment for item 8 regarding detailing permeable pavements.

Item 9) Complete. Clarifications on the extents and changes to the long approach driveway have been included on the plans and calculations.

Dpw Drainage Miscellaneous Comments

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

========= REVIEW ON OCTOBER 30, 2007 BY DAVID W SIMS =========
Miscellaneous:

A) The gravel roof sections of the building may have some potential to slow runoff release and could possibly be considered a BMP. Information on the depth of gravel, roof slopes, orientation to other roof sections, and quantification of lag time should be provided if this is proposed as a form of mitigation.

B) Maintenance procedures for the drainage facilities and mitigation measures must be provided on the plans.

A recorded maintenance agreement may be required for certain stormwater facilities.

The drainage review deposit for this application is being converted to an at-cost account.

A drainage impact fee will be assessed on the net increase in impervious area. The fees are currently $1.00 per square foot, and are assessed upon permit issuance. Reduced fees are assessed for semi-pervious surfacing to offset costs and encourage more extensive use of these materials.

You may be eligible for fee credits for pre-existing impervious areas to be demolished. To be entitled for credits for pre-existing impervious areas, please submit documentation of permitted structures to establish eligibility. Documentations such as assessor's records, survey records, or other official records that will help establish and determine the dates they were built, the structure footprint, or to confirm if a building permit was previously issued is accepted. Not all existing pavements may be recognized as exempt from mitigation, or credited against impact fees.

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

Because this application is incomplete in addressing County requirements, resulting revisions and additions will necessitate further review comment and possibly different or additional requirements.

All resubmittals shall be made through the Planning Department. Materials left with Public Works will not be processed or returned.

Please call the Dept. of Public Works, Stormwater Management Section, from 8:00 am to 12:00 noon if you have questions. ========= UPDATED ON MARCH 18, 2008 BY DAVID W SIMS =========
NO COMMENT

Dpw Driveway/Encroachment Completeness Comments

========= REVIEW ON OCTOBER 15, 2007 BY DAVID A GARIBOTTI =========
Please provide a complete and accurate plot plan that includes the entire parcel, the location of the proposed building and driveway on said parcel and any offsite extension of that driveway. Specifically indicate and identify any intersections with public or private roads or other driveways or right of ways, and any other proposed offsite improvements. ========= UPDATED ON FEBRUARY 21, 2008 BY DAVID GARIBOTTI =========
Information provided. After review of revised plans it has been determined that the driveway intrersection is not a County Maintained Road. No further information required.

Dpw Driveway/Encroachment Miscellaneous Comments

ATTACHMENT 5, 6 of 9
APPLICATION 07-0619

========= REVIEW ON OCTOBER 15, 2007 BY DAVID A GARIBOTTI =========
No comment.

Dpw Road Engineering Completeness Comments

========= REVIEW ON OCTOBER 29, 2007 BY ANWARBEG MIRZA =========
1. In order to evaluate access to the single-family dwelling, show how property obtains access road to the county road system and provide details of intersection of the private Rd/driveway, to Old Hazel Del Rd.

Until further information is submitted, 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 MARCH 3, 2008 BY GREG J MARTIN =========
Radius of returns at intersection of driveway and Old Hazel Dell Road may not exceed 15 feet. Please refer to the County Design Criteria for examples of how to draw the driveway in plan view. The tangent of the driveway is clipped for constructability. The concrete curb should stop a minimum of 3 feet from the edge of the road.

Dpw Road Engineering Miscellaneous Comments

========= REVIEW ON OCTOBER 29, 2007 BY ANWARBEG MIRZA =========
NO COMMENT
========= UPDATED ON MARCH 3, 2008 BY GREG J MARTIN =========

Environmental Health Completeness Comments

========= REVIEW ON OCTOBER 29, 2007 BY JIM G SAFRANEK ========= Septic application has been submitted and is not approved. Drainage plan should show the actual layout of the septic tank, leachfield and future expansion field.

Environmental Health Miscellaneous Comments

========= REVIEW ON OCTOBER 29, 2007 BY JIM G SAFRANEK =========
NO COMMENT

Pajaro Valley Fire District Completeness Comments

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

========= REVIEW ON OCTOBER 17, 2007 BY COLLEEN L BAXTER =========
DEPARTMENT NAME:PAJARO FIRE
Add the appropriate NOTES and DETAILS showing this information on your plans and RESUBMIT, with an annotated copy of this letter:
Note on the plans that these plans are in compliance with California Building and Fire Codes (2001) as amended by the authority having jurisdiction.
Each APN (lot) shall have separate submittals for building and sprinkler system plans.
The job copies of the building and fire systems plans and permits must be onsite during inspections.
Fire hydrant shall be painted in accordance with the state of California Health and

Safety Code. See authority having jurisdiction.
A minimum fire flow 500 GPM is required from 1 hydrant located within 150 feet.
SHOW on the plans 17,000 gallons of water for fire protection with a "fire hydrant" as located and approved by the Fire Department if your building is not serviced by a public water supply meeting fire flow requirements. For information regarding where the water tank and fire department connection should be located, contact the fire department in your jurisdiction.
NOTE on the plans that all buildings shall be protected by an approved automatic fire sprinkler system complying with the currently adopted edition of NFPA 13D and Chapter 35 of California Building Code and adopted standards of the authority having jurisdiction.
NOTE that the designer/installer shall submit three (3) sets of plans and calculations for the underground and overhead Residential Automatic Fire Sprinkler System to this agency for approval. Installation shall follow our guide sheet.
NOTE on the plans that an UNDERGROUND FIRE PROTECTION SYSTEM WORKING DRAWING must be prepared by the designer/installer. The plans shall comply with the UNDERGROUND FIRE PROTECTION SYSTEM INSTALLATION POLICY HANDOUT.
Building numbers shall be provided. Numbers shall be a minimum of 4 inches in height on a contrasting background and visible from the street, additional numbers shall be installed on a directional sign at the property driveway and street.
NOTE on the plans the installation of an approved spark arrester on the top of the chimney. The wire mesh shall be 1/2 inch.
NOTE on the plans that the roof covering shall 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 or to the property line (whichever is a shorter distance). Single specimens of trees, ornamental shrubbery or similar plants used as ground covers, provided they do not form a means of rapidly transmitting fire from native growth to any structure are exempt.
The access road shall be 18 feet minimum width and maximum twenty percent slope.
All bridges, culverts and crossings shall be certified by a registered engineer. Minimum capacity of 25 tons. Cal-Trans H-20 loading standard.
The access road shall be in place to the following standards prior to any framing construction, or construction will be stopped:
- The access road surface shall be "all weather", a minimum 6" of compacted aggregate base rock, Class 2 or equivalent, certified by a licensed engineer to 95% compaction and shall be maintained. - ALL WEATHER SURFACE: shall be minimum of 6" of compacted Class II base rock for grades up to and including 5%, oil and screened for grades up to and including 15% and asphaltic concrete for grades exceeding 15%, but in no case exceeding 20%. The maximum grade of the access road shall not exceed 20%, with grades greater than 15% not permitted for distances of more than 200 feet at a time. The access road shall have a vertical clearance of 14 feet for its entire width and length, including turnouts. A turn-around area which meets the requirements of the fire department shall be provided for access roads and driveways in excess of 150 feet in length. Drainage details for the road or driveway shall conform to current engineering practices, including erosion control measures. All private access roads, driveways, turn-around and bridges are the responsibility of the owner(s) of record and shall be maintained to ensure the fire department safe and expedient passage at all times.
SHOW on the plans, DETAILS of compliance with the driveway requirements. The driveway shall be 12 feet minimum width and maximum twenty percent slope.
All Fire Department building requirements and fees will be addressed in the Building

ATTACHMENT 5, 8 of 9
APPLICATION 07-0619

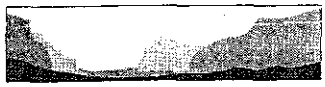
Permit phase.
Plan check is based upon plans submitted to this office. Any changes or alterations shall be re-submitted for review prior to construction.
72 hour minimum notice is required prior to any inspection and/or test.
Note: As a condition of submittal of these plans, the submitter, designer and installer certify that these plans and details comply with the 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, and, to hold harmless and without prejudice, the reviewing agency.
When a fire alarm system is proposed in lieu of 110V/battery backup smoke detectors a separate fire alarm permit and fee is required by the fire department having jurisdiction. Fire Alarm plans (3 sets) shall be submitted and approved prior to commencing work.

Pajaro Valley Fire District Miscellaneous Comments

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

========= REVIEW ON OCTOBER 17, 2007 BY COLLEEN L BAXTER =========

Environmental Review Inital Study
ATTACHMENT 5, 9 of 9
APPLICATION 07-0619



• Engineering Geology
• Hydrogeology
• GIS Services

NOLAN ASSOCIATES

PRELIMINARY GEOLOGIC HAZARDS INVESTIGATION
Property off Old Hazel Dell Road
Watsonville, California
Santa Cruz County APN 106-211-27

Prepared for :
Mr. Robert Hartman
335 Via Concha
Aptos, California 95003

Environmental Review Inital Study
ATTACHMENT 6 lot 5
APPLICATION 07-0619

Job # 05004
August 3, 2005

1509 Seabright Ave. Suite A2 Santa Cruz, California Tel. 831-423-7006 Fax 831-423-7008 Email: na@nolangeology.com

RECOMMENDATIONS

1. Construction of habitable structures should be restricted to the Geologically Suitable Building Envelope shown on Plate 1. The setbacks incorporated into this building envelope may be modified by your geotechnical engineering consultant based on specialized foundation design or the results of additional geologic investigations. We must review and approve the results of any modification of the recommended Geologically Suitable Building Envelope. The building envelope designated on Plate 1 is based in part on the scope of this investigation and is not meant to imply that it is the only geologically feasible building site on the parcel. We reserve the right to amend the building envelope recommendations where consistent with sound geologic judgement. Any structures or appurtenances constructed outside the proposed building envelope may be subject to higher than ordinary risks.

2. Considering the geologic setting of the proposed residence, we consider it prudent to design the foundation for the proposed residence to accommodate up to 3 inches of vertical offset and 6 inches of horizontal extension along a potential future ground crack through any proposed structure. Such a ground crack should be assumed to run in a northwesterly-southeasterly direction parallel or sub-parallel to the previously recognized ground cracks.

3. The project engineers should review the findings of our deterministic and probabilistic seismic shaking evaluation and incorporate these findings into their analysis, where appropriate. Given the potential for strong seismic shaking to occur during the lifetime of the proposed structures, all structures should be designed to the most current standards of the California Building Code and Uniform Building Code, at a minimum.

4. We recommend that all drainage from improved surfaces such as walkways, driveways, patios, and roofs be captured by closed pipe or lined ditches and dispersed on site in such a way as to maintain the pre-development runoff patterns as much as possible. At no time should any concentrated discharge be allowed to spill directly onto the ground adjacent to structures or to fall directly onto steep slopes. The control of runoff is essential for erosion control and prevention of water ponding against foundations.

5. We recommend that home owners implement the simple safety procedures outlined by Peter Yanev in his book, *Peace of Mind in Earthquake Country*. This book contains a wealth of information regarding earthquakes, seismic design and precautions that the individual home owner can take to reduce the potential for loss of life, injury and property damage.

6. We request the privilege of reviewing final project plans for conformance with our recommendations. If we are not permitted such a review, we cannot be held responsible for misinterpretation or omission of our recommendations.

INVESTIGATION LIMITATIONS

1. The conclusions and recommendations noted in this report are based on probability and in no way imply the site will not possibly be subjected to ground failure or seismic shaking so intense that structures will be severely damaged or destroyed. The report does suggest that implementation of the recommendations contained within will reduce the risks posed by geologic hazards.

2. This report is issued with the understanding that it is the duty and responsibility of the owner or his representative or agent to ensure that the recommendations contained in this report are brought to the attention of the architect and engineer for the project, incorporated into the plans and specifications, and that the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

3. If any unexpected variations in soil conditions or if any undesirable conditions are encountered during construction or if the proposed construction will differ from that planned at the present time, Nolan Associates should be notified so that supplemental recommendations can be given.

4. The findings of this report are valid as of the present date. However, changes in the conditions of the property and its environs can occur with the passage of time, whether they be due to natural processes of the works of man. In addition, changes in applicable or appropriate standards occur whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated, wholly or partially, by changes outside our control. Therefore, 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.

5. Our services consist of professional 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.

Environmental Review Inital Study
ATTACHMENT 6, 3 of 5
APPLICATION 07-0619

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

November 16, 2005

Mr. Robert Hartman
335 Via Concha
Aptos, CA 95003

And,

Nolan and Assocaites
1509 Seabright Avenue, Suite A2
Santa Cruz, CA 95060
ATTN: Jeffery Nolan

Subject: Review of Engineering Geology Report, by Nolan and Assocaites, Project Number 05004, dated August 3, 2005 , **APN *106-211-27, Application #: 05-0672***

Dear Messrs Hartman and Nolan,

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 reports.

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, *plan-review letters* shall be submitted to Environmental Planning from both the geotechnical engineer and engineering geologist. The authors of the reports shall write the *plan review letters*. Each letter shall state that the project plans conform to the report's recommendations.

4. An engineered grading and erosion plan is required; this plan must show the geologically approved development envelope.

5. A geotechnical engineering report is required.

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

Environmental Review Initial Study
ATTACHMENT 6, 4 of 5
APPLICATION 07-0619

(over)

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 (831) 454-3175, email pln829@co.santa-cruz.ca.us if we can be of any further assistance.

Sincerely,

Joseph L. Hanna CEG 1313
County Geologist
Cc: Hamilton-Swift, 1509 Seabright Avenue, Santa Cruz, CA 95060

Environmental Review Inital Study
ATTACHMENT 6 5 of 5
APPLICATION 07-0619

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

November 16, 2005

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3. Before building permit issuance, *plan-review letters* shall be submitted to Environmental Planning from both the geotechnical engineer and engineering geologist. The authors of the reports shall write the *plan review letters*. Each letter shall state that the project plans conform to the report's recommendations.

4. An engineered grading and erosion plan is required; this plan must show the geologically approved development envelope.

5. A geotechnical engineering report is required.

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

Environmental Review Inital Study
ATTACHMENT 7, 1 of 2
APPLICATION 07-0619

(over)

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 (831) 454-3175, email pln829@co.santa-cruz.ca.us if we can be of any further assistance.

Sincerely,

Joseph L. Hanna CEG 1313
County Geologist
Cc: Hamilton-Swift, 1509 Seabright Avenue, Santa Cruz, CA 95060

Environmental Review Inital Study
ATTACHMENT 7, 2 of 2
APPLICATION 07-0619

GEOTECHNICAL INVESTIGATION
For
PROPOSED SINGLE FAMILY DWELLING
195 Old Hazel Dell Road
Watsonville, California

Prepared For
ROBERT HARTMAN

Prepared By
HARO, KASUNICH AND ASSOCIATES, INC.
Geotechnical & Coastal Engineers
Project No. SC9485
July 2007

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

It is our opinion that the proposed development appears compatible with the site, provided the recommendations of this report are closely followed during design and construction of the project.

The results of our investigation indicate there are no adverse geotechnical hazards that would preclude the development of this project. Primary geotechnical concerns at the site include strong seismic shaking, adequate bearing support for foundations, and appropriate control of surface runoff. There is a potential for ground cracking at the site which could result in up to 3 inches of vertical offset and up to 6 inches of horizontal offset. Foundation design must take this possibility into consideration. A structural mat slab foundation is recommended for this project for this reason. Alternately, a grid system may be employed. The foundation should be constructed on an engineered building pad. The pad should consist of a minimum of 36 inches of engineered fill. This thickness may be reduced to 24 inches by placing geo-synthetic reinforcing fabric, such as Mirafi 500x, at the midpoint of the fill cross section.

The project site is located within a seismically active area. Structures designed and constructed in accordance with the most current UBC and the recommendations of this report should react well to seismic shaking.

An engineered drainage plan to handle surface and subsurface runoff should be developed for this site. Surface and subsurface site drainage should be adequately controlled during and after construction.

The following recommendations should be used as guidelines for preparing project plans and specifications, and assume that **Haro, Kasunich & Associates** will be commissioned to review project grading and foundation plans before construction and to observe, test and advise during earthwork and foundation construction. This additional opportunity to examine the site will allow us to compare subsurface conditions exposed during construction with those inferred from this investigation. Unusual or unforeseen soil conditions may require supplemental evaluation by the geotechnical engineer.

General Site Grading

1. The geotechnical engineer should be notified **at least four (4) working days prior to any grading or foundation excavating** so 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 geotechnical

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.

3. Areas to be graded or to receive proposed improvements should be cleared of all obstructions and fill materials, including trees not designated to remain and other unsuitable material. Existing depressions or voids created during site clearing should be backfilled with engineered fill. Any surface or subsurface obstructions, or questionable material encountered during grading, should be brought immediately to our attention for proper exposure, removal and processing as directed.

4. Cleared areas should then be stripped of organic-laden topsoil. Stripping depth is anticipated to be from 2 to 4 inches, although the actual depth of stripping should be determined in the field by the geotechnical engineer. Strippings should be wasted off-site or stockpiled for use in landscaped areas if desired.

5. Following clearing and stripping down to firm native soil, the exposed subgrade below exterior improvements should be scarified to a depth of at least 8 inches, moisture

conditioned (or allowed to dry as necessary) to produce a moisture about 2-4 percent above the laboratory optimum value and uniformly compacted to at least 90 percent relative compaction.

6. The building footprint, including areas for which concrete flatwork in proposed, and five feet beyond in all directions should be underlain by an engineered pad a minimum of 36 inches in thickness, or 24 inches if reinforced with fabric. The bottom of all subexcavation should be scarified to a depth of at least 8 inches, moisture conditioned (or allowed to dry as necessary) to produce a moisture about 1-2 percent above the laboratory optimum value and uniformly compacted to at least 90 percent relative compaction. Engineered fill should be placed in thin lifts not exceeding 8 inches in loose thickness, water conditioned to a moisture content about 2 percent above optimum, and compacted to at least 90 percent relative compaction. The upper 8 inches of pavement subgrades should be compacted to at least 95 percent relative compaction. Aggregate base below pavements should likewise be compacted to at least 95 percent relative compaction.

7. We estimate shrinkage factors of about 15-20 percent for the on-site materials when used in engineered fills.

8. If grading is performed during or shortly after the rainy season, the grading contractor may encounter compaction difficulty with the wet soils. If compaction cannot be achieved after adjusting the soil moisture content, it may be necessary to use imported fill or gravel and stabilize the bottom of the excavation with stabilization fabric. The need for ground stabilization measures to complete grading effectively should be determined in the field at the time of grading, based on exposed soil conditions.

9. In general, the on-site soils appear suitable for use as engineered fill. However, clay soils with intermediate or high plasticity may be unsuitable if encountered. Materials used for engineered fill which must be imported should be free of organic and deleterious material, contain no rocks or clods over 4 inches in dimension, and should contain no more than 15 percent by weight of rocks larger than 2½ inches. Imported fill should also be granular, have a Plasticity Index of less than 18, and should have sufficient binder to allow excavations to stand without caving. Prior to delivery to the site, a representative sample of proposed import should be sent to our laboratory for evaluation.

Cut and Fill Slopes

10. Temporary excavations should be properly shored and braced during construction to prevent sloughing and caving at sidewalls. The contractor should be aware of all CAL-OSHA and local safety requirements and codes dealing with excavations and trenches.

11. Permanent cut slopes should be inclined no steeper than 2:1 (horizontal to vertical).

The top of all cut slopes should be rounded off to reduce soil sloughing. If seepage is observed, the geotechnical engineer should provide additional recommendations. Cut slopes with these recommended gradients may require periodic maintenance to remove minor soil sloughing.

12. Compacted fill slopes should be constructed at a slope inclination not steeper than 2:1 horizontal to vertical. Fill slopes with these recommended gradients may require periodic maintenance to remove minor soil sloughing. All fills constructed on slopes exceeding a gradient of 7:1 (horizontal to vertical) must be adequately benched into competent material, and keys for stability will be required at the toe of the fill embankment. The toe key should be at least 8 feet wide and should extend at least 2 feet into competent soil or bedrock. The bottom of the toe key should be sloped downward at about 2 percent toward the back of the key.

13. There should be a minimum of 10 feet horizontal separation between the bottom of all footing elements and the top of a fill slope or the base of a cut slope.

14. In order to maintain stable slopes at the recommended gradients, it is important that seepage forces and accompanying hydrostatic pressure be relieved by adequate drainage. Adequate backdrains in keyways and benches should be provided. The

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locations of backdrains and outlets will be determined by the geotechnical engineer in the field during grading.

15. Following grading, exposed soil should be planted as soon as possible with erosion-resistant vegetation.

16. After the earthwork operations have been completed and the geotechnical engineer has finished his observation of the work, no further earthwork operations shall be performed without the direct observation and approval of the geotechnical engineer.

Foundations- Structural Concrete Slabs-on-Grade

17. The proposed structures should be supported by a structural mat slab foundation. The foundation may be designed for an allowable bearing capacity of 1,500 psf.

The structural mat should be designed to withstand 3 inches of vertical ground offset and 6 inches of horizontal ground offset during a seismic event.

Lateral load resistance for the structure supported on the structural slab may be developed in friction between the foundation bottom and the supporting subgrade. A friction coefficient of 0.38 may be used.

18. Building floor slabs and exterior slabs should be constructed on properly water conditioned and compacted soil subgrades. Soil subgrades should be prepared and compacted as recommended in the section entitled "General Site Grading". Soil moisture should be consistently maintained at 4 to 5 percent over optimum until the slab is poured. If the subgrade is allowed to dry out, it should be adequately pre-moistened for at least 48 hours prior to pouring concrete.

19. Slab reinforcing should be provided in accordance with the anticipated use and loading of the slab and adhere to the vertical and horizontal ground offset conditions. However we recommend a minimum reinforcement of #5 bars spaced 12 inches on-center in both directions. The steel reinforcement should be held firmly in the vertical center of the slab during placement and finishing of the concrete with pre-cast concrete dobies.

20. Where floor dampness must be minimized or where floor coverings will be installed, concrete slabs-on-grade should be constructed on a capillary break layer at least 4 inches thick, covered with a membrane vapor retarder. Capillary break material should be free-draining, clean gravel or rock, such as 3/4-inch gravel. The gravel should be washed to remove fines and dust prior to placement on the slab subgrade. The vapor retarder should be a high quality membrane at least 10 mil in thickness. A layer of sand about 2 inches thick should be placed between the vapor retarder and the floor slab to

protect the membrane and to aid in curing concrete. The sand should be lightly moistened prior to placing concrete.

21. Exterior concrete slabs-on-grade should be founded on firm, well-compacted ground as delineated above. Reinforcing should be provided in accordance with the anticipated use and loading of the slab. The reinforcement 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 pre-moistening prior to pouring concrete, adequately spaced expansion joints, and good workmanship should minimize cracking and movement.

UBC Design Criteria

22. Based on standard penetration test (SPT) data obtained from our borings and our observations of the native subsurface soil conditions, we have classified the site soil profile as Soil Type S_D as defined in Table 16-J of the 1997 UBC. The following table indicates the 1997 UBC Seismic Coefficients appropriate for this site. These are minimum values; the project designer or structural designer may utilize more conservative values at his or her discretion.

FAULT NAME	DISTANCE TO SITE	R.I. (yr)	Mmax (Mw)	SLIP RATE (mm/yr)	UBC FAULT TYPE	Na	Nv	Ca	Cv
San Andreas	1 km .62 miles	400	7.9	241	A	1.5	2.0	0.66	1.28
Sargent	4.7 km 2.9 miles	330	6.8	3.0	B	1.03	1.24	0.45	0.79
Zayante/ Vergeles	5.5 *km* 3.4 miles	10,000	6.8	0.1	B	1.3	1.18	0.57	0..76

Note: The San Andreas Fault is the dominant fault at this site.

Retaining Wall Lateral Pressures

23. Retaining walls should be designed to resist both lateral earth pressures and any additional surcharge loads. For design of retaining walls up to 8 feet high, the following design criteria may be used:

A. Active earth pressure on fully drained walls allowed to yield is that exerted by an equivalent fluid weighing 40pcf for a level backslope gradient; and 60 pcf for a 2:1 (horizontal to vertical) backslope gradient. **This assumes a fully drained condition**.

B. Where walls are restrained from moving at the top, as in the case for basement walls, design for a uniform rectangular distribution equivalent to 28H psf per foot of wall height for a level backslope, and 42H psf per foot of wall height for a 2:1 backslope (where H is the height of the wall).

C. Where retaining wall footings are poured neat against dense native soil, a passive resistance of 345 pcf (EFW) may be used. The top 12 inches of

bedrock and all topsoil or other loose materials should be neglected when computing passive resistance.

D. Use a coefficient of friction between base of foundation and native soil of 0.38.

E. In addition, the walls should be designed for any adjacent live or dead loads which will exert a force on the wall (garage and/or auto traffic).

F. Retaining walls used as interior living space should be thoroughly waterproofed.

24. For seismic design of retaining walls supporting critical structures, a dynamic surcharge load equal to 20 H psf per foot of wall, where H is the height of the wall, should be added to the above active lateral earth pressures.

25. Fully drained walls should be backfilled with drainage materials consisting of Class 1, Type A permeable material complying with Section 68-1.025 of Caltrans Standard Specifications, latest edition; or of ¾ inch drain rock wrapped in filter fabric such as Mirafi 140N or equivalent.

26. 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, rigid 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 capped at the surface with clayey

material to prevent infiltration of surface runoff into the backdrains. A layer of filter fabric (Mirafi 140N or equivalent) should separate the subdrain material from the overlying soil cap.

Utility Trenches

27. Trenches must be properly shored and braced during construction or laid back at an appropriate angle to prevent sloughing and caving at sidewalls. The project plans and specifications should direct the attention of the contractor to all CAL OSHA and local safety requirements and codes dealing with excavations and trenches.

28. Utility trenches that are parallel to the sides of buildings should be placed so that they do not extend below an imaginary line sloping down and away at a 2:1 (horizontal to vertical) slope from the bottom outside edge of all footings. The structural design professional should coordinate this requirement with the utility layout plans for the project.

29. Trenches should be backfilled with granular-type material and uniformly compacted by mechanical means to the relative compaction as required by county specifications, but not less than 95 percent under paved areas and 90 percent elsewhere. The relative compaction will be based on the maximum dry density obtained from a laboratory compaction curve run in accordance with ASTM Procedure #D1557.

30. We strongly recommend placing a 3 foot concrete plug in each trench where it passes under the exterior foundations. Care should be taken not to damage utility lines.

31. Trenches should be capped with 1.5± feet of relatively impermeable soil.

Surface Drainage

32. An engineered drainage plan to handle surface runoff should be developed for this site. Site drainage should be adequately controlled both during and after construction.

33. The site should be graded to promote positive runoff towards an approved discharge point offsite.

34. All exposed soil should be landscaped and permanently protected against erosion as soon as possible after grading.

35. We recommend that full gutters be used along all roof down eaves to collect storm runoff water and channel it through closed rigid conduits to a suitable discharge point away from all structural improvements.

36. Surface runoff should **not** be allowed to flow onto graded or natural slopes. Consideration should be given to catch basins, berms, concrete v-ditches, or drainage swales at the top of all slopes to intercept runoff and direct it to a suitable discharge point.

37. Surface drainage should include provisions for positive gradients so that surface runoff is not permitted to pond adjacent to foundations and on pavements. Surface drainage should be directed away from the building foundations, on a minimum gradient of 2 percent for a distance of at least 3 feet to an adequate discharge point. Concentrations of surface water runoff should be handled by providing necessary structures, such as paved ditches, catch basins, etc.

38. Irrigation activities at the site should be done in a controlled and reasonable manner. Planter areas should not be sited adjacent to walls; otherwise, measures should be implemented to contain irrigation water and prevent it from seeping into walls and under foundations.

39. 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.

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40. Drainage patterns approved at the time of fine grading should be maintained throughout the life of proposed structures.

Plan Review, Construction Observation and Testing

41. Our firm should be provided the opportunity for a general review of the project plans prior to construction so that our geotechnical recommendations may be properly interpreted and implemented. The purpose is to determine if this preliminary report is adequate and complete for the final planned grading and construction. It is not intended that the geotechnical engineer approve or disapprove the plans, but to provide an opportunity to update the preliminary report and include additions or qualifications as necessary. If our firm is not accorded the opportunity of making the recommended review, we can assume no responsibility for misinterpretation of our recommendations.

42. We recommend that our office review the project plans prior to submittal to public agencies, to expedite project review. The recommendations presented in this report require our review of final plans and specifications prior to construction and upon our observation and, where necessary, testing of the earthwork and foundation excavations. Observation of grading and foundation excavations allows anticipated soil conditions to be correlated to those actually encountered in the field during construction.

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

October 31, 2007

Hamilton Swift Attn: Charlie Eadie
500 Chestnut St. Ste. 100
Santa Cruz, CA, 95006

Subject: *Review of Geotechnical Investigation* by Haro Kasunich & Associates
Dated July 6, 2007; Project #: SC9485
APN 106-211-27, Application #: 07-0619

Dear Applicant:

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. Plans shall also provide a thorough and realistic representation of all grading necessary to complete this project

3. Prior to the discretionary application being deemed complete, a *plan review letter* shall be submitted to Environmental Planning. The author of the report shall write the *plan review letter*. The letter shall state that the project plans conform to the report's recommendations.

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

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 submit two copies of the report at the time of building permit application.

Please call the undersigned at (831) 454-5121 if we can be of any further assistance.

Sincerely,

Carolyn Banti
Associate Civil Engineer

Environmental Review Initial Study
ATTACHMENT 9, Lot 2
APPLICATION 07-0619

Cc: Lawrence Kasparowitz, Project Planner
Robert Hartman, Owner
Haro Kasunich & Associates

(over)

NOTICE TO PERMIT HOLDERS WHEN A SOILS REPORT HAS BEEN PREPARED, REVIEWED AND ACCEPTED FOR THE PROJECT

After issuance of the building permit, the County requires your soils engineer to be involved during construction. Several letters or reports are required to be submitted to the County at various times during construction. They are as follows:

1. **When a project has engineered fills and / or grading**, a letter from your soils engineer must be submitted to the Environmental Planning section of the Planning Department prior to foundations being excavated. This letter must state that the grading has been completed in conformance with the recommendations of the soils report. Compaction reports or a summary thereof must be submitted.

2. **Prior to placing concrete for foundations**, a letter from the soils engineer must be submitted to the building inspector and to Environmental Planning stating that the soils engineer has observed the foundation excavation and that it meets the recommendations of the soils report.

3. **At the completion of construction,** a *final letter* from your soils engineer is required to be submitted to Environmental Planning that summarizes the observations and the tests the soils engineer has made during construction. The final letter must also state the following: "Based upon our observations and tests, the project has been completed in conformance with our geotechnical recommendations."

   If the *final soils letter* identifies any items of work remaining to be completed or that any portions of the project were not observed by the soils engineer, you will be required to complete the remaining items of work and may be required to perform destructive testing in order for your permit to obtain a final inspection.

Environmental Review Inital Study
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APPLICATION 07-0619