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

NOTICE OF ENVIRONMENTAL REVIEW PERIOD

SANTA CRUZ COUNTY

APPLICANT: **County of Santa Cruz, Planning Department, for PAZ LLC**

APPLICATION NO.: **07-0414**

APN: **029-021-47**

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: **October 29, 2008**

Todd Sexauer
Staff Planner

Phone: **454-3511**

Date: **September 24, 2008**

County of Santa Cruz

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TOM BURNS, PLANNING DIRECTOR

MITIGATION MONITORING AND REPORTING PROGRAM
For the Planned Unit Development for APN: 029-021-47

Environmental Impacts	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
Geology/Soils				
Expose people or structures to potential adverse effects, including the risk of material loss, injury, or death involving seismic ground shaking.	Residential structures shall be supported on post-tensioned slabs that are designed for expansive soils unless the geotechnical engineer specifies alternative designs. The slab foundations shall bear entirely on the properly prepared compacted structural fill or native soils. In no case shall a slab foundation bear upon more than one of these materials. A soils report shall be required to confirm the design criteria for the project site. The recommendations of the soils report shall be implemented to adequately mitigate for this potential hazard.	County Planning Department	Building/Grading Permit	Project Design
Subject people or improvements to damage from soil instability as a result of on- or off-site landslide, lateral spreading, subsidence, liquefaction, or structural collapse.	Constructing with post-tensioned slab foundations and following the recommendations of the geotechnical engineer will be required to mitigate for this potential hazard.	County Planning Department	Building/Grading Permit	Project Design
Result in soil erosion or the substantial loss of topsoil.	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 (County Code Chapter 16.22.060). The plan will include provisions for disturbed areas to be planted with groundcover and to be maintained to minimize surface erosion.	County Planning Department	Building/Grading Permit	Prior to issuance of Building Permit
Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code(1994), creating substantial risks to property.	A geotechnical investigation and soils report shall be required to determine appropriate design criteria for the project site. The recommendations of the geotechnical investigation and soils report shall be implemented to adequately mitigate for this potential hazard.	County Planning Department	Building/Grading Permit	Project Design
Hydrology/Water Supply/Water Quality				
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	A water main extension will be required for the City of Santa Cruz Water Department, along with fire, domestic, irrigation meters and fire hydrants. Connection fees will be required per number and type of residential unit. Connection fees for irrigation will be calculated based on fixture points and/or gallon per minute demand. All public water facilities shall be installed within a designated utility easement per Santa Cruz Water Department Standard	City of Santa Cruz Water Department	Water Service	Prior to Construction

Environmental Impacts	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
deficit in available supply, or a significant lowering of the local groundwater table.	Specifications and Details.			
Degrade a public or private water supply. (Including the contribution of urban contaminants, nutrient enrichments, or other agricultural chemicals or seawater intrusion).	Potential siltation from the proposed project will be mitigated through implementation of an Erosion Control Plan (see Geology and Soils). A silt and grease trap, and a plan for maintenance, will be required to reduce this impact to a less than significant level.	County Planning Department	Building/Grading Permit	Ongoing
Alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner that could result in flooding, erosion, or siltation on or off-site.	The proposed project would comply with Chapter 16.22.070 (Runoff Control) of the County Code. The following measures shall be used for runoff control, and shall be adequate to control runoff from a 10-year storm: (a) To the extent that that onsite percolation is not sufficient, all runoff shall be detained or dispersed over non-erodible vegetated surfaces so that the runoff rate does not exceed the predevelopment level. Onsite detention may be required by the Planning Director where excessive runoff would contribute to downstream erosion or flooding. (Any policies and regulations for any drainage zones where the project is located will also apply.) Detention facilities included in future development shall be designed not to exceed predevelopment flows in order to avoid downstream effects. (b) Any concentrated runoff that cannot be effectively dispersed without causing erosion, shall be carried in non-erodible channels or conduits to the nearest drainage course designated for such purpose by the Planning Director or to on-site percolation devices. Where water will be discharged to natural ground or channels, appropriate energy dissipaters shall be installed to prevent erosion at the point of discharge. (c) Runoff from disturbed areas shall be detained or filtered by berms, vegetated filter strips, catch basins, or other means as necessary to prevent the escape of sediment from the disturbed area. (d) No earth or organic material shall be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water. (e) In an effort to reduce runoff, implement techniques where feasible such as minimizing site disturbance, minimizing proposed impervious areas, utilizing pervious surfacing, eliminating directly connected impervious areas, clustering development, etc.	County Planning Department	Building/Grading Permit	During Construction and Ongoing
Create or contribute runoff that would exceed the capacity of existing or planned storm water drainage systems, or create additional source(s) of polluted runoff.	All project runoff in excess of predevelopment levels for a 10-year storm event shall be detained on the site. All runoff from parking and driveway areas shall go through water quality treatment prior to discharge from the site (e.g., outsloping driveways to drain to landscaped areas for filtering prior to discharge from the site). If structural treatment is proposed, a recorded maintenance agreement will be required. This agreement shall be signed, notarized, and recorded, and a	County Planning Department and Department of Public Works	Building/Grading Permit	Design and Construction

Environmental Impacts	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
	copy of the recorded agreement shall be submitted to the County DPW. The Developer shall provide permanent markings at each drainage inlet that reads "NO DUMPING-DRAINS TO BAY," or equivalent. The property owner will be responsible for maintaining these markings.			
Contribute to flood levels or erosion in natural water courses by discharges of newly collected runoff.	All runoff in excess of predevelopment levels for a 10-year storm event shall be detained on the site.	County Planning Department	Building/Grading Permit	Design and Construction
Otherwise substantially degrade water supply or quality.	Silt and grease traps, and a plan for maintenance will be required to minimize the effects of urban pollutants. In addition, an Erosion Control Plan as specified in Section 16.22.060 of the County Code, and a Storm Water Pollution Prevention Plan will be required during construction. Because the proposed project would result in a land disturbance of one acre or more, a Construction Activities Storm Water General NPDES Permit shall be obtained from the State Water Resources Control Board. Construction activities include clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement.	County Planning Department	Building/Grading Permit	Design and Construction, and ongoing
Biological Resources				
Have an adverse effect on a sensitive biotic community (riparian corridor), wetland, native grassland, special forests, intertidal zone, etc.	All work during installation of the drainage outfall shall occur from Soquel Avenue. Construction equipment is not allowed to enter Rodeo Creek Gulch during project construction. All drainage work adjacent to Rodeo Creek Gulch shall be completed outside of the breeding season for migratory birds (February 15 through August 15).	County Planning Department; California Department of Fish and Game	Building/Grading Permit	Design and Construction
Visual Resources and Aesthetics				
Create a new source of light or glare that would adversely affect day or nighttime views in the area.	The following project conditions to reduce night lighting impacts shall be implemented: (a) It shall be an objective of lighting design to relate to the site and building design and reduce off-site impacts. (b) All site, building, security and landscape lighting shall be directed onto the site and away from adjacent properties. Light sources shall not be visible from adjacent properties. Light sources can be shielded by landscaping, structure, fixture design or other physical means. Building and security lighting shall be integrated into the building design. (c) All lighted parking and circulation areas shall utilize low-rise light standards or light fixtures attached to the building. Light standards to a maximum height of 15 feet are allowed. Area lighting shall be high-pressure sodium vapor, metal halide, fluorescent, or equivalent energy-efficient fixtures.	County Planning Department	Building/Grading Permit	Design and Construction
Cultural & Archeological Resources				
Cause an adverse change in	No archeological resources are known to occur or expected within the project	County Planning	Building/Grading	Project Construction

Environmental Impacts	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
the significance of an archaeological resource pursuant to CEQA Guidelines 15064.5.	area. However, the potential for archaeological resources exists within and adjacent to Rodeo Gulch. Therefore, construction of the drainage outfall proposed immediately south of Soquel Avenue shall occur entirely within the elevated roadway prism composed entirely of fill material.	Department	Permit	
Disturb any human remains, including those interred outside of formal cemeteries.	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.	County Planning Department	Building/Grading Permit	During Construction
Hazards and Hazardous Materials				
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.	Based on the findings of the 2007 Phase I ESA, the following mitigation measures shall be implemented: • Prior to renovation or demolition, sampling shall be conducted to assess if asbestos is contained in the construction materials of the building. The California Health and Safety Code requires owners of structures with asbestos containing material (ACM) to notify tenants and employees that the building has ACM. • All hazardous materials on the project site shall be stored in appropriate secondary containment to prevent spills or leaks. • Based on the surface staining near hazardous materials, the improper storage noted in the 1999 Phase I ESA, and the potential collection and drainage of motor fuel and oil by the sump formerly located on the project site, several soil borings and soil samples shall be taken to assess potential subsurface impacts. • All fluids shall be drained and batteries removed from non-functioning vehicles on the project site and disposed of properly to prevent leaking and spilling. • The waste oil tank shall be removed from the project site, if no longer in use, or, if the tank is not removed from the project site, it shall be stored in appropriate secondary containment to prevent further leaking and spilling. • The automobile parts cleaner shall be removed from the project site, if no longer in use, and the remaining solvent shall be disposed of properly.	County Planning Department	Building/Grading Permit	During Construction
Transportation/Traffic				
Exceed, either individually (the project alone) or cumulatively (the project combined with other development), a level of	The following mitigation shall be implemented: 1. *Soquel Avenue/SR1 Southbound Ramps:* Intersection operations can be improved by modifying the eastbound lane configuration and signal timings.	County Planning Department	Building/Grading Permit	Prior to Construction

Environmental Impacts	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
service standard established by the county congestion management agency for designated intersections, roads or highways.	The eastbound approach would be re-striped to provide a dedicated left-turn lane and one through lane (from a shared left-turn/through lane and one through lane). The signal timings will be modified to provide protected phasing for the eastbound left-turn movement. No changes are proposed for other approaches. The applicant shall pay fair share fees to the County of Santa Cruz for the required intersection improvements. 2. *Soquel Avenue/Chanticleer Avenue:* Peak-hour signal warrants are met at the Soquel Avenue/Chanticleer Avenue intersection during both peak hours. This intersection improvement is currently in the County's plan for improvements along Soquel Avenue. The applicant shall pay fair share fees to the County of Santa Cruz for the required intersection improvements.			
Air Quality				
Violate any air quality standard or contribute *substantially to an existing or* projected air quality violation.	Construction activities (e.g., excavation, grading, on-site vehicles) that directly generate 82 pounds per day or more of PM10 would result in a significant impact *on local air quality if located nearby and upwind of sensitive receptors. Although* project construction may result in a short-term, localized decrease in air quality due to generation of dust, the implementation of standard best management practices would reduce PM10 levels well below 82 pounds per day. The following mitigation measures will reduce construction-related emissions to a less than significant level. • All active construction areas shall be watered at least twice daily. Frequency will be based on the type of operation, soil, and wind exposure. • All grading activities will be prohibited during periods of high wind (over 15 mph). • Chemical soil stabilizers shall be applied to inactive construction areas (*disturbed lands within construction projects that are unused for at least four* consecutive days). • Non-toxic binders (e.g., latex acrylic copolymer) shall be applied to exposed areas after cut and fill operations and to hydroseed areas. • Haul trucks shall maintain at least 2'0" of freeboard. • All trucks hauling dirt, sand, or loose materials shall be covered. • Vegetative ground cover shall be installed in disturbed areas as soon as possible. • Inactive storage piles shall be covered. • Wheel washers shall be installed at the entrance to construction-sites for all exiting trucks. • Streets shall be swept if visible soil material is carried out from the construction site. • A publicly visible sign shall be posted that specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of	County Planning Department and *Monterey Bay* Unified Air Pollution Control District	Building/Grading Permit	During Construction

Environmental Impacts	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
	the Monterey Bay Unified Air Pollution Control District shall be visible to ensure compliance with Rule 402 (Nuisance). • Limit the area under construction at any one time (MBUAPCD 2008).			
Expose sensitive receptors to substantial pollutant concentrations.	There would be a short-term air quality impact from emissions generated during site preparation (including soil stabilization efforts) and building construction. Dust from grading and emissions from heavy equipment would incrementally increase emissions over the short-term. There would be a long-term incremental decrease in air quality resulting from vehicle emissions generated by the proposed project. However, this impact is not considered to be significant with implementation of the above mitigation.	County Planning Department and Monterey Bay Unified Air Pollution Control District	Building/Grading Permit	During Construction
Public Services and Utilities				
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.	The proposed project would comply with Chapter 16.22.070 (Runoff Control) of the County Code. The following measures shall be used for runoff control, and shall be adequate to control runoff from a 10-year storm: (a) To the extent that onsite percolation is not sufficient, all runoff shall be detained or dispersed over non-erodible vegetated surfaces so that the runoff rate does not exceed the predevelopment level. Onsite detention may be required by the Planning Director where excessive runoff would contribute to downstream erosion or flooding. (Any policies and regulations for any drainage zones where the project is located will also apply.) Detention facilities included in future development shall be designed not to exceed predevelopment flows in order to avoid downstream effects. (b) Any concentrated runoff that cannot be effectively dispersed without causing erosion, shall be carried in non-erodible channels or conduits to the nearest drainage course designated for such purpose by the Planning Director or to on-site percolation devices. Where water will be discharged to natural ground or channels, appropriate energy dissipaters shall be installed to prevent erosion at the point of discharge. (c) Runoff from disturbed areas shall be detained or filtered by berms, vegetated filter strips, catch basins, or other means as necessary to prevent the escape of sediment from the disturbed area. (d) No earth or organic material shall be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water. (e) In an effort to reduce runoff, techniques such as minimizing site disturbance, minimizing proposed impervious areas, utilizing pervious surfacing, eliminating directly connected impervious areas, clustering development, etc., shall be implemented to the extent feasible.	County Department of Public Works	Building/Grading Permit	During Construction
Result in the need for construction of new water or wastewater treatment facilities or expansion of existing	The proposed project is located within the Rodeo Gulch impacted sewer basin in which the Santa Cruz County Sanitation District Board of Directors (Board) has placed development restrictions. No development shall occur until the development restriction is lifted or the following mitigation measures are	County Department of Public Works	Building/Grading Permit	During Construction

Environmental Impacts	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
facilities, the construction of which could cause significant environmental effects.	implemented. · • A sewer extension, pump station and area-wide study of the properties in the area that currently do not have sewer service. If the project engineer determines that the project parcel is the only parcel to be connected to a pump station, the pump station will be privately maintained and located on private property. Housing for any required on-site generator and controls shall match the architecture of the subdivision or complex. A response and maintenance manual shall be prepared by the developer, submitted to the Santa Cruz County Sanitation District for review and approval at the building permit phase. · • If it is necessary for the project to sewer via Mattison Lane, three segments of public sewer main downstream of the project site would experience capacity problems, and 816 linear feet of sewer shall be upgraded.· • If it is necessary for the project to sewer via Chanticleer Avenue, sewer capacity will become available following the planned upgrades for the 2009 construction season. Sewer connection via Chanticleer Avenue will not be available prior to completion of the upgrades. · • A sewer connection of $3,000 per individual dwelling unit will be required unless any of the units qualify by the Board as a) low income senior rental units, or b) below average-income ownership units.			

Environmental Review
Initial Study

Application Number: 07-0414

Date: September 22, 2008
Staff Planner: Todd Sexauer

I. OVERVIEW AND ENVIRONMENTAL DETERMINATION

APPLICANT: County of Santa Cruz **APN**: 029-021-47

OWNER: PAZ LLC **SUPERVISORAL DISTRICT**: 1

LOCATION: The proposed project is located on the south side of Soquel Avenue at 5940 Soquel Avenue, between Chanticleer Avenue and Mattison Lane within the Live Oak planning area of unincorporated Santa Cruz County, California (See Figures 1 and 2).

SUMMARY PROJECT DESCRIPTION:

The project proposes a General Plan amendment, zone change, Riparian Exception, and Planned Unit Development (PUD) allowing a maximum development density of 20 dwelling units per usable acre on the project site. The PUD would also require any development proposal on the parcel to provide a minimum of forty (40) percent of the total number of units as affordable. Following project approval, future development of the project site would be by-right in that the use and density for the site would not discretionary. The site contains a maximum of 4.99 usable (developable) acres be equating to a maximum of 99 dwelling units. The project would amend the General Plan from "Service Commercial/Light Industry (C-S)" to "Urban High Residential (R-UH)" with a PUD. The Urban High Residential would be amended to allow 20 units per net developable acre with a 2,000 square foot lot size requirement. In addition, the parcel would be rezoned from "Light Industrial (M-1)" to "Multi-Family Residential – (RM-2)".

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	X	Noise
X	Hydrology/Water Supply/Water Quality	X	Air Quality
X	Biological Resources	X	Public Services & Utilities
	Energy & Natural Resources	X	Land Use, Population & Housing
X	Visual Resources & Aesthetics	X	Cumulative Impacts
X	Cultural Resources		Growth Inducement

X Hazards & Hazardous Materials	____ Mandatory Findings of Significance
X Transportation/Traffic	

DISCRETIONARY APPROVAL(S) BEING CONSIDERED

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

NON-LOCAL APPROVALS
Other agencies that must issue permits or authorizations:

1. California Department of Fish and Game – Section 1602 Streambed Alteration Agreement
2. City of Santa Cruz Water Department
3. State Water Resources Control Board – National Pollution Discharge Elimination System Permit

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

9/24/08
Date

For: Claudia Slater
Environmental Coordinator

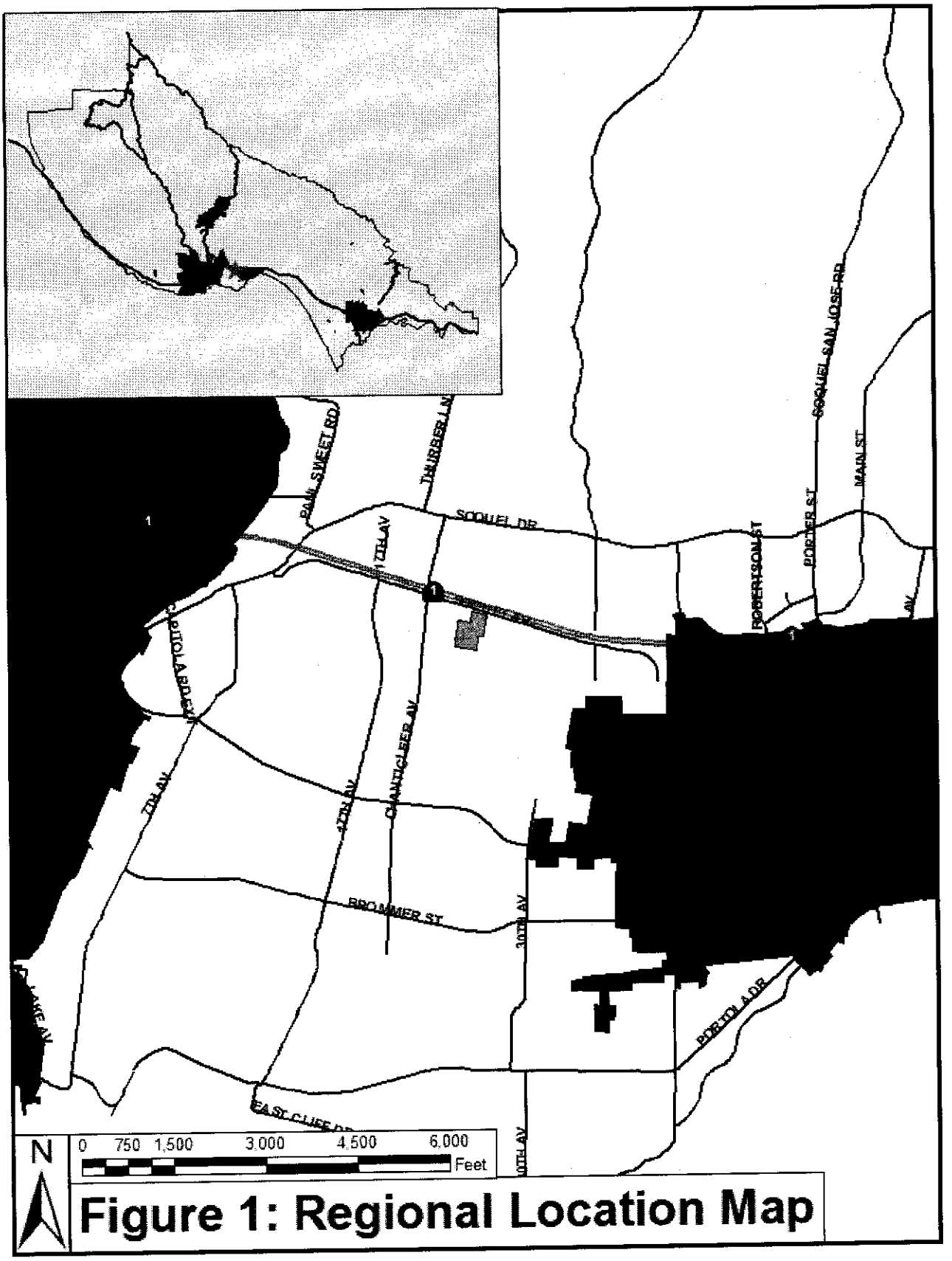

Figure 1: Regional Location Map

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

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Figure 2: Location Map

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II. BACKGROUND INFORMATION

EXISTING SITE CONDITIONS

Parcel Size: 4.99 acres
Existing Land Use: Light Industrial/Vehicle and Equipment Storage
Vegetation: Devoid of vegetation
Slope in area affected by project: _X_ 0 - 30% ___ 31 – 100%
Nearby Watercourse: Rodeo Creek Gulch
Distance To: Located approximately ¼ mile east of parcel

ENVIRONMENTAL RESOURCES AND CONSTRAINTS

Groundwater Supply: Not mapped
Water Supply Watershed: Not mapped
Groundwater Recharge: Not mapped
Timber or Mineral: Not mapped
Agricultural Resource: Not mapped
Biologically Sensitive Habitat: Yes (Rodeo Gulch)
Fire Hazard: Not mapped
Floodplain: Not mapped
Erosion: Not mapped
Landslide: Not mapped
Liquefaction: Not mapped
Fault Zone: Not mapped
Scenic Corridor: Yes
Historic: Not mapped
Archaeology: Yes (Rodeo Gulch)
Noise Constraint: Yes
Electric Power Lines: No
Solar Access: Adequate
Solar Orientation: Adequate
Hazardous Materials: Yes

SERVICES

Fire Protection: Central Fire Protection District
School District: Live Oak School District
Sewage Disposal: Santa Cruz County Sanitation District
Drainage District: Zone 5 Flood Control District
Project Access: Soquel Avenue; County maintained road
Water Supply: City of Santa Cruz Water Department

PLANNING POLICIES

Zone District: Light Industrial (M-1)
General Plan: Service Commercial/Light Industry (C-S)
Special Designation:

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

PROJECT SETTING AND BACKGROUND:

The 4.99-acre project site is located on the south side of Soquel Avenue, between Chanticleer Avenue and Mattison Lane within the Live Oak planning area of unincorporated Santa Cruz County (Figures 1 and 2).

Primary vehicular access to the project site is from the east and west via Soquel Avenue. Soquel Avenue is an east-west arterial roadway connecting Santa Cruz, Live Oak, and Capitola. Soquel Avenue is four lanes wide west of Soquel Drive and two

lanes wide east of Soquel Drive at the project site. Soquel Avenue is paved without curb, gutter or sidewalks along the project frontage.

The project site is within the unincorporated County of Santa Cruz Live Oak planning area. The site is also located within the Santa Cruz County Sanitation District, and the City of Santa Cruz Water Department provides water service.

The predominant land uses surrounding the project site are light industrial to the east and west, Soquel Avenue and Highway 1 to the north, and a mobile home park to the south.

The property has been divided into numerous individual storage lots. One single-story wood-frame office and garage structure containing approximately 1,000 square feet, and one single-story storage structure containing approximately 500 square feet were developed prior to 1963 at the western perimeter of the property. One mobile office trailer containing approximately 1,200 square feet is also located adjacent to the east of the structures.

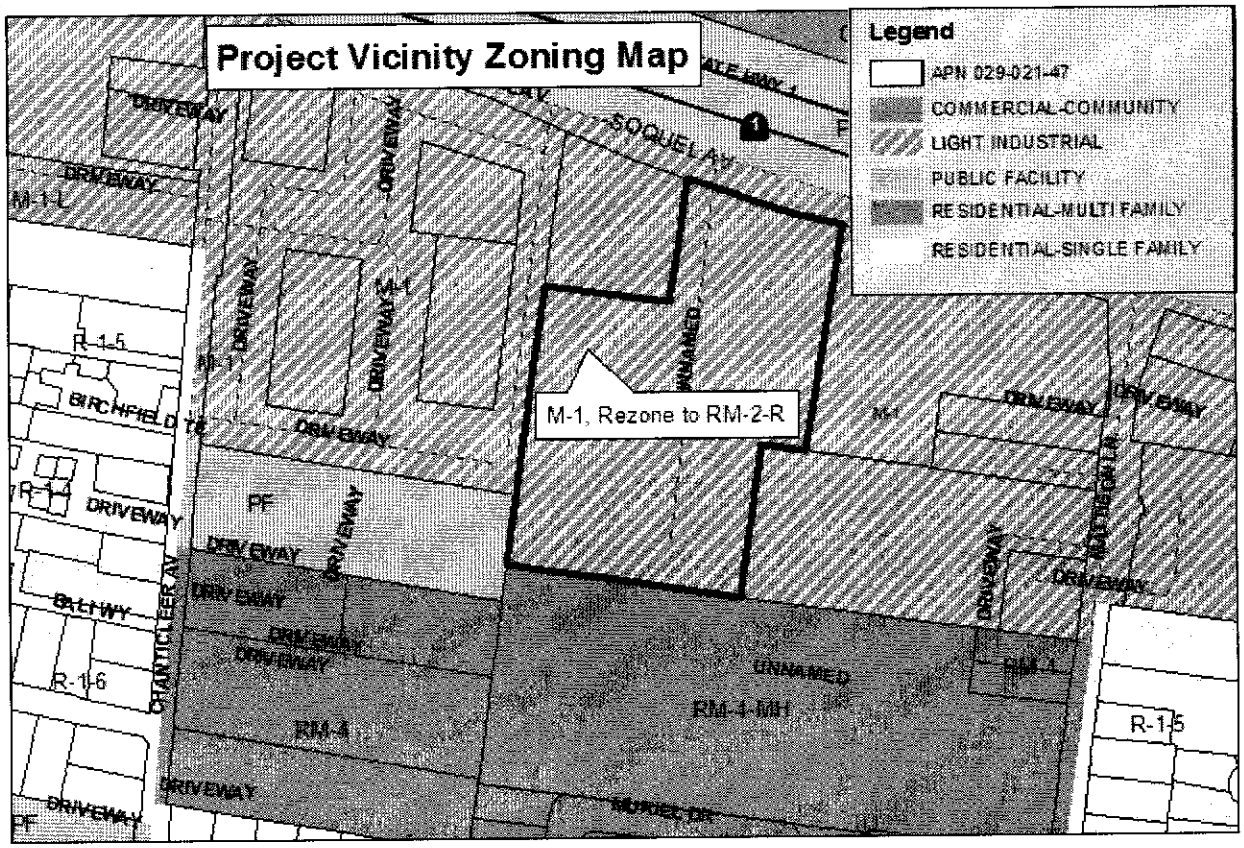
The northern portion of the property is used by ABC Roofing Supply Company for storage of retail and wholesale roofing building supplies. The eastern portion of the property is used for vehicle storage. The southern portion of the property is used for storage of vehicles and shipping containers. The western portion of the property is used by A-1 Towing, Coast Concrete, and various individuals for the storage of vehicles, shipping containers, and offices.

From at least 1937 to approximately 1963, the property was in agricultural use. From 1963 until approximately 1975, the northern portion of the property was used for vehicle storage, and the southern portion of the property was in agricultural use. From 1975 until approximately 1985, the northern portion of the property was used for vehicle storage, and the southern portion of the property was a fallow field. From 1985 until the present, the northern and southern portions of the property have been used for vehicle storage.

DETAILED PROJECT DESCRIPTION:

The project proposes a General Plan amendment, zone change, Riparian Exception, and PUD allowing a maximum development density of 20 dwelling units per usable acre on the project site. The PUD would also require any development proposal on the parcel to provide a minimum of forty (40) percent of the total number of units as affordable. Following project approval, future development of the project site would be by-right in that the use and density for the site would not be discretionary. A Tentative Map approval may be requested as part of the development application but is not required. The site contains a maximum of 4.99 usable acres equating to a maximum of 99 dwelling units.

The project would rezone the parcel and amend the General Plan as shown in Table 1. Figure 3 also shows the proposed land use changes.



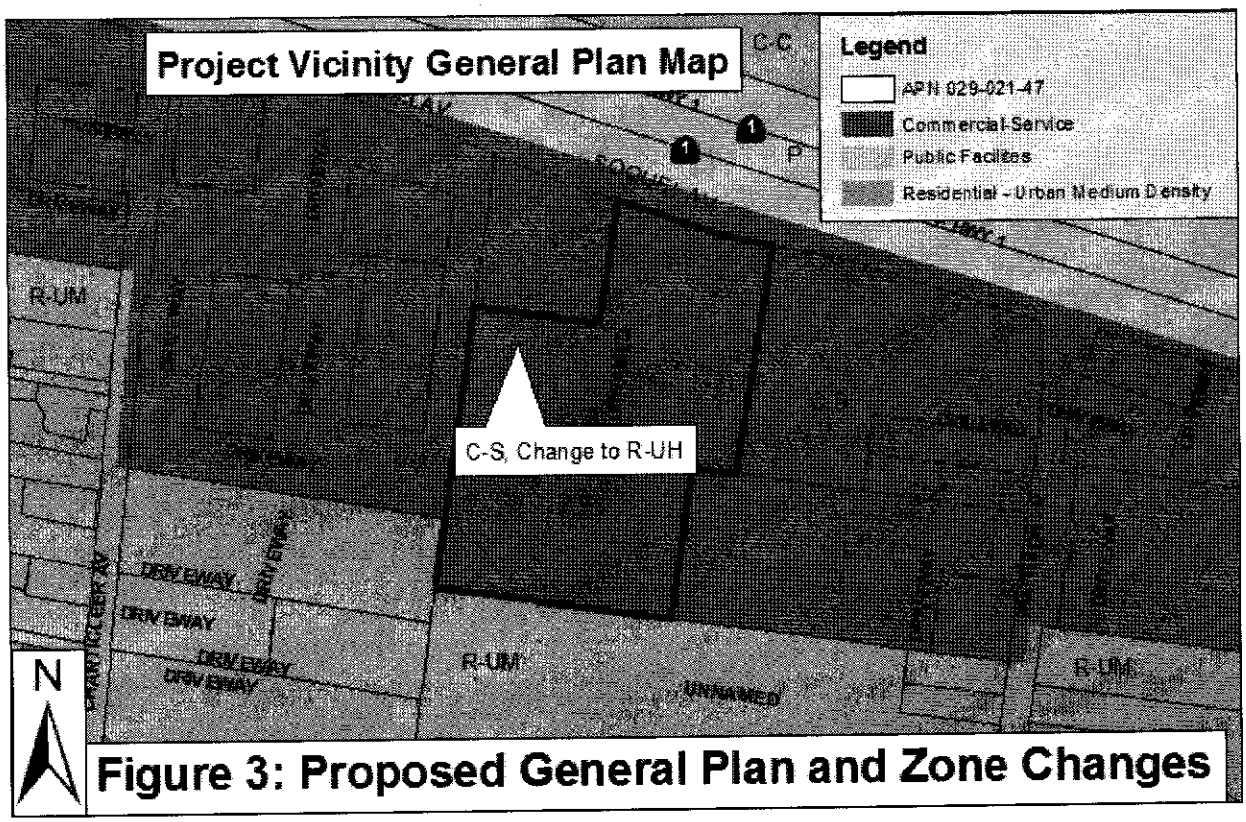


Figure 3: Proposed General Plan and Zone Changes

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Table 1 Proposed General Plan and Zone Changes for Assessor Parcel Number 029-021-47		
	Existing	**Proposed**
Zoning District	Light Industrial – (M-1)	Multi-Family Residential – 2,000 square foot minimum parcel size and Regional Housing Need Site RM-2-R
General Plan Land Use Designation	Service Commercial/Light Industry (C-S)	Residential - Urban High (R-UH)
General Plan Density and Minimum Parcel Size	R-UH currently allows 10.9 to 17.4 units per net developable acre with a 2,500 to 4000 square foot lot size requirement	R-UH would be amended to allow 20 units per net developable acre with a 2,000 square foot lot size requirement
Planned Unit Development	No	Yes

Source: County of Santa Cruz, 2008.

The PUD would add an additional affordable housing requirement of 25 percent of the total number of new dwelling units to future development of the proposed project site. Units meeting the 25 percent requirement would be considered "Enhanced Affordable" units. Enhanced Affordable refers to the additional 25 percent affordable units required. The Enhanced Affordable Units would have a maximum allowable sales price limited to be affordable to Enhanced Moderate income households unless otherwise required to be affordable at a lower income level. In addition, the Enhanced Affordable units would have a maximum allowable rental price that would be affordable to Enhanced Low income households unless otherwise required to be affordable at a lower income level. Affordable units would also be allowed to average 0.5 less bedrooms than the average number of bedrooms in the market rate units. In addition, all affordable units would not be less than 70 percent of the average size of the market rate units, unless a smaller unit size is allowed by the decision-making body at the time of project approval and with the written findings that a smaller size would provide housing units compatible with the remainder of the development, and that a larger unit size would impose a financial hardship on the project developer. All affordable units would be constructed on site and clustered if desired. Where garages are provided for market-rate units, garages would not be required for affordable units. See the attached PUD in Attachment A for the complete text.

Any future development proposal on the project site would be subject to Design Review. Development proposals would undergo a Design Review process and public hearing limited to design issues only. No discretionary permit would be necessary for the density or use of the site. All requirements of the Site, Architectural and Landscape Design Review (Chapter 13.11 of the County Code) or successor ordinance in effect at the time a Design Review Permit is deemed complete for processing would be applicable unless modified by the PUD. See the PUD contained in Attachment A for the complete text.

Access to the site is currently off of Soquel Avenue. The internal road or driveway improvements for the project are recommended to meet current standards depending on overall project layout (which is unknown at this time).

Under the PUD, the proposed project would be required to meet the following development standards:

Circulation and Parking Requirements

- Parking requirements: 1.5 spaces per studio or one bedroom unit; 2.0 spaces per two bedroom unit; 2.5 spaces per three bedroom unit; and 3.0 spaces per four bedroom unit. An additional 20 percent of the total number of parking spaces is required to accommodate guest parking.
- A reduction to the required on-site parking standard may be considered by the Board of Supervisors as part of the Design Review Permit. Any requests would include an on site parking management plan prepared by a traffic engineer.
- Circulation Requirements: All interior driveways would be a minimum of 20 feet in width for two-way circulation and 12 feet in width for one-way circulation. A minimum of 50-foot centerline radius on all access routes is required.
- Bicycle Storage: At least one lockable storage space would be provided for each dwelling unit. The lockable storage area may be located within the storage area.
- Accessibility: Developments must meet accessibility requirements of Title 24 of the Building Code or successor code in effect at the time the building permit application is submitted. Building permit applications would not be processed concurrently with the Level VII Design Review application.
- Accessible Parking: Accessible parking would be provided consistent with California State Law. This applies to the design of the parking spaces, location of the parking spaces, number of accessible spaces provided, and accessible path of travel through the development and to the public right-of-way.

Requirements for Structures

- Number of Stories: A maximum of three (3) stories as defined by the County Code exclusive of subsurface parking is allowed. Three stories are allowed except in areas restricted to a two-story maximum due to visual impacts (see Attachment A).
- Height: Height of structures may be up to 35 feet, exclusive of sub-surface parking, and the height of two-story structures may be up to 28 feet, exclusive of subsurface parking. In order to minimize grading on site, heights of buildings would be measured only from finished grade, and in no case would finished grade exceed natural grade by more than three (3) feet.

Developable Area Requirements

- Site Standards: Lot Coverage Site Standards and Floor Area Ratio Site Standards do not apply.

- Setbacks: The applicable minimum yard setbacks would be established from the perimeter of the property to the habitable structures and enclosed non habitable structures in aggregate and are as follows:

  1. Northern Property Line: 15 feet.
  2. Eastern Property Line: 5 feet
  3. Western Property Line: 5 feet
  4. Southern Property Line: 5 feet to single story structures, 15 feet to two-story structures, 20 feet to three-story structures

  For projects involving a tentative map, the interior setbacks and lot size shall be established through the Design Review process and are not subject to obtaining a Residential Development Permit under County Code Section 13.10.323(d)(A) or its successor.

- Site Design:

  1. In order to promote the development of smaller "villages" within the project site, and to prevent large, unbroken building frontages, buildings would be clustered into groups around the site.
  2. To the extent feasible, buildings would take advantage of passive solar opportunities for roof pitch and building orientation.
  3. Structures would be oriented and designed to create useable open space areas for each building cluster.
  4. The open space requirements specified in County Code Section 13.10.323(f) would not apply to this site. Instead, useable open space shall be provided on site as specified by the Design Review permit. If family units are proposed for this site, the developer is encouraged to include one larger open space area for active use.
  5. Screening would be installed along the eastern, western, and southern property lines consisting of masonry, wood fencing or a combination, and including vegetation, as appropriate to adjoining uses on either side of the property boundary, with a wooden fence preferred for the southern property line. Screening features other than vegetation would not exceed 6 feet in height.
  6. The street frontage at Soquel Avenue would include a single entrance, and would be characterized by articulated building facades or an appropriately and attractively designed sound barrier.
  7. The developer is encouraged to separate parking areas and driveways from open space and units in order to promote pedestrian safety.
  8. The developer is encouraged to incorporate significant landscape features in order to augment the livability of the project.

- Roadway Design:

  The following standards would apply to internal roadways on the project site and along the Soquel Avenue frontage:

  1. Paved road width for internal 2-way roads: Minimum 20 feet.
  2. Improvements: In Soquel Avenue, match the improvements to the west in front of Live Oak Business park which include a 69 foot right-of-way for the length of the site frontage, a 5 foot westbound bike lane, 12 foot travel lane, 11 foot center turn lane, 12 foot travel lane, 5 foot eastbound lane, 4.625 foot landscaping strip, and 6 foot sidewalk. The sidewalk would connect to the existing sidewalk to the west of the site.
  3. Secondary access to the site would be provided. This access may be Emergency Only, and could be negotiated as an easement with the owner of APN 029-021-59, directly to the west.

Building Design Standards

- It would be an objective of building design that the basic architectural design principles of balance, harmony, order and unity prevail, while not excluding the opportunity for unique design.
- Due to the required development density of this project, the requirements of Chapter 13.10 relating to distance between structures is not applicable.
- To reduce the potential bulk and mass of buildings, efforts would be made to provide articulation and architectural features and to provide a transition from the adjacent properties. This transition would be achieved by the following:
  1. Restricting buildings to 28 feet and two stories in height and set back a minimum of 15 feet adjacent to the southern property line.
  2. Requiring that buildings facing public roads to incorporate features such as step-back heights, articulation, variations in finishes, glazing, building separation and varied roof heights.

Drainage Improvements

Improvements to the existing drainage system along Soquel Avenue from the culvert that drains across the highway in front of the project site, up to the box culvert in Rodeo Gulch, are required to address drainage from the site and the existing sub-standard system. Storm water from the site would be directed to a new drainage system installed along Soquel Avenue and emptying into Rodeo Creek Gulch. All improvements would meet Department of Public Works (DPW) Design Standards, and would be constructed within the roadway prism connecting to the existing box culvert beneath Soquel Avenue and Highway 1.

Final engineered drainage details would be submitted to the County Planning and Public Works departments for both on- and off-site drainage work. Drainage plans would show that the release rate from the site would not exceed the pre-development

10-year storm level. Drainage from road improvements would be filtered and released into the new drainage system along Soquel Avenue.

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

III. ENVIRONMENTAL REVIEW CHECKLIST

A. Geology and Soils

Does the project have the potential to:

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

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

The project site is located outside of the limits of the State Alquist-Priolo Special Studies Zone. The project site is located approximately 8.8 miles southwest of the San Andreas fault zone, and approximately 5.6 miles southwest of the Zayante fault zone. The U.S. Geological Survey (2007) indicated that there is a 62 percent chance of at least one magnitude 6.7 or greater earthquake striking the San Francisco Bay region between 2007 and 2036. Therefore, the site will probably be subjected to at least one moderate to severe earthquake that will cause strong ground shaking. The October 17, 1989 Loma Prieta earthquake (magnitude 7.1) is considered to have been associated with the San Andreas fault system. The event was the second largest earthquake in central California history. Improvements to this parcel could be subjected to the effects of seismically induced ground shaking during a large magnitude earthquake. However, seismic related ruptures are not anticipated.

   B. Seismic ground shaking? ____ X ____ ____

The project site is located in one of the most seismically active regions in the United States. Significant earthquakes have occurred in the Santa Cruz area and are believed to be associated with crustal movements along a system of sub-parallel fault zones that generally trend in a northwesterly direction. The project site is located approximately 8.8 miles southwest of the San Andreas fault zone, and approximately 5.6 miles southwest of the Zayante fault zone.

Earthquake intensities vary throughout the area, depending upon numerous factors including the magnitude of the earthquake, the distance of the site from the causative fault, and the type of materials underlying the site. The U.S. Geological Survey (2007) indicated that there is a 62 percent chance of at least one magnitude 6.7 earthquake striking the San Francisco Bay region between 2007 and 2036. Therefore, the site will probably be subjected to at least one moderate to severe earthquake that will cause strong ground shaking. Therefore, the residential structures shall be supported on

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

post-tensioned slabs that are designed for expansive soils unless the geotechnical engineer specifies alternative designs. The slab foundations shall bear entirely on the properly prepared compacted structural fill or native soils. In no case shall a slab foundation bear upon more than one of these materials. A soils report shall be required to confirm the design criteria for the project site. The recommendations of the soils report shall be implemented to adequately mitigate for this potential hazard.

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

Liquefaction is the transformation of loose saturated silts and sands with less than 15 percent clay-sized particles from a solid state to a semi-liquid state. This occurs under vibratory conditions such as those induced by a seismic event. There is a low potential for liquefaction to occur at the site based on borings taken in the project vicinity by United Soils Engineering, Inc. (1999).

D. Landslides? ____ ____ X ____

The site contains minimal topographic relief (less than 10 percent slope). As a result, there is no indication that landsliding is a significant hazard at this site.

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 ____ ____

There is a potential risk from severe ground shaking. The recommendations noted in A-1- B above will be implemented to mitigate for this potential hazard. Therefore, no significant impacts are anticipated following mitigation.

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

There are no slopes that exceed 30% on the property. No significant impacts are anticipated.

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 best management practices and standard erosion control measures 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 (County Code

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

Chapter 16.22.060). The plan will include provisions for disturbed areas to be planted with groundcover and to be maintained to minimize surface erosion.

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

According to the Soil Survey of Santa Cruz County, California, there are indications of expansive soils in the project area. Elkhorn sandy loam, with 2 to 9 percent slopes has a moderate shrink-swell potential. A soils report shall be required to determine appropriate design criteria for the project site. The recommendations of the soils report shall be implemented to adequately mitigate for this potential hazard.

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

No septic systems are proposed. The project would connect to the County Sanitation District, and the applicant would be required to pay standard sewer connection and service fees that fund sanitation improvements within the District as a Condition of Approval for the project.

7. Result in coastal cliff erosion?				X

The project is not located in the coastal zone. No coastal cliff erosion would occur as a result of project implementation.

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

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

100-year flood hazard area.

3.	Be inundated by a seiche or tsunami?				X

The site is located at an elevation of approximately 110 to 115 feet above mean sea level approximately 1.5 miles from the coast. Therefore, impacts from tsumanis are not anticipated.

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 proposed project would obtain water from City of Santa Cruz Water Department and would not rely on private well water. Although the project would incrementally increase water demand, the City of Santa Cruz Water Department has indicated that adequate supplies are available to serve the project. However, a water main extension will be required, along with fire, domestic, irrigation meters and fire hydrants. Connections fees will be required per number and type of residential unit. Connection fees for irrigation will be calculated based on fixture points and/or gallon per minute demand. All public water facilities shall be installed within a designated utility easement per Santa Cruz Water Department Standard Specifications and Details. The project is not located in a mapped groundwater recharge area.

5.	Degrade a public or private water supply? (Including the contribution of urban contaminants, nutrient enrichments, or other agricultural chemicals or seawater intrusion).		X		

Runoff from this project may contain small amounts of chemicals and other household contaminants. No commercial or industrial activities are proposed that would contribute a significant amount of contaminants to a public or private water supply. The parking and driveway associated with the project would incrementally contribute urban pollutants to the environment; however, the contribution would be minimal given the size of the driveway and parking areas. Potential siltation from the proposed project will be mitigated through implementation of an Erosion Control Plan (see Geology and Soils). A silt and grease trap, and a plan for maintenance, will be required to reduce this impact to a less than significant level. In addition, the project would not contribute to seawater intrusion.

	Significant Or Potentially *Significant* Impact	Less than Significant with *Mitigation* Incorporation	Less than Significant Or No Impact	Not Applicable
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 located approximately one-quarter mile west of Rodeo Creek Gulch in the Arana-Rodeo watershed. The project site currently drains into Rodeo Creek Gulch via an open ditch located immediately east of the project site. The project proposes to construct a new drainage system along the south side of Soquel Avenue from the project site to Rodeo Creek Gulch. The entire drainage alignment would be located within the existing Soquel Avenue right-of-way (see Attachment E). The proposed project would comply with Chapter 16.22.070 (Runoff Control) of the County Code. The following measures shall be used for runoff control, and shall be adequate to control runoff from a 10-year storm:

(a) To the extent that onsite percolation is not sufficient, all runoff shall be detained or dispersed over non-erodible vegetated surfaces so that the runoff rate does not exceed the predevelopment level. Onsite detention may be required by the Planning Director where excessive runoff would contribute to downstream erosion or flooding. (Any policies and regulations for any drainage zones where the project is located will also apply.) Detention facilities included in future development shall be designed not to exceed predevelopment flows in order to avoid downstream effects.

(b) Any concentrated runoff that cannot be effectively dispersed without causing erosion, shall be carried in non-erodible channels or conduits to the nearest drainage course designated for such purpose by the Planning Director or to on-site percolation devices. Where water will be discharged to natural ground or channels, appropriate energy dissipaters shall be installed to prevent erosion at the point of discharge.

(c) Runoff from disturbed areas shall be detained or filtered by berms, vegetated filter strips, catch basins, or other means as necessary to prevent the escape of sediment from the disturbed area.

(d) No earth or organic material shall be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water.

(e) In an effort to reduce runoff, techniques such as minimizing site disturbance, minimizing proposed impervious areas, utilizing pervious surfacing, eliminating directly connected impervious areas, clustering development, etc., shall be implemented to the extent feasible.

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

Implementation of the above measures would reduce impacts to below a level of significance.

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 ____ ____

Currently, the drainage from the properties north of Highway 1 flows through a 36-inch culvert under Highway 1 followed by a combination of drainage ditches, vegetated swales, graded swales, concrete channels and underground storm drain pipes. The drainage makes its way through the subject property and then across multiple properties before it is finally discharged into Rodeo Creek Gulch through the outfall approximately 1,500 feet south of Highway 1. The project proposes to construct a new outfall into Rodeo Creek Gulch immediately south of Soquel Avenue to redirect storm water runoff from the properties north of Highway 1 that currently drain onto the project site. The following analysis was completed to determine if the capacity of the upstream reach from the current outfall would have the capacity to handle the redirected storm water runoff.

The Zone 5 Master Drainage Plan was used to quantify the existing drainage in Rodeo Creek Gulch from the reach beginning immediately north of Highway 1, to a point approximately 550 feet south of the current drainage outfall for the project area drainage basin. According to the Master Drainage Plan, the flow rates and capacities at points along Rodeo Creek Gulch are as shown in Table 2 below. Based on the data outlined in Table 2, the existing Rodeo Creek Gulch channel is capable of handling a 25-year storm event within the reach studied (see Attachment E).

Table 2
Flow Rate and Capacities at Points Along Upstream Reach of Rodeo Creek Gulch

Location of Measurement in Stream Reach	Channel Type	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)	Capacity (cfs)
Immediately north of Highway 1	Natural Channel	332	520	677	864	663
Approximately 150 feet south of Highway 1	Concrete Culvert	332	520	677	864	656
Approximately 1,450 feet south of Highway 1	Natural Channel	339	528	688	877	549
Approximately 2,000 feet south of Highway 1	Natural Channel	371	574	744	945	675

Notes: Q = The resistance of the bed of a channel to the flow of water in it.
cfs = Cubic Feet per Second.
10, 25, 50, and 100 = Storm Events for 10, 25, 50, and 100 Years.
Source: Ifland Engineers, 2008.

The project proposes to discharge storm water into Rodeo Creek Gulch generated from several properties located north of Highway 1 that currently drain across the

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project site. The discharge point would be relocated approximately 1,500 feet upstream from its current discharge point. This proposed improvement would be achieved by intercepting storm water at Soquel Avenue north of the project site, diverting it to Rodeo Creek Gulch through a new storm drain to be constructed along the Soquel Avenue right-of-way. Although the drainage pipe would be as much as 10 feet deep at the high point in the road, this route would not require the acquisition of an easement through private property.

All project runoff in excess of predevelopment levels for a 10-year storm event shall be detained on the site (See issue 7 above under Hydrology, Water Supply and Water Quality).

All runoff from parking and driveway areas shall go through water quality treatment prior to discharge from the site (e.g., outsloping driveways to drain to landscaped areas for filtering prior to discharge from the site). If structural treatment is proposed, a recorded maintenance agreement will be required. This agreement shall be signed, notarized, and recorded, and a copy of the recorded agreement shall be submitted to the County DPW.

The Developer shall provide permanent markings at each drainage inlet that reads "NO DUMPING-DRAINS TO BAY," or equivalent. The property owner will be responsible for maintaining these markings.

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

All runoff in excess of predevelopment levels for a 10-year storm event shall be detained on the site (see issue 7 above under Hydrology, Water Supply and Water Quality).

10. Otherwise substantially degrade water supply or quality? ____ X ____ ____

Silt and grease traps, and a plan for maintenance will be required to minimize the effects of urban pollutants. In addition, an Erosion Control Plan as specified in Section 16.22.060 of the County Code, and a Storm Water Pollution Prevention Plan will be required during construction. Because the proposed project would result in a land disturbance of one acre or more, a Construction Activities Storm Water General National Pollution Discharge Elimination System (NPDES) Permit shall be obtained from the State Water Resources Control Board. Construction activities include clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement.

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

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 lack of suitable habitat and the disturbed nature of the site make it unlikely that any special status plant or animal species occur in the area. In addition, offsite impacts to Rodeo Creek Gulch will be avoided by installing the drainage improvements from Soquel Avenue and entirely within the roadway prism above the ordinary high water mark.

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

The vast majority of the Nigh Lumber site is unvegetated. Ruderal vegetation is the only substantial vegetation type identified within the project area. Ruderal plant species include weedy non-native grasses, forbs and shrubs commonly found in disturbed places. Plants identified within the Nigh Lumber project site include fennel (*Foeniculum vulgare*), brome grasses (*Bromus hordeaceus*, *B. diandrus*), wild oats (*Avena* spp.), Italian ryegrass (*Lolium multiflorum*), English plantain (*Plantago lanceolata*), wild radish (*Raphanus sativus*), English ivy (*Hedera helix*), black mustard (*Brassica nigra*), cutleaf geranium (*Geranium dissectum*) and broadleaf filaree (*Erodium botrys*). The California Invasive Plant Council lists the majority of these species as invasive weeds (see Attachment B).

A potential seasonal wetland is located in a shallow linear drainage ditch located immediately east of the project site. This area appears to be a man-made feature excavated for the purpose of draining storm water off of the adjacent parcel into the storm drain system. The ditch contained approximately 3 to 6 inches of standing water at the time of the delineation site visit (Attachment B). A subsequent site visit by County Planning Department staff in September 2008 found the drainage ditch completely dry and devoid of vegetation. Dominant hydrophytic plant species in the seasonal wetland ditch included spikerush (*Eleocharis macrostachya*; OBL), curly dock (*Rumex crispus*; FACW-), tall flatsedge (*Cyperus eragrostis*; FACW), and watercress (*Rorippa nasturtium-aquaticum*; OBL). All of the plant species identified within this feature are indicative of wetlands with periods of prolonged inundation and/or

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

saturation during the growing season. Due to the presence of clay loam soils within the ditch, standing water persists for periods sufficient to support wetland vegetation. Although the drainage ditch contains some herbaceous wetland vegetation, it contains no valuable wildlife habitat due to its constant level of disturbance, urban setting, and isolated location (lack of connectivity to wildlife habitat areas). No wetlands or sensitive biotic communities were observed on the project site.

Although a wetland was delineated immediately east of the project site, it is not considered a waters of the U.S.; and therefore, would not be under the jurisdiction of the U.S. Army Corps of Engineers. Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water are generally not waters of the U.S. because they are not tributaries or they do not have a significant nexus to downstream traditional navigable waters. These geographic features may function as point sources (i.e., "discernible, confined, and discrete conveyances"), such that discharges of pollutants to other waters through these features could be subject to other Clean Water Act (CWA) regulations (e.g., CWA §§ 311 and 402)(U.S Army Corps of Engineers 2007).

Although wetlands are protected under the County of Santa Cruz Riparian Corridor and Wetlands Protection Ordinance (Chapter 16.30 of the County Code), no direct impacts would occur to the offsite wetland. In addition, the offsite drainage ditch does not meet the definition of wetland under Chapter 16.30 of the County Ordinance. The drainage ditch does not meet the definition of ephemeral stream, intermittent stream, or perennial stream, and is not considered a riparian corridor. Therefore, no wetland buffer will be required.

Improvements to the existing drainage system along Soquel Avenue from the culvert that drains across the highway north of the project site, up to the box culvert in Rodeo Creek Gulch, are required to address drainage from the site and the existing sub-standard system. Storm water from the site would be directed to a new drainage system installed along Soquel Avenue and emptying into Rodeo Creek Gulch. All improvements would meet Department of Public Works Design Standards, and would be constructed entirely within the roadway prism connecting to the existing box culvert beneath Soquel Avenue and Highway 1. All work during installation shall occur from Soquel Avenue. Construction equipment is not allowed to enter Rodeo Creek Gulch during project construction. All drainage work adjacent to Rodeo Creek Gulch shall be completed outside of the breeding season for migratory birds (February 15 through August 15).

No impacts to sensitive biotic communities are anticipated.

	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 an urbanized area and is surrounded by existing commercial, light industrial and residential development that currently generates nighttime lighting. There are no sensitive animal habitats 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	____

The proposed project would not significantly contribute to the reduction of the number of species of plants or animals. No sensitive wildlife species are known to occur on the project site (see C-1 and C-2 above). As a result, no project-related impacts are anticipated.

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.

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	____

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

The proposed project would not conflict with any adopted Habitat Conservation Plan.

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 site is not designated as a Timber Resource. No timber resources occur on the project site or in the project vicinity. No impacts would occur.

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

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

3. Encourage activities that result in the use of large amounts of fuel, water, or energy, or use of these in a wasteful manner?	____	____	X	____

The proposed project is a multi-family residential development. The project would not encourage the use of large amounts of fuel, water, or energy. The provisions of the PUD encourage energy efficient design.

4. Have a substantial effect on the potential use, extraction, or depletion of a natural resource (i.e., minerals or energy resources)?	____	____	____	X

The site does not contain any natural resources (i.e., minerals or energy resources).

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.

Highway 1 is a designated scenic corridor by both the County and the state, and the

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

project site is partially visible from Highway 1 through the sparse landscape strip along the south side of Highway 1 within the Caltrans right-of-way. However, because the project site is currently used for commercial storage of vehicles and for contractor storage, the site could be considered somewhat blighted. Although the project site is visible from Soquel Avenue, the County of Santa Cruz has not designated it as a scenic roadway. As outlined in the PUD (Attachment A), all buildings immediately facing Highway 1 would incorporate features such as step-back heights, articulation, variations in finishes, glazing, building separation and varied roof heights. No significant impact is anticipated.

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	____

See E-1 above for a complete discussion addressing this issue.

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 ridgeline?	____	____	X	____

The existing visual setting contains virtually no topographic relief. Therefore, minimal grading and alteration of the existing topography is anticipated. The site currently is used for storage of old vehicles and various types of equipment. The proposed project would be designed and landscaped so as to improve this setting. No significant impacts are anticipated.

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

The project would contribute an incremental amount of night lighting to the visual environment. However, the following project conditions will reduce this potential impact to a less than significant level:

(a) It shall be an objective of lighting design to relate to the site and building design and reduce off-site impacts.

(b) All site, building, security and landscape lighting shall be directed onto the site and away from adjacent properties. Light sources shall not be visible from adjacent properties. Light sources can be shielded by landscaping, structure, fixture design or other physical means. Building and security

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

lighting shall be integrated into the building design.

(c) All lighted parking and circulation areas shall utilize low-rise light standards or light fixtures attached to the building. Light standards to a maximum height of 15 feet are allowed.

Area lighting shall be high-pressure sodium vapor, metal halide, fluorescent, or equivalent energy-efficient fixtures.

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

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

F. Cultural Resources

Does the project have the potential to:

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

No structures are located on the property; and therefore, none are designated as historic resources on any federal, State or local inventory.

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

No archeological resources are known to occur or expected within the project area. However, the potential for archaeological resources exists within and adjacent to Rodeo Gulch. Therefore, construction of the drainage outfall proposed immediately south of Soquel Avenue shall occur entirely within the elevated roadway prism composed entirely of fill material.

As directed by the PUD, the project will comply with County Code Section 16.40.040 (see Attachment A).

With implementation of the above mitigation measures, no significant impacts to archaeological resources are anticipated.

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

As directed by the PUD, the project will comply with County Code Section 16.40.040 (see Attachment A).

	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	

A database search of the University of California Museum of Paleontology Specimen Search was conducted on August 16, 2007. No paleontological resources are known to occur within the project area. No impacts to paleontological resources are anticipated.

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	

The project proposes a General Plan amendment and rezone allowing the development of multi-family residential housing units. The transport, storage, use and disposal of hazardous materials are not being proposed by this project. Therefore, no significant hazard to the public would occur as a result of the proposed project.

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 September 4, 2008 list of hazardous sites in Santa Cruz County compiled pursuant to the specified code. However, a Phase I Environmental Site Assessment (ESA) was completed for the site by Ceres Associates, dated October 22, 2007 due to the presence of onsite hazardous materials (see Attachment F).

According to a previous Phase I ESA (November 1999), from at least 1937 to approximately 1963, the site was in agricultural use. Beginning in 1963 and ending around 1975, the site was used for vehicle storage and agricultural purposes. From 1975 until approximately 2008, the site has been used exclusively for vehicle and contractor storage.

Hazardous Materials

Hazardous materials observed on the site in 2007 included roofing cement, roof

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

coating, paint, oil, brickform antique release, brickform liquid release, tractor fluid, hydraulic fluid, concrete lacquer, brick sealer, waste oil, and a parts washer. These materials were not stored in secondary containment. Minor to moderate staining was observed on the soil and concrete beneath some of these materials. This observed staining and noted lack of secondary containment is consistent with observations made during the previous Phase I ESA in November 1999.

Storage Tank

One approximately 2,500-gallon storage tank was also located on the project site in 1999 and again in 2007. It appeared that the tank was used to store non-potable water. The tank appears to be a former motor fuel tank. Files were not found that indicated the presence of a former fuel underground storage tank (UST) on the site. Further, it is not likely that known historic uses of the project site would require a fuel UST. Therefore, it is not likely that the tank was originally in use as a UST on the site. The tank has been used to store non-potable water since at least 1999. Based on this use, it does not appear likely that the tank has significantly impacted the environmental quality of the project site.

Non-functioning Vehicles

Several non-functioning vehicles are stored on the site and contain fluids (e.g., oil, antifreeze, etc.) and batteries that have the potential to contaminate the site.

Sump

According to the November 20, 1999 Phase I ESA, a sump was formerly located on the western portion of the project site. However, it was reported that the sump was removed approximately 8 years ago. The exact location of the former sump is unknown, and no evidence of the sump was found.

Waste Oil Tank

One 55-gallon waste oil tank was observed on the project site.

Parts Cleaner

One automobile parts cleaner containing minimal solvent was observed on the project site. Staining or leaking was not observed on the concrete beneath the parts cleaner.

Based on the findings of the October 2007 Phase I ESA, the following mitigation measures shall be implemented to reduce significant impacts to below a level of significance:

- Prior to renovation or demolition, sampling shall be conducted to assess if asbestos is contained in the construction materials of the building. The California Health and Safety Code requires owners of structures with asbestos containing material (ACM) to notify tenants and employees that the building has ACM.
- All hazardous materials on the project site shall be stored in appropriate

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

secondary containment to prevent spills or leaks.

- Based on the surface staining near hazardous materials, the improper storage noted in the 1999 Phase I ESA, and the potential collection and drainage of motor fuel and oil by the sump formerly located on the project site, several soil borings and soil samples shall be taken to assess potential subsurface impacts.
- All fluids shall be drained and batteries removed from non-functioning vehicles on the project site and disposed of properly to prevent leaking and spilling.
- The waste oil tank shall be removed from the project site, if no longer in use, or, if the tank is not removed from the project site, it shall be stored in appropriate secondary containment to prevent further leaking and spilling.
- The automobile parts cleaner shall be removed from the project site, if no longer in use, and the remaining solvent shall be disposed of properly.

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 ____

The proposed project is not located within two miles of an airport. Watsonville Municipal Airport is the nearest airport to the project site located approximately 12 miles to the southeast in the City of Watsonville. No impacts are anticipated.

4. Expose people to electro-magnetic fields associated with electrical transmission lines? ____ ____ X ____

No electrical transmission lines are located within or adjacent to the project area. Therefore, no adverse impacts are anticipated.

5. Create a potential fire hazard? ____ ____ X ____

The project design incorporates all applicable fire safety code requirements and would include fire protection devices as required by the local fire agency.

6. Release bio-engineered organisms or chemicals into the air outside of project buildings? ____ ____ ____ X

The proposed multi-family residential development would not release bio-engineered organisms or chemicals into the air outside of project buildings.

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

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 following discussion is a summary of the Transportation Impact Analysis prepared by Fehr & Peers Transportation Consultants dated April 13, 2007 (Attachment C). As shown in Table 3, four intersections currently operate at acceptable levels. The 41st Avenue/Gross Road Intersection currently operates unacceptably (Level of Service [LOS] D AM peak and LOS E PM peak). Overall operations at the Soquel Avenue/Chanticleer Avenue intersection are acceptable, but the northbound left-turn movement operates at LOS F during the PM peak hour; however, peak-hour signal warrants are not met.

Background conditions include existing traffic volumes plus traffic generated from approved but not yet constructed or occupied projects and serve as the basis for identifying project impacts. As indicated in Table 3, four study intersections are projected to continue operating at acceptable levels (LOS C or better). The 41st Avenue/Gross Road intersection is projected to operate at unacceptable levels (LOS D and E for the AM and PM peak hours). Potential improvements to this intersection could include optimization of signal timings. Overall operations at the Soquel Avenue/Chanticleer Avenue intersection would remain acceptable, and the northbound left-turn movement would continue to operate at LOS F during the PM peak hour. Peak-hour signal warrants are not met at the Soquel Avenue/Chanticleer Avenue intersection.

The proposed project is expected to generate 741 daily trips, 52 AM peak-hour trips (10 inbound and 42 outbound), and 72 PM peak-hour trips (47 inbound and 25 outbound).

As shown in Table 3, four study intersections are projected to operate at acceptable levels (LOS C or better) with the addition of project traffic. The 41st Avenue/Gross Road intersection is projected to operate at unacceptable levels (LOS D or E). Overall operations at the Soquel Avenue/Chanticleer Avenue intersection would remain acceptable, and the northbound left-turn movement would continue to operate at LOS F during the PM peak hour. Peak-hour signal warrants are not met at the Soquel Avenue/Mattison Lane and Soquel Avenue/Chanticleer Avenue intersections.

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

Table 3
Intersection Levels of Service

Intersection	Peak Hour	Existing Conditions		Background Conditions		Project Conditions	
		Average Delay[1]	LOS[2]	Average Delay[1]	LOS[2]	Average Delay[1]	LOS[2]
Soquel Avenue/Soquel Drive	AM	22.7	C	22.9	C	23.2	C
	PM	22.6	C	23.1	C	23.7	C
Soquel Avenue/SR 1 SB Ramps	AM	19.1	B	19.1	B	19.5	B
	PM	20.5	C	20.8	C	21.3	C
Soquel Avenue/17th Avenue	AM	12.6	B	12.6	B	12.8	B
	PM	14.1	C	14.1	B	14.4	B
Soquel Avenue/Chanticleer Avenue	AM	4.9 (20.8)	A (C)	4.9 (21.1)	A (C)	5.1 (22.7)	A (C)
	PM	6.6 (50.6)	A (F)	6.8 (53.4)	A (F)	8.0 (68.1)	A (F)
41st Avenue/Gross Road	AM	40.7	D	40.9	D	43.0	D
	PM	65.7	E	66.0	E	67.6	E
41st Avenue/SR 1 SB Ramps	AM	19.3	B	19.4	B	19.3	B
	PM	16.8	B	17.4	B	17.6	B

Notes:
1. Whole intersections weighted average control delay expressed in seconds per vehicle calculated using methods described in the *2000 Highway Capacity Manual*. For side-street stop-controlled intersections, total control delay for the worst movement is presented in parenthesis.
2. LOS = Level of service. LOS calculations conducted using the Synchro level of service analysis software package.

Source: Fehr & Peers Transportation Consultants, 2007.

County and Capitola operating standards are used to determine impacts at Caltrans freeway ramp intersections maintained by Caltrans. Thus, impacts at the Soquel Avenue/State Route 1 (SR 1) SB Ramps intersection are determined using County standards, and impacts at the 41st Avenue/SR 1 SB Ramps intersection are determined using Capitola standards. Both jurisdictions have established a minimum acceptable operating level of LOS C for signalized intersections. LOS D operations are considered acceptable at County intersections where further improvements are considered infeasible.

Significant impacts at signalized County intersections are defined to occur when:

1. The addition of project traffic causes intersection operations to degrade from LOS D or better to LOS E or F, or
2. Project traffic is added to an intersection operating at LOS E or F, resulting in a one-percent increase in the volume-to-capacity ratio of the sum of all critical movements.

Significant impacts at unsignalized County intersections are defined to occur when:

1. The addition of project traffic causes intersection operations to degrade from LOS D or better to LOS E or F, and the peak-hour signal warrant from the Manual on Uniform Traffic Control Devices (MUTCD) is satisfied, or
2. Project traffic is added to an intersection operating at LOS E or F, and the peak-hour signal warrant from the MUTCD is satisfied.

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

Significant impacts to signalized Capitola intersections are defined to occur when:

1. The addition of project traffic causes intersection operations to degrade from LOS C or better to LOS D, E, or F, or
2. Project traffic is added to an intersection operating at LOS D, E, or F, resulting in a one-percent increase in the volume-to-capacity ratio of the sum of all critical movements.

Based on the project impact criteria listed above, the proposed project would have a less-than-significant impact at all study intersections. The project increases the volume-to-capacity ratio of the sum of all critical movements by less than one percent. Therefore, no roadway mitigation measures are required under project conditions.

2.	Cause an increase in parking demand which cannot be accommodated by existing parking facilities?			X	

The parking provided would be consistent with the requirements outlined in the PUD (Attachment A). The development of 1.5 spaces per studio and one bedroom unit, 2.0 parking spaces for a two-bedroom unit, 2.5 spaces for a three-bedroom unit, and 3.0 spaces for a four-bedroom unit. In addition, a minimum of 20 percent of the total residential parking spaces would be provided for on site guest parking in addition to the on site residential parking requirement. Thus, the project meets the code requirements for the required number of parking spaces; and therefore, new parking demand would be accommodated on site. No impacts are anticipated.

3.	Increase hazards to motorists, bicyclists, or pedestrians?			X	

The proposed project will comply with current plan line for Soquel Avenue 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		

The following discussion is a summary of the Transportation Impact Analysis prepared by Fehr & Peers Transportation Consultants dated December 6, 2007. Table 4 presents the level of service results under future conditions (Year 2025). Significant impacts were identified using the significance criteria described in H-1 above. Based on those criteria, significant impacts were identified at the Soquel Avenue/SR 1 southbound ramps and Soquel Avenue/Chanticleer Avenue intersections during the

PM peak hour. The project has a less-than-significant impact on the two other intersections that are projected to operate at unacceptable levels because the increase in critical volume-to-capacity ratio is below the one percent threshold.

The County's General Plan identifies planned improvements to its roadway network. No changes are proposed for the study area intersections, so the lane geometries and intersection controls were left unchanged.

Table 4
Future (Year 2025) Intersection Levels of Service

Intersection	Peak Hour	Future No Project Conditions		Future Plus Project Conditions			Future Plus Project with Mitigation Conditions		
		Average Delay[1]	LOS[2]	Average Delay[1]	LOS[2]	Change in Crit. V/C	Improvement	Average Delay[1]	LOS[2]
Soquel Avenue/Soquel Drive	AM PM	46.9 63.0	D E	48.5 65.2	D E	- +0.45%			
Soquel Avenue/SR 1 Southbound Ramps	AM PM	29.6 71.8	C E	30.4 75.9	C E	- +1.19%	Modify EB Approach	31.0 19.9	C B
Soquel Avenue/17th Avenue	AM PM	20.1 23.0	C C	20.7 24.0	C C	- -			
Soquel Avenue/ Chanticleer Avenue	AM PM	18.3 (100.8)[3] >180 (>180)	A (F) F (F)	24.9 (126.5) >180 (>180)	C (F) F (F)	- - - -	Signalize	7.2 8.5	A A
41st Avenue/Gross Road	AM PM	45.6 74.9	D E	47.6 76.6	D E	- +0.97%			
41st Avenue/ SR 1 Southbound Ramps	AM PM	46.6 50.0	D D	48.5 53.7	D D	- -			

Notes:
1. Whole intersections weighted average control delay expressed in seconds per vehicle calculated using methods described in the *2000 Highway Capacity Manual*. For side-street stop-controlled intersections, total control delay for the worst movement is presented in parenthesis.
2. LOS = Level of service. LOS calculations conducted using the Synchro level of service analysis software package.
3. Values in parentheses represent the delay on the worst-case maneuver.

Source: Fehr & Peers Transportation Consultants, 2007.

The following mitigation measures are proposed to reduce significant impacts to below a level of significance:

1. *Soquel Avenue/SR1 Southbound Ramps*: Intersection operations will be improved by modifying the eastbound lane configuration and signal timings. The eastbound approach will be re-striped to provide a dedicated left-turn lane and one through lane (from a shared left-turn/through lane and one through lane). The signal timings will be modified to provide protected phasing for the eastbound left-turn movement. No changes are proposed for other approaches. The applicant shall pay fair share fees to the County of Santa Cruz for the required intersection improvements.

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

2. *Soquel Avenue/Chanticleer Avenue*: Peak-hour signal warrants are met at the Soquel Avenue/Chanticleer Avenue intersection during both peak hours. Signalizing this intersection is currently in the County's plan for improvements along Soquel Avenue. The applicant shall pay fair share fees to the County of Santa Cruz for the required intersection improvements.

Implementation of the above outlined mitigation measures would reduce impacts to a less than significant level.

I. Noise

Does the project have the potential to:

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

The project would not create an increase in the existing noise environment. The existing uses on the property (light industrial) would likely generate more noise than the proposed residential development. No adverse impact is anticipated.

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

County General Plan Policy 6.9.1 requires all new development to conform with the Land Use Compatibility Guidelines. All new residential and noise sensitive land developments shall conform to a noise exposure standard of 60 dB L_{dn} (day/night average noise level) for outdoor noise and 45 dB L_{dn} for indoor noise. New development of land, which cannot be made to conform to this standard, shall not be permitted (County of Santa Cruz 1994).

The dominant source of vehicular noise in the area is the traffic on Soquel Avenue and Highway 1, which is located immediately north of the project site. A traffic analysis showed that the L_{dn} contribution due to vehicle traffic along Soquel Avenue and Highway 1 is 67 dB and 74 dB, respectively (see Table 5 and Attachment D). When both contributions are added together, the resultant L_{dn} noise level is 75 dB. This is within 1 dB of the onsite measurements, which is not considered a noticeable change in noise level.

Section IV.B.4 of the PUD addresses all potential noise impacts. No adverse noise impacts are anticipated.

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

Table 5
Existing Noise Levels

Monitor	Location (On-site)	Measured L_{dn}
L1	Approximately 35-feet south of the Soquel Avenue centerline, on the western property line, 12-feet above grade.	61 dB
L2	Approximately 35-feet sough of the Soquel Avenue centerline, on the eastern property line, 12-feet above grade.	74 dB
L3	Approximately 435-feet south of the Soquel Avenue centerline, approximately 230-feet east of the western property line, 15-feet above grade.	62 dB
S1	Approximately 35-feet south of the Soquel Avenue centerline, on the eastern property line, 5-feet above grade.	72 dB[1]
S2	Approximately 35-feet south of the Soquel Avenue centerline, on the eastern property line, 25 feet above grade.	74 dB[1]
S3	Approximately 240-feet sough of the Soquel Avenue centerline, on the eastern property line, 5-feet above grade.	51 dB[1]
S4	Approximately 240-feet south of the Soquel Avenue centerline, on the eastern property line, 25-feet above grade.	62 dB[1]

Note:
1. Estimated by an L_{eq} offset from monitor L1.
Source: Charles M. Salter Associates, Inc., April 2007.

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

(a) Noise generated during construction would temporarily increase the ambient noise levels for adjoining areas. However Section VI of the PUD includes noise control measures to address this issue. No significant noise impacts are anticipated.

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 (PM_{10}). Therefore, the regional pollutants of concern that would be emitted by the project are ozone precursors (Volatile Organic Compounds [VOCs] and

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

nitrogen oxides [NOx]), and dust.

The proposed project is expected to generate 741 daily trips, 52 AM peak-hour trips (10 inbound and 42 outbound), and 72 PM peak-hour trips (47 inbound and 25 outbound). The carbon monoxide (CO) thresholds outlined in Section 5.4 of the Monterey Bay Unified Air Pollution Control District (MBUAPCD) California Environmental Quality Act (CEQA) Guidelines would not be exceeded by the proposed project (MBUAPCD 2008). The proposed project would not cause or affect levels of service at intersections or road segments that would cause or substantially contribute to a violation of state or national Ambient Air Quality Standards (AAQS) for carbon monoxide.

Construction activities (e.g., excavation, grading, on-site vehicles) that directly generate 82 pounds per day or more of PM_{10} would result in a significant impact on local air quality if located nearby and upwind of sensitive receptors. Although project construction may result in a short-term, localized decrease in air quality due to generation of dust, the implementation of standard best management practices would reduce PM_{10} levels well below 82 pounds per day. The following mitigation measures will reduce construction-related emissions to a less than significant level.

- All active construction areas shall be watered at least twice daily. Frequency will be based on the type of operation, soil, and wind exposure.
- All grading activities will be prohibited during periods of high wind (over 15 mph).
- Chemical soil stabilizers shall be applied on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).
- Non-toxic binders (e.g., latex acrylic copolymer) shall be applied to exposed areas after cut and fill operations and hydroseeded areas.
- Haul trucks shall maintain at least 2'0" of freeboard.
- All trucks hauling dirt, sand, or loose materials shall be covered.
- Vegetative ground cover shall be installed in disturbed areas as soon as possible.
- Inactive storage piles shall be covered.
- Wheel washers shall be installed at the entrance to construction sites for all exiting trucks.
- Streets shall be swept if visible soil material is carried out from the construction site.
- A publicly visible sign shall be posted that specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the MBUAPCD shall be visible to ensure compliance with Rule 402 (Nuisance).

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

- Limit the area under construction at any one time (MBUAPCD 2008).

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, Air Quality above.

3. Expose sensitive receptors to substantial pollutant concentrations? _____ X _____ _____

There would be a short-term air quality impact from emissions generated during site preparation (including soil stabilization efforts) and building construction. Dust from grading and emissions from heavy equipment would incrementally increase emissions over the short-term. There would be a long-term incremental decrease in air quality resulting from vehicle emissions generated by the proposed project. However, this impact is not considered to be significant (See J-1 Air Quality Mitigation).

4. Create objectionable odors affecting a substantial number of people? _____ _____ X _____

The project is not expected to create objectionable odors. No impacts are anticipated.

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 _____

The project site is located within the Central Fire Protection District (CFPD) of Santa Cruz County. The site is located midpoint between Station 2 located at 3445 Thurber Lane, Santa Cruz, California and Station 3 located at 4747 Soquel Drive, Soquel. The Station 2 is located approximately 1.5 miles from the project site to the northwest. Station 3 is located approximately 1.5 miles from the project site to the northeast. There would be an incremental increase in demand for fire protection services with project implementation, but not sufficient to warrant additional personnel or equipment.

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
b. Police protection?	____	____	X	____

The project site is within the jurisdiction of the County of Santa Cruz Sheriff's Department located at 701 Ocean Avenue in Santa Cruz. The Sheriff's Department is located approximately 2.8 miles west of the proposed project site. However, the Soquel/Live Oak Sheriff's Service Center also serves a large area in the central part of the county, including the Summit Area, the townships of Soquel, Live Oak and Davenport and their surrounding areas. The Live Oak Service Center is located at 870-B 17th Avenue in Santa Cruz. Volunteers operate the station from 9 a.m. to 5 p.m. Monday through Friday, and on Saturdays from 10 a.m. to 2 p.m.

Response time depends on the character of the call, the availability of an officer, and the office's proximity to the site. Emergency response time to the project site is estimated at three minutes (for burglaries in progress or domestic violence) to two hours (for investigations of a non-emergency nature). The department also maintains a service agreement with the California Highway Patrol and the City of Capitola Police Department. No significant impacts are anticipated.

c. Schools?	____	____	X	____

The proposed project site is located within the Live Oak School District (LOSD). While the project represents an incremental contribution to the need for services, the increase would be minimal. School fees to be paid by the applicant would be used to offset the incremental increase in demand for school facilities.

d. Parks or other recreational activities?	____	____	X	____

The proposed project site is located within the jurisdiction of the County of Santa Cruz Department of Parks, Open Space and Cultural Services. While the project represents an incremental contribution to the need for services, the increase would be minimal. Park fees to be paid by the applicant would be used to offset the incremental increase in demand recreational facilities.

e. Other public facilities; including the maintenance of roads?	____	____	X	____

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

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

Please see response to B-7 of this Initial Study and Attachment E.

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 would connect to an existing municipal water supply. The City of Santa Cruz has determined that adequate supplies are available to serve the project with implementation of the following measures:

- High-efficiency toilets and washers shall be shall be installed in each residential unit.
- Extremely low volume irrigation shall be installed for all project landscaping (pers. comm.., Toby Godard, City of Santa Cruz Water Dept.).

The proposed project is located within the Rodeo Gulch impacted sewer basin in which the Santa Cruz County Sanitation District Board of Directors (Board) has placed development restrictions. No development shall occur until the development restriction is lifted or the following mitigation measures are implemented.

- A sewer extension, pump station and area-wide elevation study of the properties in the area that currently do not have sewer service. If the project engineer determines that the project parcel is the only parcel to be connected to a pump station, the pump station will be privately maintained and located on private property. Housing for any required on-site generator and controls shall match the architecture of the subdivision or complex. A response and maintenance manual shall be prepared by the developer, submitted to the Santa Cruz County Sanitation District for review and approval at the building permit phase.
- If it is necessary for the project to sewer via Mattison Lane, three segments of public sewer main downstream of the project site would experience capacity problems, and 816 linear feet of sewer shall be upgraded.
- If it is necessary for the project to sewer via Chanticleer Avenue, sewer capacity will become available following the planned upgrades for the 2009 construction season. Sewer connection via Chanticleer Avenue will not be available prior to completion of the upgrades.
- A sewer connection of $3,000 per individual dwelling unit will be required unless any of the units qualify by the Board as a) low income senior rental units, or b)

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

below average-income ownership units.

Implementation of the above measures prior to site development would reduce impacts to a less than significant level.

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

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

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

The water mains serving the project site provide adequate flows and pressure for fire suppression. According to the CFPD, fire flow requirements are 1,000 gallons per minute for the project. Fire hydrants are to be located within 250-feet of the property along the CFPD access route (Soquel Avenue). The CFPD shall review and approve the project plans during Design Review to assure 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 would meet County standards with implementation of the following measures:

The roadways are required to be designated as fire lanes, and painted with a red curb with "Fire Lane No Parking" in contrasting color every 30 feet on the top of the red curb. If the roadway is 27 feet wide or less, both sides of the street/roadway shall be painted; for roadways between 27 and 35 feet in width, the roadway curbs shall be painted on one side, and for roadways 36 feet and wider no red curb is required. All cul-de-sacs shall be fire lane, red curbed. In addition, there shall be two ways into and out of the project site thereby requiring two approaches onto Soquel Avenue.

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

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

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
8. Result in a breach of federal, state, and local statutes and regulations related to solid waste management?			X	

The proposed project would not breach federal, state or local statutes and regulations related to solid waste management.

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.

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

Riparian Exception

A Riparian Exception would be granted by the PUD for the installation and maintenance of drainage outlets and energy dissipaters within Rodeo Creek Gulch.

Under Chapter 16.30.060 (d) of the County Code, specific findings must be made in order to allow a Riparian Exception. These findings in relation to the installation and maintenance of drainage outlets and energy dissipaters are presented below:

- That there are special circumstances or conditions affecting the property;

  One special circumstance affecting this parcel is the County's Housing Element requirement to designate parcels across the County for higher density housing. This parcel has been identified and selected by the Board of Supervisors as appropriate for rezoning and high-density use. Drainage outlets and energy dissipaters would be needed to drain offsite storm water currently draining onto the project site from the north. Drainage improvements would be constructed within the Soquel Avenue right-of-way from the project site to Rodeo Creek Gulch. The site currently drains to an outfall in Rodeo Creek Gulch located approximately 1,500 feet downstream of the proposed outfall. Drainage would be kept to predevelopment levels. Installation of these improvements would not interfere with wildlife movement or impact water quality.

- That the exception is necessary for the proper design and function of some permitted or existing activity on the property;

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

The approval of the PUD would permit development at a density of 20 dwelling units per acre necessitating the installation of a detention basin to reduce storm water runoff into Rodeo Creek Gulch. However, a drainage outfall into Rodeo Creek Gulch would still be necessary to redirect storm water flows from the north side of SR 1. Development of the project site would not be possible without the construction of these improvements. The site currently drains to Rodeo Creek Gulch. Drainage would be kept to predevelopment levels. Installation of these improvements would not interfere with wildlife movement or impact water quality.

- That the granting of the exception will not be detrimental to the public welfare or injurious to other property downstream or in the area in which the project is located;

  The exception would allow for the installation of the drainage outlets and energy dissipaters. The construction of drainage improvements, including a detention basin, would maintain downstream flow levels at pre-development levels preventing downstream impacts.

- That the granting of the exception, in the Coastal Zone, will not reduce or adversely impact the riparian corridor, and there is no feasible less environmentally damaging alternative; and

  The proposed project is located outside of the Coastal Zone.

- That the granting of the exception is in accordance with the purpose of this chapter, and with the objectives of the General Plan and elements thereof, and the Local Coastal Program Land Use Plan."

  The Riparian Exception would be consistent with the General Plan amendment and zone change proposed under the project. The Riparian Exception conditions will be incorporated into the PUD that is being proposed as part of this project.

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

	Significant Or Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Or No Impact	Not Applicable
4. Have a potentially significant growth inducing effect, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	

Although the project proposes a General Plan amendment and zone change, the authorization of 99 multi-family residences would not result in a potentially significant direct growth inducing effect. The project proposes a maximum development density of 20 dwelling units per usable acre on the project site. The project would rezone the parcel and amend the General Plan from "Service Commercial/Light Industry (C-S)" and "Light Industrial (M-1)" to "Multi-Family Residential (RM-2)" and "Urban High Residential" with a PUD.

The Regional Housing Need "R" Combining District (Chapter 13.10.477 and 478) proposes to increase the supply of affordable housing in the County of Santa Cruz by designating sites for development at 20 units per acre. Development projects on sites designated with the Regional Housing Need "R" Combining District are required to provide 40 percent of the units as affordable housing. In addition, the Regional Housing Need "R" Combining District shall only be applied to those parcels identified by the Board of Supervisors in advance of housing element adoption, as part of the housing element, or as part of the implementation of housing element policies. For sites to be designated under the Regional Housing Need "R" Combining District, the site must:

(a) Be located within the Urban Services Line; and

(b) Be identified by the County to satisfy the Regional Housing Need. A private landowner may not apply for designation under the Regional Housing Need "R" Combining District without the concurrence of the Board of Supervisors prior to application.

Therefore, the density of the surrounding development would not be affected by the proposed project. No growth inducing impacts are anticipated.

Although the proposed project proposes improvements to drainage and sewer facilities in the project vicinity, the improvements are currently planned by DPW and will be implemented with or without the proposed project. The current obstacle to implementing the improvements is the lack of funding. Therefore, the proposed project would not result in potentially significant indirect growth inducing impacts.

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.

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

M. Non-Local Approvals

Does the project require approval of federal, state, or regional agencies? Yes X No ____

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

References

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ATTACHMENT A

ORDINANCE GRANTING A PLANNED UNIT DEVELOPMENT AS ALLOWED BY SANTA CRUZ COUNTY CODE RELATING TO ESTABLISHMENT OF DEVELOPMENT STANDARDS FOR APN: 029-021-47

Environmental Review Inital Study
ATTACHMENT 1, 1 of 16
APPLICATION 07-0414

Nigh PUD
9/22/2008

ORDINANCE NO. _____

ORDINANCE GRANTING A PLANNED UNIT DEVELOPMENT AS ALLOWED BY SANTA CRUZ COUNTY CODE RELATING TO ESTABLISHMENT OF DEVELOPMENT STANDARDS FOR APN: 029-021-47

The Board of Supervisors of the County of Santa Cruz ordains as follows:

SECTION I

A Planned Unit Development is hereby granted to the property located on the south side of Soquel Avenue about 575 feet from the intersection of Mattison Lane and Soquel Avenue, also known as the Nigh Lumber Site, and shown on Exhibit A attached hereto and subject to the conditions shown on Exhibit B, attached hereto.

SECTION II

This ordinance shall become effective 31 days after adoption.

PASSED AND ADOPTED this _____ day of _____ 2008 by the Board of Supervisors of the County of Santa Cruz by the following vote:

AYES:	SUPERVISORS
NOES:	SUPERVISORS
ABSENT:	SUPERVISORS
ABSTAIN:	SUPERVISORS

_____
Chairman of the Board of Supervisors

Attest: _____
Clerk of the Board

APPROVED AS TO FORM:

_____
County Counsel

Environmental Review Inital Study
ATTACHMENT 1, 2 of 16
APPLICATION 07-0414

EXHIBIT A

Planned Unit Development
Conditions of Approval

Property located on the south side of Soquel Avenue about 575 feet west of the intersection of Soquel Avenue and Mattison Lane; Live Oak Planning Area.

APN: 029-021-47

Environmental Review Initial Study

ATTACHMENT 1, 3 of 16
APPLICATION 07-0414

EXHIBIT B

Planned Unit Development
Conditions of Approval

Property located on the south side of Soquel Avenue about 575 feet west of the intersection of Soquel Avenue and Mattison Lane; Live Oak Planning Area.

APN: 029-021-47

This site contains 5.0 useable (developable) acres, equating to 100 dwelling units, of these, 15 affordable units are required under County Code Section 17.10.030(b)(1) and 25 affordable units are required by this Planned Unit Development (PUD). Development of this site is by-right in that the use and density for the site are not discretionary. A Level VII design review hearing is required.

I) General Site Standards

A) All requirements and standards contained in Section 13.10.475 through 13.10.478 of the County Code (Regional Housing Needs "R" Combining District) shall be applicable unless expressly modified by the conditions of this Planned Unit Development.

B) Site Standards. The following development standards supersede the development standards in the County Code. Unless specifically defined below, developments must meet all required development standards in the County Code at the time the Design Review application is deemed complete. All of the site standards contained within Chapter 13.10 regarding the Multi-Family (RM) zone district shall be applicable unless modified by this Planned Unit Development.

1) Circulation and Parking Requirements

(a) Parking Requirements.

(i) 1.5 spaces per studio or one-bedroom unit;

(ii) 2.0 spaces for two-bedroom unit;

(iii) 2.5 spaces for three-bedroom unit; and

(iv) 3.0 spaces per four-bedroom unit.

(v) An additional 20% of the total number of parking spaces to accommodate guest parking.

(vi) A reduction to the required on-site parking standard may be considered by the Board of Supervisors as part of the Design Review Permit. Any request shall include an on-site parking management plan prepared by a traffic engineer.

(vii) The maximum number of required parking spaces that may be compact in size is specified in County Code Section 13.10.553 (e) or its successor ordinance.

(viii) The standards for off-street parking facilities as outlined in County Code Section 13.10.554 at the time of application is deemed complete shall apply.

(b) Circulation Requirements. All interior driveways shall be a minimum of 20 feet in width for two-way circulation and 12 feet in width for one-way circulation. A minimum 50-foot centerline radius on all access routes is required.

(c) Bicycle Storage. At least one lockable storage space for bicycle storage shall be provided for each dwelling unit. This lockable storage area may be located within the storage area, as required in III.D.1(d).

(d) Accessibility. Developments must meet accessibility requirements of Title 24 of the Building Code or successor code in effect at the time the Building Permit application is submitted. Building Permit applications will not be processed concurrently with the Level VII Design Review application.

(i) Accessible parking shall be provided consistent with California State Law. This applies to the design of the parking spaces, location of the parking spaces, number of accessible spaces provided, and accessible path of travel through the development and to the public right-of-way.

2) Requirements for Structures

(a) Number of Stories. A maximum of three (3) stories as defined by the County Code exclusive of subsurface parking is allowed.

(i) Three stories are allowed except in areas restricted to a two-story maximum due to visual impacts. These areas are delineated in Exhibit A and are described below in Section I.B.4(c)(i).

(b) Height. Height of three-story structures may be up to 35 feet, exclusive of sub-surface parking, and the height of two-story structures may be up to 28 feet, exclusive of subsurface parking. In order to minimize grading on site, heights of buildings shall be measured only from finished grade, and in no case shall finished grade exceed natural grade by more than 3 feet.

(i) For any structure proposed to be within 2 feet of the maximum height limit, the building plans must include a roof plan and a surveyed contour map of the ground surface, superimposed and extended to allow height measurement of all features. Spot elevations shall be provided at points on the structure that have the greatest difference between ground surface and the highest portion of the structure above. This requirement is in addition to the standard requirement of detailed elevations and cross-sections and the topography of the project site, which clearly depict the total height of the proposed structure above preconstruction natural grade and finished grade.

3) Developable Area Requirements

(a) Site Standards. Lot Coverage Site Standards and Floor Area Ratio Site Standards do not apply.

(b) Setbacks. The following setbacks are established from the perimeter of the property to the structures in aggregate and are as follows:

(i) North: 15 feet

(ii) East 5 feet

(iii) West: 5 feet

(iv) South: 5 feet to single story structures, 15 feet to two-story structures, 20 feet to three-story structures.

(v) For projects involving a tentative map , the interior setbacks and lot size shall be established through the Design Review process and are not subject to obtaining a Residential Development Permit under County Code Section 13.10.323(d)(1)(A) or its successor ordinance.

(c) Site Design

(i) In order to promote the development of smaller "villages" within the project site, and to prevent large, unbroken building frontages, buildings shall be clustered into groups around the site.

(ii) To the extent feasible, buildings should take advantage of passive solar opportunities for roof pitch and building orientation.

(iii) Structures shall be oriented and designed to create useable open space areas for each building cluster.

(iv) The Open Space requirements specified in County Code Section 13.10.323e(6)F shall not apply to this site. Instead, useable open space shall be provided on site as specified by the Design Review permit. If family units are proposed for this site, the developer is encouraged to include one larger open space area for active use.

(v) Screening shall be installed along the eastern, western, and southern property lines consisting of masonry, wood fencing or a combination, and including vegetation, as appropriate to adjoining uses on either side of the property boundary, with a wooden fence preferred for the southern property line. Screening features other than vegetation shall not exceed 6 feet in height.

(vi) The street frontage at Soquel Avenue shall include a single entrance, and should be characterized by articulated building facades or an appropriately and attractively designed sound barrier.

(vii) The developer is encouraged to separate parking areas and driveways from open space and units in order to promote pedestrian safety.

(viii) The developer is encouraged to incorporate significant landscape features in order to augment the livability of the project.

(d) Roadway Design. The following standards shall apply to internal roadways on the project site and along the Soquel Avenue frontage:

(i) Paved road width for internal two-way roads: Minimum 20'

(ii) Improvements: On Soquel Avenue, match the improvements to the west, in front of Live Oak Business Park which include a 69 foot right-of-way for the length of the site frontage, a 5 foot westbound bike lane, 12 foot travel lane, 11 foot center turn lane, 12 foot travel lane, 5 foot eastbound bike lane, 4.625 foot landscaping strip, and 6 foot sidewalk. The sidewalk shall connect to the existing sidewalk to the west of the site.

- When planting the landscaping strip, street trees shall conform to Redevelopment Agency standards, and plantings shall be arranged such that a METRO transit shelter could be incorporated at a future date.

(iii) Secondary access to the site must be provided. This access may be Emergency Only, and could be negotiated as an easement with the owner of APN 029-021-59, directly to the west.

4) Building Design Standards

(a) It shall be an objective of building design that the basic architectural design principles of balance, harmony, order and unity prevail, while not excluding the opportunity for unique design.

(b) Due to the required development density of this project, the requirements of Chapter 13.10 relating to distance between structures is not applicable.

(c) To reduce the potential bulk and mass of buildings, efforts shall be made to provide articulation and architectural features and to provide a transition from the adjacent properties. This transition shall be achieved by the following:

(i) Restricting buildings to 28 feet and two stories in height and set back a minimum of 15 feet adjacent to the southern property line.

(ii) Requiring that buildings facing public roads incorporate features such as step-back heights, articulation, variations in finishes, glazing, building separation and varied roof heights.

II) Project Review

A) Entitlements. All entitlements, with the exception of the building permit application review shall be processed concurrently at Level VII, subject to the processing provisions of 18.10.210, 18.10.332, and 18.10.211.

B) Tentative Map. If a tentative map approval is required, it must be included in the application. A Residential Development Permit, normally required by Section 13.10.323(d)(1)(A) is not required.

1) Development that includes approval of a Tentative Map is subject to the provisions of the Subdivision Map Act and Chapter 14.01. Where a tentative map is proposed, the public hearing shall be expanded to address findings necessary under the Subdivision Map Act. Wherever possible the environmental review performed at the time this PUD was adopted will be utilized in the processing of the Tentative Map unless the Environmental Coordinator determines that additional California Environmental Quality Act (CEQA) review is required based upon the available information.

III) Affordable Housing

A) Affordability Level. All development proposals for this parcel are required to provide a minimum of forty percent (40%) of the total number of units as affordable:

1) A minimum of 15% of the 100 units shall be affordable under the requirements for all development projects in Chapter 17.10.030(b)(1).

2) An additional minimum of 25% of the 100 units shall be affordable under the requirements for Enhanced Affordable units as described in Chapter 17.10.030(b)(6). For

fractional numbers in the 25% Enhanced Affordable category, affordable housing obligation will be derived by rounding to the nearest whole number, such that 0.5 will be rounded up.

3) For the purpose of this PUD the following terms shall have the following meanings:

(a) "Enhanced Affordable" refers to the additional 25% affordable units required. These units may be rented at Enhanced Low Income levels or sold at Enhanced Moderate Income levels.

(i) For Enhanced Affordable units, the income and assets of owner-occupant households shall not exceed the limits for an Enhanced Moderate income household, and for tenant households, shall not exceed the limits for an Enhanced Low income household, unless more stringent limits are required by funding sources.

(b) "Enhanced Low Income" means a household earning up to 100% of median income. Rental pricing for units designated as affordable to Enhanced Low Income households is based on 80% of median income, as adjusted for household size.

(c) "Enhanced Moderate Income" means a household earning up to 150% of median income. Sales pricing for units designated as affordable to Enhanced Moderate Income households is based on 120% of median income, as adjusted for household size

B) Financial Liability

1) In the event that a developer believes that the affordable housing requirements for a project proposed for this site renders the project financially infeasible, the developer may request relief from a proportional amount of the affordability requirements. That request shall be submitted to the Planning Director with all supporting information, including the development pro forma for the project. The Planning Director shall analyze that request and make suitable recommendations to the Board of Supervisors. In the event that the Board finds that the developer has provided evidence that fulfillment of the affordable housing requirements renders the project financially infeasible, the Board shall grant an increase in the allowed unit resale price, above the price restrictions contained in Sections 17.10.030(b)(1) and 17.10.030(b)(6) of the County Code, in an amount equal to that required to render the project financially feasible. In the event that such price modifications are granted, the developer shall grant the County Redevelopment Agency the option to purchase units at the revised sales price for the purpose of writing them down to suitable levels of affordability, consistent with the intent of this PUD.

C) Participation Agreement

1) Prior to Building Permit issuance or prior to filing of the Final Map, if one is required, the developer shall enter into a Certification and Participation Agreement with the County of Santa Cruz to meet the Affordable Housing Requirements specified by Chapter 17.10 of the County Code and as noted in Section III.A.1 and 2.

D) Affordable Unit Standards

1) The following standards supersede the standards of the County Code and Affordable Housing Guidelines regarding affordable units. Where not superseded by the provisions below, affordable units shall be comparable to market rate units and must meet the requirements of Chapter 17.10 of the County Code and the Affordable Housing

Guidelines and shall be subject to all affordable housing standards, with the following exceptions.

(a) The size of affordable units may be smaller than market rate units. At a minimum, the average size of the affordable units must be 70% of the average size of the market rate units (see County Code Section 17.10.032(a)(4)).

(b) The affordable units may average 0.5 of a bedroom less than the average number of bedrooms per unit in the market rate units.

(c) Affordable units may be clustered on-site.

(d) Where garages are provided for market rate units, garages are not required for affordable units. Where garages are not provided for any unit, that unit (market rate or affordable unit) shall have a minimum of 218 cubic feet of private storage space per unit which shall be accessed outside the unit and may not encroach into the required parking space dimensions.

E) Applicability of Density Bonus

1) Density Bonus provisions do not apply to developments meeting the minimum 40% requirements of the Regional Housing Need Combining District.

2) For projects eligible for concessions under State density bonus law due to an appropriate incremental increase in the number of affordable units as set forth in State law beyond those required by the Regional Housing Need Combining District, a project developer may request additional concessions as set forth in Chapter 17.12. No increase in the number of units on the site is allowed.

IV) Design Review

A) Public Hearings

1) Development proposals shall undergo a Design Review process and public hearing limited to design issues only. No discretionary permit is required for the density or use of the site. For development proposals under these "by-right" provisions, applicants must apply for a Level VII Design Review, which requires review at public hearing by the Planning Commission and Board of Supervisors. The Design Review Permit is valid for a maximum of two (2) years. The building permit shall be issued within the two year period for the Design Review Permit to be exercised.

(a) Requests for an extension of time for the Design Review Permit shall be processed as a Level VII permit review. The permit may be extended for one year up to five (5) times for a total permit life of seven (7) years.

B) Development Standards

1) All requirements of the Site, Architectural and Landscape Design Review (Chapter 13.11) or successor ordinance in effect at the time a Design Review Application is deemed complete for processing shall be applicable unless modified by this PUD.

2) All applicable requirements and standards of the Zoning Regulations (Title 13, Chapter 13.10) and Environmental and Resource Protection Regulations (Title 16) in effect at the time a Design Review Application is deemed complete for processing shall apply unless modified by this PUD.

3) All future development on the site shall comply with the requirements of the traffic study prepared by Fehr and Peers dated April 13, 2007, or an update thereof.

4) All future development on the site shall comply with the requirements of the noise study prepared by Charles M. Salter Associates dated April 24, 2007, included as Exhibit C, or an update thereof.

5) Improvements to the existing drainage system along Soquel Avenue from the culvert that drains across the highway in front of the project site, up to the box culvert in Rodeo Gulch, are required to address drainage from the site and the existing sub-standard system. Stormwater from the site shall be directed to a new drainage system installed along Soquel Avenue and emptying into Rodeo Gulch. All improvements shall meet Department of Public Works (DPW) Design Standards, and shall be constructed within the roadway up to the existing box culvert beneath Soquel Avenue and Highway 1. Alternative drainage proposals will require an amendment to this PUD.

   (a) A Riparian Exception is granted by this PUD for installation and maintenance of drainage outlets and energy dissipaters in Rodeo Gulch under the following conditions:

      (i) No disturbance is allowed below the average high-water mark of Rodeo Gulch.

      (ii) Prior to issuance of the final building permit, drainage plans shall be reviewed and approved by both DPW Drainage and Environmental Planning.

      (iii) Prior to issuance of the final building permit, the applicant shall provide the County a copy of the California Department of Fish and Game (CDFG) 1602 permit, or a statement from the CDFG that no permit is required.

C) Minor Variations

1) Minor variations to this permit that do not affect the overall concept or density may be approved by the Planning Director at the request of the applicant or staff.

D) Level VII Design Review Submittal Requirements

1) A Geotechnical Report shall be prepared for the site. Four copies of the report shall be submitted to the County for review at the time of project application and accepted prior to the application being determined complete. All requirements and recommendations of the approved report shall be incorporated into the project design. A Plan Review letter shall be submitted as part of the Design Review submittal and Building Permit Application submittal. All future development on the site shall comply with the requirements of the geotechnical report prepared by a licensed geotechnical engineer.

2) Preliminary Architectural and Site Plans

   (a) Preliminary architectural and site plans, prepared by a licensed architect, meeting the standards established by the Planning Department for multi-family residential application submittal, shall be submitted. The plans shall incorporate, but not be limited to, all requirements contained in this PUD.

   (b) The site plan shall clearly delineate all useable and non-usable areas, including but not limited to:

      (i) Noise Buffer. The area of noise concern and an appropriate noise buffer area must be shown on the site plan. Please refer to the April 2007 report by Charles

M. Salter Associates for guidelines regarding the required buffer and noise-reducing construction techniques.

- All interior spaces must meet County noise standards, but may also include operable windows.
- Exterior open space areas shall be sheltered by two or three story structures or by an adequate sound wall in order to reduce noise impacts.
- A soundwall at the Soquel frontage is not preferred, and if proposed should be designed in such a way as to incorporate vegetation, articulation, and visual interest.

3) Utilities, Roads and Services

(a) Preliminary engineered improvement plans shall be submitted to the Planning Department for all roads, curbs and gutters, storm drains, erosion control, and other improvements proposed or required by this PUD. Form and content of the plans shall meet the standards established by the Planning Department for multi-family residential application submittal.

(i) Preliminary improvement plans shall meet the following requirements:

- All improvements shall be prepared by a registered civil engineer and shall meet the requirements of the County of Santa Cruz Design Criteria except as modified herein. Plans shall also comply with applicable provisions of Title 24 (Accessibility) of the State Building Code.
- Preliminary drainage details including existing and proposed contours, plan views and centerline profiles of all driveway improvements, complete drainage calculations and all volumes of excavated and fill soils. This includes off-site work as described in Section IV. B. 5.
- Preliminary grading plans must be submitted at time of application. An objective of the project design shall be to minimize the grading on site and off site to the maximum extent possible. This includes designing the grading and foundations to follow existing topography as much as possible. The grading plans shall include existing and proposed contours, plan views and centerline profiles of all driveway improvements, locations, and heights of all retaining walls, preliminary drainage design, grading cross sections through proposed building pads, and all volumes of excavated and fill soils. This includes all on-site and off-site work. In no case shall final finished grade exceed 3' above pre-construction existing grade.
- Preliminary Sanitation plans shall be submitted to DPW for all sanitary improvements proposed or required by this PUD, either on site or off site.

(ii) All road plans shall comply with all requirements of the DPW Road Engineering and shall be consistent with the County's Design Criteria and any adopted Plan Line.

(iii) A sign plan indicating the location and size of all signs on the site shall be submitted. The signs shall be consistent with the provisions of this PUD.

V) Final Map Requirements and Timing.

If the project includes a Map, the following requirements shall be met prior to the final filing:

A) Drainage. Final engineered drainage details shall be submitted to the County Planning and Public Works departments for both on- and off-site drainage work. Drainage plans shall show that the release rate from the site will not exceed the pre-development 10-year storm level. Drainage from road improvements shall be filtered and released into the new drainage system along Soquel Avenue. A Construction Activities Stormwater General National Pollutant Discharge Elimination System (NPDES) Permit shall be obtained from the State Water Resources Control Board.

B) Roads. Final engineered road improvement plans shall be submitted to the County Planning and Public Works departments for both on- and off-site road improvements.

C) Recorded Conditions. Proof must be submitted that the conditions of all required permits (such as Design Review, NPDES) have been recorded in the official records of the County Recorder.

D) Affordable Housing. The developer must enter into an Affordable Housing Participation Agreement with the County of Santa Cruz.

E) Fees. All applicable in-lieu fees shall be paid.

1) Unless otherwise satisfied by meeting the requirements of County Code Chapter 15.01 or its successor ordinance, park dedication in-lieu fees shall be paid for each dwelling unit. The fees in effect at the time of filing of a Final Map, if applicable, shall be paid. Units reserved for low and moderate-income purchasers shall be exempt from this fee.

VI) Building Permit Requirements and Timing:

Prior to the issuance of any building permit, all of the following conditions shall be met, some of which may have been met at the Final Map Stage:

A) Plans shall be consistent with the Design Review approved project and all requirements of this PUD.

B) Final engineered drainage details shall be submitted to DPW Drainage for both on–site and off-site drainage work.

1) The allowable release rate from the site shall be limited to the 10-year predevelopment flow rates or less based on the assessment performed by Ifland Engineers dated August, 2008. The safe overflow paths for the proposed mitigation system shall be described and analyzed, and techniques such as minimizing site disturbance, minimizing impervious areas, utilizing pervious surfacing, eliminating directly connected impervious areas, clustering development, etc shall be considered.

2) All runoff from parking and driveway areas shall go through water quality treatment prior to discharge from the site.

3) Depending on the nature of the proposed development DPW staff may inspect the construction of the drainage related items.

4) Zone 5 fees will be assessed on the net increase in impervious area due to the development project. Semi-pervious surfaces will be charged at a 50% rate.

C) Final engineered road improvement plans shall be submitted to the County for both on-site and off-site road improvements.

D) Proof that the conditions of all required permits (such as Design Review, Tentative Map) and all required Declarations of Restriction and Statements of Acknowledgment have been recorded in the official records of the County Recorder shall be submitted to the Planning Department prior to the issuance of Building Permits.

E) All applicable in lieu fees shall be paid

1) Unless otherwise satisfied by meeting the requirements of County Code Chapter 15.01 or its successor ordinance, park dedication in-lieu fees shall be paid for each dwelling unit. The fees in effect at the time of building permit issuance or filing of a Final Map, if applicable, shall be paid.

2) Unless otherwise satisfied by meeting the requirements of County Code Chapter 15.04 or its successor ordinance, Child Care Development fees shall be paid for each dwelling unit. The fees in effect at the time of building permit issuance or filing of a Final Map, if applicable, shall be paid.

3) Transportation improvement fees shall be paid for each dwelling unit. The fees in effect at the time of building permit issuance or filing of a Final Map, if applicable, shall be paid. A credit may be allowed for installation of improvements off-site that are part of the Capital Improvement Program.

4) Roadside improvement fees shall be paid for each dwelling unit. The fees in effect at the time of building permit issuance or filing of a Final Map, if applicable, shall be paid. A credit may be allowed for installation of improvements off-site that are part of the Capital Improvement Program.

5) A written statement signed by an authorized representative of the school district in which the project is located confirming payment in full of all applicable developer fees and other requirements lawfully imposed by said school district in which the project is located shall be submitted to the Planning Department prior to building permit issuance. The applicant/developer is advised that the development may be subject to inclusion in a Mello-Roos Community Facilities.

F) Plan review letters shall be obtained from the technical report authors indicating that the plans comply with the County approved technical reports and all of their recommendations have been incorporated into the project plans.

G) All requirements of the Central Fire Protection District shall be met with respect to access, turnarounds, fees, water availability and design features.

H) The units shall be connected for sewer service to the Sanitation District. All regulations, conditions and hookup charges of the Sanitation District shall be met. Currently the site is not connected to the sewer lines and off-site improvements will be required to access either the main line in Mattison Lane, or in Chanticleer Avenue. Final engineered plans shall be submitted complying with all requirements and standards of the Sanitation District, as specified in Section IX.

1) Payment equivalent to the required flow metering and odor control equipment will be collected at the time sewer connection permits are obtained.

I) All units shall be served by the Santa Cruz Water District. All requirements of that water district including the payment of connection charges shall be met. Engineered improvement plans for all water line extensions required by the Santa Cruz Water District shall be submitted for the review and approval of the water agency. Off site improvements may be required.

J) Final engineered plans shall be submitted complying with all requirements and standards of the Santa Cruz Water District.

K) The developer shall enter into the Affordable Housing Participation Agreement with the County.

L) One (1) "construction/security trailer" (maximum 12 feet by 60 feet) is allowed on the site during construction. The size and location of the unit conforming to all yard setbacks contained in the PUD shall be shown on the plot plan. Compliance with Section 13.10.683 or any successor ordinance is required. A building permit is required for installation of the construction trailer.

M) Any signs shall comply with Section 13.10.580 or any successor ordinance and the location and design shall be reviewed and approved as part of the Design Review process. The following signs are allowed:

1) A non-illuminated temporary sign pertaining to the sale, lease or rental of a dwelling and limited to six square feet in size or less.

2) A permanent identification sign, in-directly illuminated, of 12 square feet or less.

N) Prior to the final inspection or clearance of the building permit, all of the site improvements shown on the approved building permit plans and Design Review Approval shall be installed/ implemented.

VII) Construction Phase Requirements

A) Prior to any site disturbance or physical construction on the subject property the following condition shall be met:

1) Pre-Construction Meeting: In order to ensure that the mitigation measures are communicated to the various parties responsible for constructing the project, prior to any disturbance on the property the applicant shall convene a pre-construction meeting on the site. The following parties shall attend: applicant, grading contractor supervisor, and Santa Cruz County Environmental Planning staff. The receiving site for any exported fill will also be identified and County approved grading permits presented.

B) All work adjacent to or within a County road shall be subject to the provisions of Chapter 9.70 of the County Code, including obtaining an encroachment permit where required. Where feasible, all improvements adjacent to or affecting a County road shall be coordinated with any planned County-sponsored construction on that road. An Encroachment Permit from DPW shall be obtained for any work performed in the public right-of-way. All work shall be consistent with the DPW Design Criteria unless otherwise specifically excepted by this PUD.

C) No land clearing, grading or excavating shall take place between October 15 and April 15 unless a separate winter grading approval is granted by the Planning Director, which may or may not be granted.

D) No land disturbance shall take place prior to issuance of building permits (except the minimum required to install required improvements, provide access for County required tests or to carry out work required by the conditions of an entitlement permit).

E) 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 human remains of any age or any artifact or other evidence of an archaeological resource or a Native American cultural site which reasonably appears to exceed 100 years of age is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.100, shall be observed.

F) To minimize noise and nuisance impacts on surrounding properties during construction, the owner/applicant shall or shall have the project contractor, comply with the following measures during all construction work:

1) All construction shall be limited to the time between 7:30 am and 4:30 pm weekdays unless a temporary exception to this time restriction is approved in advance by County Planning to address and emergency situation; and

G) The applicant shall designate a disturbance coordinator and a 24-hour contact number shall be conspicuously posted on the job site, and visible from Soquel Avenue. The disturbance coordinator shall record the name, phone number, and nature of all complaints received regarding the construction site. The disturbance coordinator shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry.

VIII) Mitigation Monitoring Program

A) The mitigation measures listed under this heading have been incorporated in the conditions of this approval in order to mitigate or avoid significant effects on the environment. As required by Section 21081.6 of the California Public Resources Code, a monitoring and reporting program for the mitigations is hereby adopted as a condition of approval. The purpose of this monitoring is to ensure compliance with the environmental mitigations during implementation and operation. Failure to comply with the conditions contained within the PUD, including the terms of the adopted mitigation monitoring program, may result in the revocation of the PUD pursuant to section 18.10.462 of the Santa Cruz County Code.

IX) Mitigation Measures

A)

B)

C)

Exhibit C

Environmental Noise Feasibility Study
by Charles M. Salter Associates, Inc,
Dated April 2007

See Attachment D to the Initial Study

ATTACHMENT B

DELINEATION OF WETLANDS AND WATERS OF THE U.S. SUBJECT TO SECTION 404 JURISDICTION FOR THE NIGH LUMBER AFFORDABLE HOUSING PROPERTY, PREPARED BY ECOSYSTEMS WEST CONSULTING GROUP, APRIL 2008

Delineation of Wetlands and Waters of the U.S. Subject to Section 404 Jurisdiction for the Nigh Lumber Affordable Housing Property

Prepared For:

Matt Johnson
Planning Department
County of Santa Cruz
801 Ocean Street, Room
Santa Cruz, CA 95060

Prepared By:

EcoSystems West Consulting Group
819 ½ Pacific Avenue
Santa Cruz, CA 95062

Contact: Justin Davilla

April 2008

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1.0 INTRODUCTION

1.1 Project Background

The Nigh Lumber Affordable Housing Project (Project Area) covers approximately 7.7 acres and is located at 5940 Soquel Avenue in Santa Cruz, Santa Cruz County, California (Figure 1). It is bounded to the east and west by commercial properties, and by residential housing and an outdoor plant nursery to the south.

On April 4, 2008 EcoSystems West biologist Justin Davilla conducted a routine wetland delineation to determine the presence of potential wetlands and "other waters" subject to federal jurisdiction under Section 404 of the Clean Water Act within the Project Area. This report presents the results of this delineation.

1.2 Regulatory Background

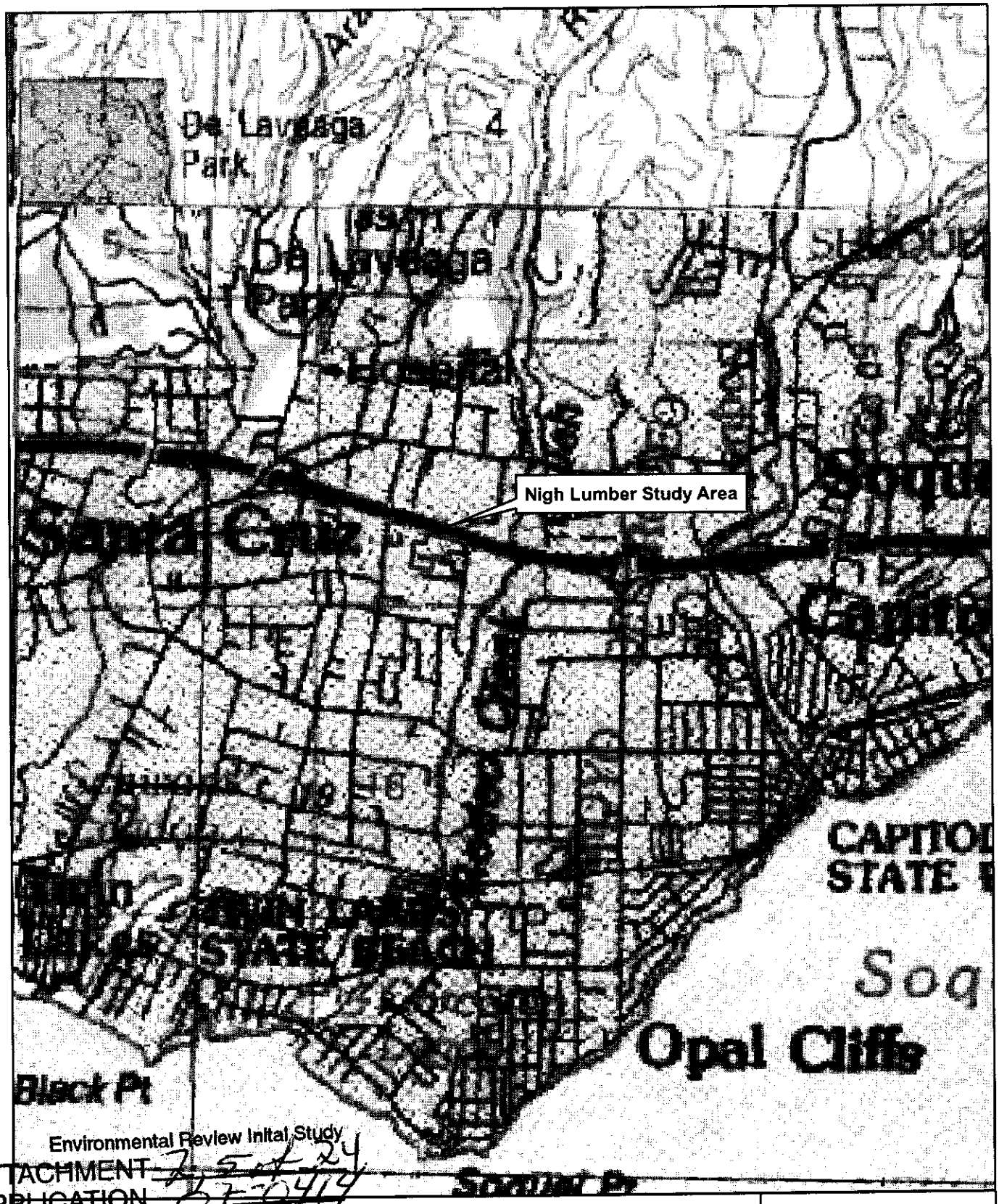
Section 404 of the Clean Water Act

Section 404 of the Clean Water Act gives the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Corps) regulatory and permitting authority regarding the discharge of dredged or fills material into "navigable waters of the United States". Section 502(7) of the Clean Water Act defines navigable waters as "waters of the United States, including territorial seas." Section 328 of Chapter 33 in the Code of Federal Regulations defines the term "waters of the United States" as it applies to the jurisdictional limits of the authority of the Corps under the Clean Water Act. A summary of this definition of "waters of the U.S." in 33 CFR 328.3 includes (1) waters used for interstate and foreign commerce including all waters subject to tides; (2) interstate waters and wetlands; (3) "other waters" such as intrastate lakes, rivers, streams, and wetlands affecting interstate and foreign commerce; (4) impoundments of waters; (5) tributaries of waters; (6) territorial seas; and (7) wetlands adjacent to waters. Therefore, for the purpose of determining Corps jurisdiction under the Clean Water Act, "navigable waters" as defined in the Clean Water Act are the same as "waters of the U.S." defined in the Code of Federal Regulations above.

The limits of Corps jurisdiction under Section 404 as given in 33 CFR Section 328.4 are as follows: (a) *Territorial seas:* three nautical miles in a seaward direction from the baseline; (b) *Tidal waters of the U.S.:* high tide line or to the limit of adjacent non-tidal waters; (c) *Non-tidal waters of the U.S.:* ordinary high water mark or to the limit of adjacent wetlands; (d) *Wetlands:* to the limit of the wetland.

Section 328.3 of the Federal Code of Regulations defines wetlands as:

> *"Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."* (EPA, 40 CFR 230.3 and CE, 33 CFR 328.3)



Environmental Review Inital Study
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Figure 1

Nigh Lumber Affordable Housing Wetland Delineation Project Area Location

Nigh Lumber Affordable Housing Project Area Boundary

0 0.25 0.5 1 Miles

N

EcoSystems West Consulting Group

The delineation study determined the presence or absence of wetland indicators used by the Corps in making a jurisdictional determination. The three criteria used to delineate wetlands are the presence of: (1) hydrophytic vegetation, (2) wetland hydrology, and (3) hydric soils. According to the Corps Manual:

> *"....[E]vidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland delineation."*

2.0 METHODS

Prior to conducting field surveys, available reference materials were reviewed, including the 1980 Soil Survey of Santa Cruz (USDA, Soil Conservation Service(SCS)/Natural Resources Conservation Service (NRCS)), the Soquel USGS 7.5' quadrangle map, National Wetland Inventory maps, and available aerial photographs of the site. A focused evaluation of indicators of wetlands and waters was performed in the Project Area on April 4, 2008. The methods used in this study to delineate jurisdictional wetlands and waters are based on the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Corps Manual; Environmental Laboratory 1987). The routine method for wetland delineation described in the Corps Manual was used to identify areas potentially subject to Corps Section 404 jurisdiction within the Project Area. A general description of the Project Area, including plant communities present, topography, and land use was also generated during the delineation visit. The methods for evaluating the presence of wetlands and other waters of the United States employed during the site visit are described in detail below.

2.1 Potential Section 404 Wetlands

Data on vegetation, hydrology, and soils collected at sample points during the delineation site visit were recorded on standard Corps data forms. Once an area was determined to be a potential jurisdictional wetland, its boundaries were delineated using a resource grade Trimble GPS unit and mapped onto an aerial photograph. The acreage of potential jurisdictional wetlands was measured digitally using ArcGIS software. Indicators described in the Corps Manual that were used to make wetland determinations at each sample point in the Project Area are summarized below.

Vegetation

Plant species identified on the project site were assigned a wetland status according to the U.S. Fish and Wildlife Service list of plant species that occur in wetlands (Reed 1988). This wetland classification system is based on the expected frequency of occurrence in wetlands as follows:

OBL	Always found in wetlands	>99% frequency
FACW(±)	Usually found in wetlands	67-99%
FAC	Equal in wetland or non-wetlands	34-66%
FACU	Usually found in non-wetlands	1-33%
NL	Not listed (upland)	<1%

Plants with OBL, FACW, and FAC classifications are classified as hydrophytic vegetation in the Corps Manual methodology. The hydrophytic vegetation criterion is met when greater than 50 percent of the dominant plant species have an indicator status of OBL, FACW, and/or FAC. Dominant herbaceous plant species are those having 20 percent or more relative areal cover.

Hydrology

The Corps jurisdictional wetland hydrology criterion is satisfied if an area is inundated or saturated for a period sufficient to create anoxic soil conditions during the growing season (minimum of 18 consecutive days in the Monterey Bay Area). Evidence of wetland hydrology can include direct evidence ("primary indicators") such as visible inundation or saturation, drift lines, and surface sediment deposits (including algal mats), or indirect evidence ("secondary indicators") such as oxidized root channels and the FAC-neutral test. If secondary indicators are used to make a determination, at least two secondary indicators must be present to conclude that an area has adequate wetland hydrology. Primary and secondary hydrology indicators were used to determine if areas surrounding each sample point in the Project Area satisfied the Corps' hydrology criterion.

Soils

The Natural Resource Conservation Service (NRCS) defines a hydric soil as:

> *"A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part."*
>
> (Federal Register July 13, 1994, US Department of Agriculture, Natural Resource Conservation Service.)

Soils formed over long periods of time under wetland (anaerobic) conditions often possess characteristics that indicate they meet the definition of hydric soils. Hydric soils generally have a characteristic low matrix chroma, designated 0, 1, or 2, used to identify them as hydric. Chroma designations are determined by comparing a soil sample with a standard Munsell soil color chart (GretagMacbeth 2000). Soils with a chroma of 0 or 1 are considered hydric; however, some upland forest and grassland soils may also have dark (black), low chroma colors. Soils with a chroma of 2 must also have redoximorphic features (mottles) to be considered hydric. Soil profiles at each sample point in the Project Area were described to include horizon depths, color, redoximorphic features, and texture to determine if the soils satisfy the Corps' criteria for hydric soils. The NRCS manual *Field Indicators of Hydric Soils in the United States* (USDA, NRCS, 2002) was also used as a guide for determining hydric soils in the Project Area.

2.2 Lakes, Ponds and Streams/ "Other Waters" of the U.S.

Areas that are inundated for sufficient duration and depth to exclude growth of hydrophytic vegetation, such as lakes and ponds, or convey water, such as streams, are also subject to Section

404 jurisdiction. In the Central California Coast, these "other waters" can include intermittent and ephemeral streams, as well as lakes, and rivers. The Project Area was concurrently evaluated for the presence of "other waters" at the time of the delineation site visit.

Areas delineated as "other waters" are characterized by an ordinary high water (OHW) mark, defined as:

> *...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the characteristics of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*
>
> Federal Register Vol. 51, No. 219,
> Part 328.3 (d). November 13, 1986.

"Other waters" are identified in the field by the presence of a defined river or stream bed, a bank, and evidence of the flow of water, or by the absence of emergent vegetation in ponds or lakes. Corps jurisdiction of waters in non-tidal areas extends to the ordinary high water (OHW) mark.

2.3 Areas Exempt from Section 404 Jurisdiction

Some areas that meet the technical criteria for wetlands or waters may not be jurisdictional under the Clean Water Act. Included in this category are some man-induced wetlands, which are areas that have developed at least some characteristics of naturally occurring wetlands due to either intentional or incidental human activities. Examples of man-induced wetlands include, but are not limited to, irrigated wetlands, stock ponds, drainage ditches excavated in uplands, and dredged material disposal areas.

In addition, some isolated wetlands and waters may also be considered outside of Corps jurisdiction as a result of the Supreme Court's decision in *Solid Waste Agency of Northern Cook County (SWANCC) v. United States Army Corps of Engineers* (531 U.S. 159 (2001)). Isolated wetlands and waters are those areas that do not have a surface or groundwater connection to, and are not adjacent to a navigable "Waters of the U.S.", and do not otherwise exhibit an interstate commerce connection. In the most recent Supreme Court *Rapanos v. United States* (547 U.S. 715 (2006)) decision, the Court recommended further restrictions on federal jurisdiction over wetlands and required that a "significant nexus" test be applied to those wetlands and "waters" which are not navigable waters. A memorandum issued in June 2007 provides guidance to the Corps and EPA for implementing the Supreme Court's significant nexus test. The *Rapanos* decision and the SWANCC decision may be applicable to this Project Area if any of the wetlands or seeps are considered not to have a direct connection or significant nexus with navigable waters.

3.0 PROJECT AREA DESCRIPTION

The Project Area is approximately 7.7 acres located at 5940 of Soquel Avenue, in the city of Santa Cruz, California (Figure 1). The site elevation is approximately 110 feet above Mean Sea Level. The majority of the Nigh Lumber Property consists of portable storage facilities, discarded appliances, heavy equipment, and non-operating vehicles. A significant portion of the property currently operates as a roofing supply business. Sparse ruderal vegetation consisting of weedy grasses and forbs are interspersed throughout the site. No other natural vegetation communities are located within the Project Area. The topography of the site is almost entirely flat with a narrow man-made drainage situated in the center of the property angled northwest to southeast towards Rodeo Creek Gulch. This feature was inundated by several inches of stagnant water at the time of the delineation site visit. A disorganized network of narrow dirt and gravel roads traverse the property providing access to storage containers. The County of Santa Cruz is investigating the property as a potential site for moderate/high density affordable housing.

Vegetation

The vast majority of the Nigh Lumber site is unvegetated. Ruderal vegetation is the only significant plant community type identified within the Project Area. Ruderal plant species include weedy non-native grasses, forbs and shrubs commonly found in disturbed places. Plants indentified within the Nigh Lumber Project Site include fennel (*Foeniculum vulgare*), brome grasses (*Bromus hordeaceus*, *B. diandrus*), wild oats (*Avena* spp.), Italian ryegrass (*Lolium multiflorum*), English plantain (*Plantago lanceolata*), wild radish (*Raphanus sativa*), English ivy (*Hedera helix*), black mustard (*Brassica nigra*), cutleaf geranium (*Geranium dissectum*) and broadleaf filaree (*Erodium botrys*). The majority of these species are listed as invasive weeds by the California Invasive Plant Council (Cal-IPC).

Hydrology

The principal natural hydrological sources for the Project Area are precipitation and surface runoff from adjacent lands. Surface water appears to sheet naturally into a ditch wetland located in the center of the property and into additional drainage ditches along Soquel Drive.

Soils

The Santa Cruz County Soil Survey (USDA 1980) identifies one soil map units within the Project Area. An additional soil type, non-native landfill, is not described by the survey.

- Elkhorn sandy loam, 2 to 9 percent slopes
- Non-native landfill

The Soil Survey descriptions of these mapping units are presented below with indication of whether the soils are classified as hydric or not according to the Hydric Soils List for Santa Cruz County (USDA 1992).

Elkhorn Sandy Loam, 2-9 percent slopes. The Elkhorn series consists of very deep, well drained soils formed in old alluvium and in marine deposits. Elkhorn soils are found on marine terraces with slopes of 0-50 percent. This soil type is often used for growing specialized agricultural crops such as brussel sprouts, strawberries, artichokes, broccoli, and hay. Uncultivated areas are typically dominated by annual grasses and forbs. The surface layer is very dark grayish brown fine sandy loam extending 20 inches or more below the ground surface, while the underlying material is a light brown sandy clay loam. This soil type is not classified as hydric by the NRCS (USDA 1992).

Non-Native Landfill. Much of soil material at the Nigh Lumber site consists of non-native gravelly to rocky fill material. This soil was likely imported to reduce erosion and tire ruts caused by large vehicle traffic, and to serve as the foundation for buildings and storage facilities. As a result, a large portion of the Nigh Lumber Project Area contains at least several inches of non-native soil material. Due to the thickness and compaction of this soils type, it was difficult to asses the depth of fill material on the site.

4.0 RESULTS

Vegetation, soils, and hydrology data collected during the delineation site visit are reported on standard Corps data forms in Appendix A. Potential jurisdictional areas are described in the following sections and shown on the enclosed maps in Appendix B. Photographs of Project Area including sample points and wetland features are shown in Appendix C.

This report identified all areas that met the 1987 Corps Manual criteria as wetlands or possessed a discernable ordinary high water mark and could be classified as "waters of the United States". This report provides the additional information necessary to make recommendations to the Corps on those areas that are potentially jurisdictional and those which are not.

4.1 Potential Section 404 Wetlands

Seasonal Wetland/ Drainage Ditch

In general, seasonal wetlands occur in shallow topographic depressions that are only periodically inundated or saturated during the rainy season. These wetlands typically have shorter hydroperiods than perennial wetlands such as springs and marshes, and are supported by a combination of direct precipitation, surface runoff from adjacent uplands, and seasonal fluctuations in the water table. One potential seasonal wetland was situated in shallow linear drainage ditch in the center of the Nigh Lumber property (Appendix B). The ditch contained approximately 3 to 6 inches of standing water at the time of the delineation site visit and appeared as though it would be completely dry during the dry summer months.

Dominant hydrophytic plant species in the seasonal wetland ditch included spikerush (*Eleocharis macrostachya*; OBL), curly dock (*Rumex crispus*; FACW-), tall flatsedge (*Cyperus eragrostis*; FACW), and watercress (*Rorippa nasturtium-aquaticum*; OBL). All of the plant species identified within this feature are indicative of wetlands with periods of inundation and/or saturation of several months or more.

Wetland hydrology indicators observed in the wetland ditch generally consisted of primary indicators which included direct evidence of inundation and/or soil saturation, a preponderance of hydrophytic vegetation, and evidence of hydric soil formation. Secondary indicators observed included oxidized root channels, satisfaction of the FAC-neutral test, and "other" indicators such as depressional topography. Hydric soil indicators in the sampled seasonal wetland consisted of a combination of low chroma colors and redoximorphic characteristics such as mottling and oxidized root channels.

Atypical Situation/Problem Areas

The primary hydrologic sources for the seep wetland appear to be from precipitation and surface runoff. However, the ditch appears to have been originally constructed in uplands to drain the Nigh Lumber property. Due to access restrictions to neighboring properties, it was not immediately evident whether this ditch has a direct surface or ground water connection with Rodeo Gulch Creek. Lacking a significant nexus to navigable waters of the U.S., this feature would not be subject to Section 404 jurisdiction. Culverts located within the Nigh Lumber Property linking several sections of this ditch provide a reasonable inference that water from this feature may eventually enter Rodeo Gulch via additional culverts beneath the neighboring plant nursery and Mattison Lane to the east. However, a review of aerial photographs did not offer irrefutable evidence of such a connection.

Wetland Boundary Determination

Wetland boundaries were determined in the field by the predominance of hydrophytic vegetation, namely spikerush, watercress, and tall flatsedge, the presence of low chroma soils with oxidized rhizospheres and shifts in topography. Seasonal wetland problem areas which require observations of secondary indicators of wetland hydrology, subtle changes in plant species composition, or slight breaks in topography were not observed within the Nigh Lumber Project Area.

4.2 Lakes, Ponds and Streams/ "Other Waters" of the U.S.

No "other waters" of the U.S. are located within the Project Area Boundary. Rodeo Creek Gulch is located approximately 500 feet to the east and should not be impacted by the proposed development.

4.3 Areas Exempt from Section 404 Jurisdiction

None of the features identified by this wetland delineation are likely to be exempt from Section 404 due to either the *SWANCC* or *Rapanos* Supreme Court decisions. The seasonal wetland/drainage ditch indentified in this report is expected to have a hydrological connection to navigable "Waters of the U.S." due to a presumed nexus with Rodeo Gulch Creek, a first order tributary of the Monterey Bay. According to the "significant nexus criteria", a hydrological connection would be determined to be absent if (1) the wetland was located too far from another jurisdictional feature, and/or (2) the wetland did not have a discernable surface water connection

that would allow surface water to be transported from the wetland into a jurisdictional feature. Nevertheless, the seasonal wetland ditch may ultimately be considered an isolated ditch excavated in uplands if it is determined to lack direct connectivity with Rodeo Gulch Creek. As mentioned in Section 4.1, the extent to which this ditch feature contributes to the hydrology of Rodeo Gulch Creek could not be determined at the time of the delineation site visit due to access restrictions on adjacent private properties. Furthermore, review of available aerial photographs did not clearly reveal whether culverts were positioned along this feature beyond the Project Area that would allow for direct outflow into Rodeo Gulch.

5.0 POTENTIAL CORPS OF ENGINEERS JURISDICTION

The Nigh Lumber Affordable Housing Project Area has one primary wetland feature (Appendix B) with wetland indicators. This area showed evidence of hydric soil formation characterized by low-chroma colors and/or redoximorphic characteristics, a preponderance of hydrophytic vegetation with FAC, FACW, and OBL-classified plants, and wetland hydrology characterized by drainage patterns, sediment deposits, oxidized root channels, and/or satisfaction of the FAC-neutral test. This area met the definition of jurisdictional wetlands for Section 404 of the Clean Water Act. However, this feature may ultimately be considered an isolated, man-made ditch excavated in uplands and therefore not subject to Section 404 jurisdiction.

The Project Area does not contain jurisdictional "other waters" of the U.S. A summary of potentially jurisdictional wetlands is presented in Table 1.

Table 1. Summary of Potentially Jurisdictional Wetlands and Waters in the Project Area.

Wetland Type	**Potential Jurisdictional Area (Acres)**	**Potential Non-Jurisdictional Area (Acres)**
Seasonal Ditch Wetland	0.041 Acres	None (Presumed nexus between ditch and Rodeo Gulch Creek)
Total Wetlands:	0.041 Acres	None
Other Waters Type	**Potential Jurisdictional Length (Linear Feet/Acres)**	**Potential Non-Jurisdictional Length (Linear Feet/Acres)**
None	N/A	N/A
Total Other Waters:	None	None

The conclusion of this delineation is based on conditions observed at the time of the field survey conducted on April 4, 2008.

6.0 REFERENCES

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APPENDIX A.

WETLAND DELINEATION DATA FORMS

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Nigh Lumber			Date: 4/4/08	
Applicant/Owner: Santa Cruz County			County: Santa Cruz	
Investigator: Justin Davilla			State: CA	
Do Normal Circumstances Exist on the site?	(Yes)	No	Community ID: Upland	
Is the site significantly disturbed (Atypical Situation)?	(Yes)	No	Transect ID:	
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID: Sp 1	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Sub-Dominant Plant Species	Stratum	Indicator
1. Salix lasiandra ssp. lasiandra	T	OBL	9. Rumex crispus	H	FACW-
2. Geranium dissectum	H	NL	10. Plantago coronopus	H	FAC
3. Hedera helix	H	NL	11.		
4. Bromus diandrus	H	NI	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 25%

Remarks: One mature Pacific willow tree w/ understory and surrounding vegetative ground cover dominated by weedy upland grasses + forbs

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HYDROLOGY

___ Recorded Data (Describe in Remarks):
____ Stream, Lake, or Tide Gauge
____ Aerial Photographs
____ Other
X No Recorded Data Available

Field Observations:
Depth of Surface Water: 0 (in.)
Depth to Free Water in Pit: >4 (in.)
Depth to Saturated Soil: >4 (in.)

Wetland hydrology Indicators:
Primary Indicators:
____ Inundated
____ Saturated in Upper 12 Inches
____ Water Marks
____ *Drift Lines*
____ Sediment Deposits
____ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
____ Oxidized Root Channels in Upper 12"
____ Water-Stained Leaves
____ Local Soil Survey Data
____ FAC-Neutral Test
____ Other (Explain in Remarks)

Remarks: Soils consist of gravelly non-native landfill. No evidence of inundation or saturation but soil pit could only be dug to about 4 inches. Sample point located in a shallow linear depression along a fenceline.

SOILS

SP 1

Map Unit Name (Series and Phase): Elkhorn Sandy Loam

Drainage Class: well drained

Taxonomy (Subgroup): thermic Cumulic Haploxerolls

Field Observations
Confirm Mapped Type? Yes (No)

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-4		10 YR 3/2	—	—	loam (gravelly)
4+		N/A			coarse gravelly landfill

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in Surface Layer Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks: Organic soil layer is very shallow and did not show evidence of hydric/anaerobic conditions. Gravelly fill material was too dense (nearly concrete) to extract with a sharpshooter shovel for investigation purposes.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	(No)	(Circle)	(Circle)
Wetland Hydrology Present?	Yes	(No)		
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	Yes (No)

Remarks: Despite location within a swale feature and presence of a mature Pacific willow, this feature lacks wetland characteristics. Therefore, this sampling point is not located within a wetland.

Environmental Review Inital Study

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APPLICATION 07-044

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: High Lumber Applicant/Owner: Santa Cruz County Investigator: Justin Davilla	Date: 4/4/08 County: Santa Cruz State: CA
Do Normal Circumstances Exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? (Yes) No (If needed, explain on reverse.) Potential "ditch dug in uplands"	Community ID: Wetland Transect ID: Plot ID: Sp 2

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Eleocharis macrostachya	H	OBL	9.		
2. Cyperus eragrostis	H	FACW	10.		
3. Rorippa nasturtium-aquaticum	H	OBL	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%

Remarks: Completely dominated by hydrophytic vegetation. Sparse aereal cover due to complete inundation.

HYDROLOGY

Environmental Review Initial Study
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APPLICATION 07-0474

___ Recorded Data (Describe in Remarks):
- ____ Stream, Lake, or Tide Gauge
- ____ Aerial Photographs
- ____ Other

X No Recorded Data Available

Field Observations:
- Depth of Surface Water: 3-6 (in.)
- Depth to Free Water in Pit: N/A (in.)
- Depth to Saturated Soil: N/A (in.)

Wetland hydrology Indicators:
Primary Indicators:
- X Inundated
- X Saturated in Upper 12 Inches
- X Water Marks
- ____ Drift Lines
- X Sediment Deposits
- ____ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ____ Oxidized Root Channels in Upper 12"
- ____ Water-Stained Leaves
- ____ Local Soil Survey Data
- ____ FAC-Neutral Test
- ____ Other (Explain in Remarks)

Remarks: Narrow linear ditch feature inundated throughout the entirety of the area located on the High Lumber property. Did not appear to be a flowing feature.

SOILS

SP 2

Map Unit Name (Series and Phase): Elkhorn Sandy Loam

Drainage Class: well drained

Field Observations
Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): thermic Cumulic Haploxerolls

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-16		10YR 2/1	7.5 YR 5/6	3% / Distinct	clay loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
X Reducing Conditions
X Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in Surface Layer Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks: Inundated mucky soil with low chroma and distinct mottles.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No

(Circle)
Is this Sampling Point Within a Wetland? (Yes) No

Remarks: Feature is several hundred feet long by about 3-5' wide and contains emergent wetland vegetation and inundated soils. This sampling point is clearly located within a wetland.

Approved by HQUSACE 3/92

Environmental Review Initial Study
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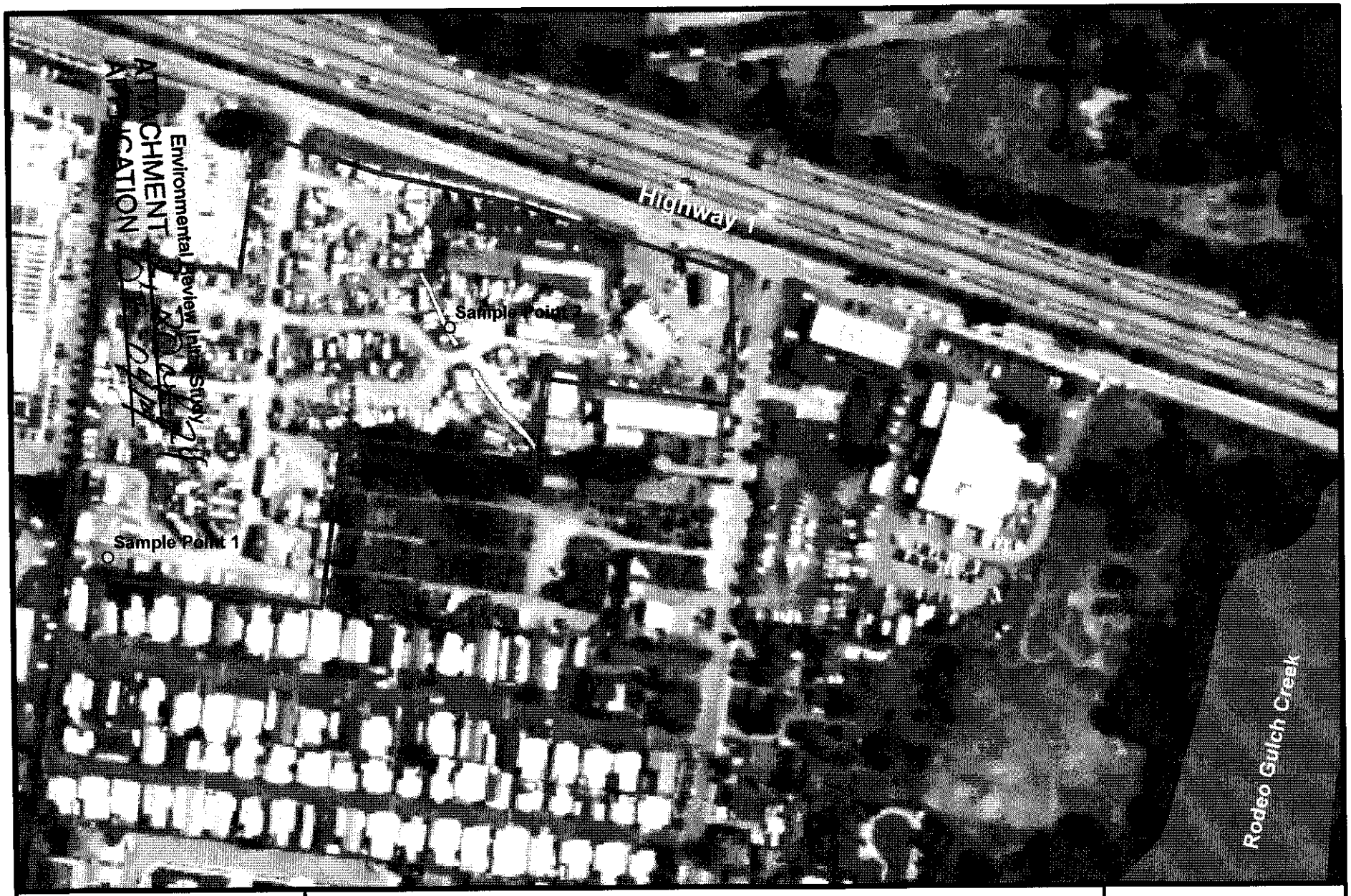
APPLICATION 07-0414

APPENDIX B.

MAP OF POTENTIAL SECTION 404 WETLANDS AND WATERS OF THE U.S FOR THE NIGH LUMBER AFFORDABLE HOUSING PROJECT AREA



Appendix B.

Wetlands and Other Waters of the U.S. on the Nigh Lumber Affordable Housing Property

Legend

- Sample Points
- Rodeo Gulch
- Nigh Lumber Project Area
- Potential Wetlands (0.041 acres)

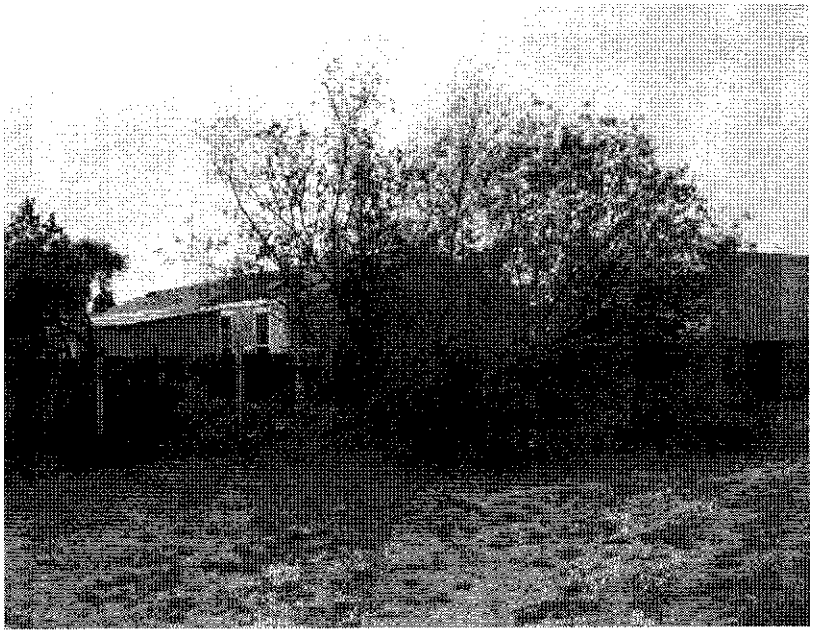
N

0 75 150 300 Feet

EcoSystems West Consulting Group

APPENDIX C.

REPRESENTATIVE PHOTOGRAPHS OF THE NIGH LUMBER PROJECT AREA



Appendix C. Representative Photographs

Above: Pacific willow with ruderal understory in southwest corner of the Nigh Lumber Project Area

Below: Close-up of Sample Point 1 beneath Pacific willow.

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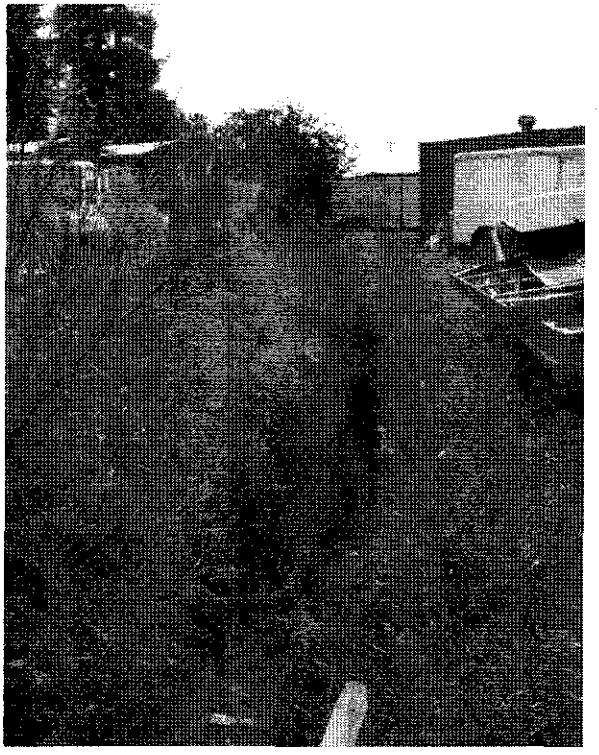

Environmental Review Inital Study
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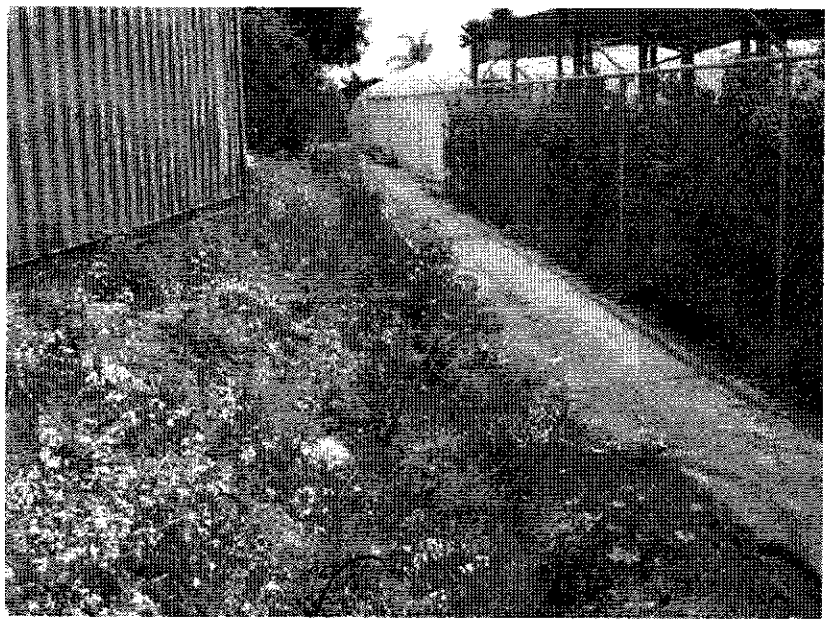
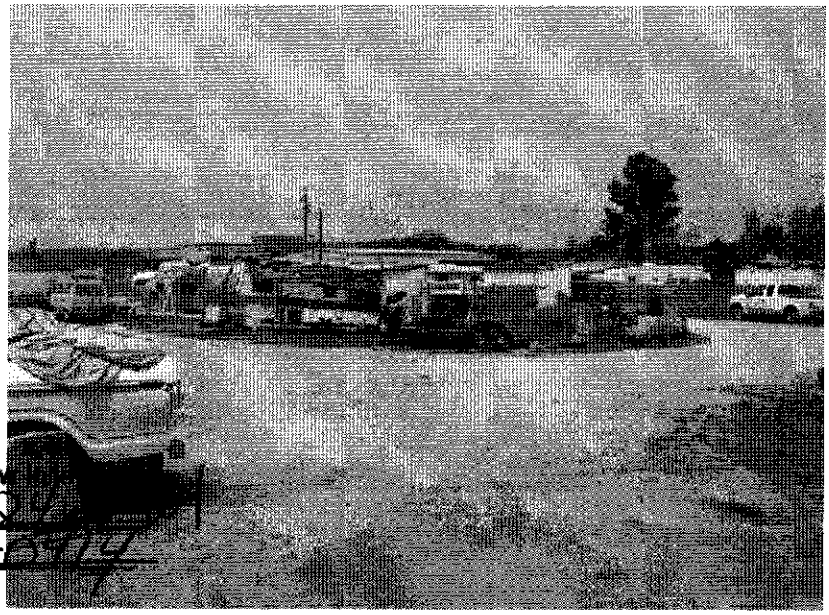
Appendix C. Representative Photographs

Left: Upper (north) section of seasonal wetland ditch in center portion of the Nigh lumber Project Area

Right: Lower (south) section of seasonal wetland ditch feature.

EcoSystems West Consulting Group





Environmental Review
ATTACHMENT 2-2
APPLICATION OZ-0014

Appendix C. Representative Photographs

Above: Ruderal upland vegetation in shallow ditch feature along fence line adjacent to the neighboring outdoor plant nursery.

Below: Overview of Nigh Lumber Storage facility.

EcoSystems West Consulting Group

ATTACHMENT C

TRANSPORTATION IMPACT ANALYSIS FOR THE NIGH LUMBER HIGH-DENSITY HOUSING SITE IN SANTA CRUZ COUNTY, CALIFORNIA, PREPARED BY FEHR & PEERS TRANSPORTATION CONSULTANTS, DECEMBER 6, 2007

FEHR & PEERS
TRANSPORTATION CONSULTANTS

MEMORANDUM

Date: December 6, 2007

To: Todd Sexauer, Santa Cruz County Planning Dept.
Jack Sohriakoff, Santa Cruz County Public Works Dept.

From: Todd Henry
Norman Wong, P.E.

Subject: ***Transportation Impact Analysis for the Nigh Lumber High-Density Housing Site in Santa Cruz County, California***

SJ06-908

This memorandum presents the results of a transportation impact analysis (TIA) for a proposed high-density housing development located in the Live Oak neighborhood of unincorporated Santa Cruz County, California. The proposed 100 multi-family dwelling unit project is located on Soquel Avenue between Chanticleer Avenue and Mattison Lane. The site is currently occupied by a vehicle storage yard, which is adjacent to the Nigh Lumber yard.

Potential transportation impacts were analyzed at intersections, and for bicycle, pedestrian, and transit facilities and services. Peak-hour intersection operations were analyzed under Existing, Background, Project, and Cumulative Conditions for six study intersections:

1. Soquel Avenue and Soquel Drive (signalized, County)
2. Soquel Avenue and State Route 1 Southbound Ramps (signalized, Caltrans)
3. Soquel Avenue and 17th Avenue (signalized, County)
4. Soquel Avenue and Chanticleer Avenue (side-street stop control, County)
5. 41st Avenue and Gross Road (signalized, City of Capitola)
6. 41st Avenue and State Route 1 Southbound Ramps (signalized, Caltrans)

The project location and study intersections are presented on Figure 1. The remainder of this memorandum includes a description of each study scenario, the associated assumptions, intersection operations, significant impacts, and mitigation measures.

EXISTING CONDITIONS

This section describes the existing conditions of the roadway facilities, pedestrian and bicycle facilities, transit service, traffic volumes, and intersection operations. The following text also includes a discussion of the methods used to calculate intersection levels of service.

Study Roadways

State Route (SR) 1 is a regional north-south roadway connecting Santa Cruz County with San Francisco to the north and Los Angeles to the south. SR 1 is an east-west, four-lane freeway in

160 West Santa Clara Street, Suite 675 San Jose, CA 95113 (408) 278-1700 Fax (408) 278-1717
www.fehrandpeers.com

the project vicinity. ***Soquel Avenue*** is an east-west arterial roadway connecting Santa Cruz, Live Oak, and Capitola. Soquel Avenue is four lanes wide west of Soquel Drive and two lanes wide east of Soquel Drive. ***Soquel Drive*** is an east-west, four-lane arterial roadway connecting Live Oak, Soquel, and Aptos. ***17th Avenue*** is a north-south, two-lane arterial roadway in Live Oak. ***Chanticleer Avenue*** is a north-south, two-lane collector roadway in Live Oak. ***Gross Road*** is an east-west, two-lane arterial roadway in Live Oak. ***41st Avenue*** is a north-south arterial roadway connecting Capitola and Soquel. 41st Avenue is six lanes between SR 1 and Capitola Road and four lanes elsewhere.

Pedestrian and Bicycle Facilities

Sidewalks are located on both sides of 17th Avenue, Chanticleer Avenue, and 41st Avenue, the north side of Soquel Drive, portions of the south side of Soquel Avenue (from Soquel Drive to SR 1 SB Ramps; near Paul Minnie Avenue, 17th Avenue, Chanticleer Avenue, Mattison Lane; from Rodeo Gulch Road to just north of Gross Road), and portions of the north side of Soquel Avenue (at 17th Avenue serving a former bus stop, and north of Gross Road) in the study area. Sidewalks are not provided along the project frontage. Bicycle lanes are located on Soquel Avenue, Soquel Drive, 17th Avenue, Chanticleer Avenue, and 41st Avenue south of Gross Road.

Transit Service

The Santa Cruz Metropolitan Transit District (Metro) provides bus service throughout Santa Cruz County. The nearest bus stop is located at Paul Minnie Avenue and Soquel Avenue, which is served by Route 53. The stop is approximately one-half mile west of the project site. Additional bus service is provided by Routes 69, 69A, 69N, and 69W on Capitola Road (south of the project site) and Routes 56, 69A, 69N, and 69W on 41st Avenue (east of the project site).

Route 53 operates in a counterclockwise loop between Capitola Mall, Soquel, and Live Oak, with service on Paul Minnie Avenue only in the southbound direction. Route 53 operates on weekdays only, every 120 minutes from 9:05 AM to 5:55 PM.

Level of Service Methodology

The operation of roadway facilities are described with the term level of service (LOS). LOS is a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, with the best operating conditions, to LOS F, with the worst operating conditions. LOS E represents "at-capacity" operations. Operations are designated as LOS F when volumes exceed capacity, resulting in stop-and-go conditions. The County, Caltrans, and City of Capitola maintain a LOS C standard for their intersections. The County accepts LOS D operations at physically or economically constrained locations, and Caltrans typically accepts LOS D operations in urban areas such as Live Oak.

Signalized Intersections

The level of service method approved by Santa Cruz County analyzes a signalized intersection's operation based on average control vehicular delay using the method described in Chapter 16 of the *2000 Highway Capacity Manual* (*HCM*) by the Transportation Research Board. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for signalized intersections is calculated using the Synchro analysis software and is correlated to a LOS designation as shown in Table 1.

FEHR & PEERS
TRANSPORTATION CONSULTANTS

TABLE 1
SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	55.1 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

Unsignalized Intersections

Operations of the unsignalized study intersections are evaluated using the method contained in Chapter 17 of the *2000 HCM* and calculated using the Synchro analysis software. LOS ratings for stop-sign controlled intersections are based on the average control delay expressed in seconds per vehicle. At two-way or side-street-stop controlled intersections, control delay is calculated for each movement, not for the intersection as a whole. For approaches composed of a single lane, control delay is computed as the average of all movements in that lane. For all-way stop-controlled locations, a weighted average delay for the entire intersection is presented. Table 2 summarizes the relationship between delay and LOS for unsignalized intersections.

TABLE 2
UNSIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Little or no delay.	≤ 10.0
B	Short traffic delays.	10.1 to 15.0
C	Average traffic delays.	15.1 to 25.0
D	Long traffic delays.	25.1 to 35.0
E	Very long traffic delays.	35.1 to 50.0
F	Extreme traffic delays with intersection capacity exceeded.	> 50.0

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

Existing Intersection Volumes and Operations

The operation of the key intersections were evaluated during weekday morning (AM) and afternoon (PM) peak period conditions. The AM and PM peak periods occur from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM, respectively. Intersection operations were evaluated for the highest one-hour volume counted during each period.

New AM and PM peak-period turning movement counts were conducted at four study intersections in November 2006. Per County staff direction, traffic counts from April and May 2000 were used at the 41st Avenue/Gross Road and 41st Avenue/SR 1 SB Ramps intersections to account for recent retail vacancies along 41st Avenue. Figure 2 presents the existing peak-hour turning movement volumes and lane configurations at the study intersections. Attachment A contains the detailed traffic counts.

Existing intersection lane configurations, signal timings, and turning movement volumes were entered into the Synchro software package to calculate the levels of service. The results of the existing operations analysis are shown in Table 3. Four intersections currently operate at acceptable levels. The 41st Avenue/Gross Road intersection currently operates unacceptably (LOS D morning peak and LOS E afternoon peak). Overall operations at the Soquel Avenue/Chanticleer Avenue intersection are acceptable, but the northbound left-turn movement operates at LOS F during the PM peak hour. Attachment B contains the corresponding LOS calculation sheets. Peak-hour signal warrants[1] are not met at the Soquel Avenue/Chanticleer Avenue intersection. Attachment C contains the signal warrant worksheets.

Field Observations

Field observations of the study intersections were conducted during the AM and PM peak periods in February and April 2007. The intersections were observed to operate at the calculated levels of service. The Soquel Avenue/Soquel Drive intersection had long westbound left-turn queues, and vehicles often backed up to the preceding intersection. Long eastbound left-turn queues formed at the 41st Avenue/Gross Road intersection, and vehicles often backed up to the preceding intersection. Vehicles also spilled out of the northbound left-turn pocket. Vehicles generally did not clear this intersection within one cycle length. No substantial congestion or queuing was noted elsewhere along study roadways, and vehicles cleared all other the signalized study intersections within one signal cycle.

BACKGROUND CONDITIONS

This section discusses the operations of the key intersections with existing traffic volumes plus traffic generated from approved but not yet constructed or occupied projects. Background Conditions serve as the basis for identifying project impacts.

[1] The use of peak-hour signal warrants is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. The traffic analysis presented in this document estimates future development-generated traffic compared against a sub-set (peak-hour warrant) of the standard traffic signal warrants recommended in the Federal Highway Administration's *Manual on Uniform Traffic Control Devices* and associated State guidelines. This analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured, rather than forecast, traffic data and a thorough study of traffic and roadway conditions by an experienced engineer. The decision to install a signal should not be based solely upon the warrants because signals can lead to certain types of collisions. Santa Cruz County should undertake regular monitoring of actual traffic conditions and accident data, and timely re-evaluation of the full set of warrants, in order to prioritize and program intersections for signalization.

TABLE 3
INTERSECTION LEVELS OF SERVICE

Intersection	Peak Hour	Existing Conditions		Background Conditions		Project Conditions	
		Average Delay[1]	LOS[2]	Average Delay[1]	LOS[2]	Average Delay[1]	LOS[2]
1. Soquel Avenue/ Soquel Drive	AM	22.7	C	22.9	C	23.2	C
	PM	22.6	C	23.1	C	23.7	C
2. Soquel Avenue/ SR 1 SB Ramps	AM	19.1	B	19.2	B	19.5	B
	PM	20.5	C	20.8	C	21.3	C
3. Soquel Avenue/ 17th Avenue	AM	12.6	B	12.6	B	12.8	B
	PM	14.1	B	14.1	B	14.4	B
4. Soquel Avenue/ Chanticleer Avenue	AM	4.9 (20.8)	A (C)	4.9 (21.1)	A (C)	5.1 (22.7)	A (C)
	PM	6.6 (50.6)	A (F)	6.8 (53.4)	A (F)	8.0 (68.1)	A (F)
5. 41st Avenue/ Gross Road	AM	40.7	D	40.9	D	43.0	D
	PM	65.7	E	66.0	E	67.6	E
6. 41st Avenue/ SR 1 SB Ramps	AM	19.3	B	19.4	B	19.3	B
	PM	16.8	B	17.4	B	17.6	B

Notes:

1 Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the *2000 HCM*. For side-street stop-controlled intersections, total control delay for the worst movement is presented in parenthesis.

2 LOS = Level of service. LOS calculations conducted using the Synchro level of service analysis software package.

Background Traffic Estimates

The list of approved projects, presented in Attachment D, was developed in consultation with Santa Cruz County and Capitola City staff. The traffic volumes for the approved developments were estimated using Institute of Transportation Engineers (ITE) trip generation rates and standard engineering practice. The trips associated with each approved development were assigned to the roadway network based on general project locations and existing travel patterns and added to existing volumes to represent Background Conditions, as shown on Figure 2.

Background Intersection Operations

Level-of-service calculations were conducted for the key intersections to evaluate their operations under Background Conditions. As indicated in Table 3, four study intersections are projected to continue operating at acceptable levels (LOS C or better). The 41st Avenue/Gross Road intersection is projected to operate at unacceptable levels (LOS D or E). Potential improvements to this intersection could include optimization of signal timings. Overall operations at the Soquel Avenue/Chanticleer Avenue intersection will remain acceptable, and the northbound left-turn movement will continue to operate at LOS F during the PM peak hour. Attachment B contains the corresponding LOS calculation sheets. Peak-hour signal warrants are not met at the Soquel Avenue/Chanticleer Avenue intersection. Attachment C contains the signal warrant worksheets.

PROJECT CONDITIONS

This section describes the estimated amount of traffic generated by the proposed development and identifies significant impacts and mitigation measures to the transportation system.

Project Traffic Estimates

The amount of traffic generated by the proposed development was estimated by applying trip rates from ITE's *Trip Generation* (7th Edition) for the apartment land use to the size of the project. Although condominiums may be developed on the site, the trip rates for this land use are lower than apartment rates. Thus, apartment trip rates were used to account for all potential traffic generated by the site.

The trips generated by the existing vehicle storage yard were credited against the trips generated by the project. As shown in Table 4, the project is expected to generate 741 net new daily trips, 52 net new AM peak-hour trips (10 inbound and 42 outbound), and 72 net new PM peak-hour trips (47 inbound and 25 outbound).

The trip distribution pattern shown on Figure 1 was developed using existing travel patterns and the location of complementary land uses including employment areas, retail centers, and recreation opportunities. The project trips were assigned to the roadway system using the trip distribution pattern, as shown on Figure 2.

TABLE 4
PROJECT TRIP GENERATION RATES AND ESTIMATES

Land Use	Size	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Trip Rates								
Apartment[1]		7.51	0.11	0.42	0.53	0.47	0.26	0.73
Trip Estimates								
Proposed Apartments	100 units	751	11	42	53	47	26	73
Vehicle Storage Yard[2]	5 acres	(10)	(1)	(0)	(1)	(0)	(1)	(1)
Total Net New Trips		***741***	***10***	***42***	***52***	***47***	***25***	***72***

Notes:

1 Fitted curve equations used for ITE land use code 220.

2 Peak-hour trips estimated in consultation with County Planning staff. The daily trip estimate assumes 20% of project traffic occurs during the peak hours, which is typical of similar land uses.

Source: *Trip Generation (7th Edition)*, Institute of Transportation Engineers, 2003.

Project Intersection Operations

Project trips were added to Background Condition volumes, and intersection operations were re-calculated to determine Project Condition LOS. As indicated in Table 3, four study intersections are projected to operate at acceptable levels (LOS C or better) with the addition of project traffic. The 41st Avenue/Gross Road intersection is projected to operate at unacceptable levels (LOS D or E). Overall operations at the Soquel Avenue/Chanticleer Avenue intersection will remain

acceptable, and the northbound left-turn movement will continue to operate at LOS F during the PM peak hour. Attachment B contains the corresponding LOS calculation sheets. Peak-hour signal warrants are not met at the Soquel Avenue/Mattison Lane and Soquel Avenue/Chanticleer Avenue intersections. Attachment C contains the signal warrant worksheets.

Intersection Impacts and Mitigation Measures

County and Capitola operating standards are used to determine impacts at Caltrans freeway ramp intersections maintained by Caltrans. Thus, impacts at the Soquel Avenue/SR 1 SB Ramps intersection are determined using County standards, and impacts at the 41st Avenue/SR 1 SB Ramps intersection are determined using Capitola standards. Both jurisdictions have established a minimum acceptable operating level of LOS C for signalized intersections. LOS D operations are considered acceptable at County intersections where further improvements are considered infeasible.

Significant impacts at signalized County intersections are defined to occur when:

1. The addition of project traffic causes intersection operations to degrade from LOS D or better to LOS E or F, or
2. Project traffic is added to an intersection operating at LOS E or F, resulting in a one-percent increase in the volume-to-capacity ratio of the sum of all critical movements.

Significant impacts at unsignalized County intersections are defined to occur when:

1. The addition of project traffic causes intersection operations to degrade from LOS D or better to LOS E or F, and the peak-hour signal warrant from the Manual on Uniform Traffic Control Devices (MUTCD) is satisfied, or
2. Project traffic is added to an intersection operating at LOS E or F, and the peak-hour signal warrant from the Manual on Uniform Traffic Control Devices (MUTCD) is satisfied.

Significant impacts at signalized Capitola intersections are defined to occur when:

1. The addition of project traffic causes intersection operations to degrade from LOS C or better to LOS D, E, or F, or
2. Project traffic is added to an intersection operating at LOS D, E, or F, resulting in a one-percent increase in the volume-to-capacity ratio of the sum of all critical movements.

Based on the project impact criteria listed above, the proposed project will have a less-than-significant impact at all study intersections. The project increases the volume-to-capacity ratio of the sum of all critical movements by less than one percent, as shown in Attachment E. Therefore, no roadway mitigation measures are required under Project Conditions.

Pedestrian, Bicycle, and Transit Facilities

Significant impacts to pedestrian and bicycle facilities are defined to occur when the project conflicts with existing or planned pedestrian or bicycle facilities, or it creates pedestrian and bicycle demand without providing adequate facilities.

Significant impacts to transit facilities are defined to occur when the project conflicts with existing or planned transit facilities, or it generates potential transit trips without providing adequate facilities for pedestrians and bicyclists to access transit routes and stops.

The project will generate new pedestrian trips, but continuous sidewalks are not provided on Soquel Avenue to accommodate this demand. It is recommended that the project applicant construct sidewalks along the project frontage to improve pedestrian circulation. The sidewalks should be consistent with the Board-approved plan line for Soquel Avenue, which calls for two travel lanes, a center turn lane, bike lanes in both directions, and a sidewalk on the south side of the street.

Because the site is located one-half mile from the closest transit stop and there are existing sidewalk gaps, the number of project-generated transit trips will be limited. Based on existing transit usage patterns in Santa Cruz County, the project is expected to generate fewer than five transit trips during the peak hour. These trips can be spread between several different buses during the peak hour, resulting in a minimal increase in transit demand and less-than-significant impact to transit facilities. No mitigation measures are required.

All bicycle improvements identified in the General Plan have been made. Existing bicycle facilities can accommodate the project-generated demand. The impacts to bicycle facilities are less than significant and no mitigation measures are required.

Site Access, On-Site Circulation, and Parking

A site plan has not been developed for this project. The site plan, once prepared, should be reviewed by County staff to ensure adequate site access and on-site circulation for all modes, as well as an adequate parking supply for vehicles and bicycles.

CUMULATIVE CONDITIONS

This section presents the cumulative operations analysis of the key intersections in Year 2025. Cumulative operations were evaluated under two scenarios: Cumulative No Project and Cumulative Plus Project. Under Cumulative No Project Conditions, existing traffic volumes were increased by an annual growth rate and background-related trips were added. Per the County's direction, a growth rate of two percent per year (based upon historical counts) was used in this analysis. Intersection signal timings were optimized to reflect future operating conditions. The project trips were added to the Cumulative No Project volumes to represent Cumulative Plus Project Conditions and significant cumulative impacts were identified by comparing the results of the two cumulative scenarios.

The County's General Plan identifies planned improvements to its roadway network. No changes are proposed for the study intersections, so the lane geometries and intersection controls were left unchanged for this study scenario.

Table 4 compares the level of service results under the two Cumulative scenarios. Significant impacts were identified using the significance criteria listed previously. Based on those criteria, significant impacts were identified at the Soquel Avenue/SR 1 Southbound Ramps and Soquel Avenue/Chanticleer Avenue intersections during the PM peak hour. The project has a less-than-significant impact on the two other intersections that are projected to operate at unacceptable levels since the increase in critical volume-to-capacity ratio is below the one percent threshold. Attachment B contains the corresponding LOS calculation sheets.

TABLE 4
CUMULATIVE INTERSECTION LEVELS OF SERVICE

Intersection	Peak Hour	Cumulative No Project Conditions		Cumulative Plus Project Conditions			Cumulative Plus Project and Mitigation		
		Average Delay[1]	LOS[2]	Average Delay[1]	LOS[2]	Δ in Crit. V/C	Improvement	Average Delay[1]	LOS[2]
1. Soquel Avenue/ Soquel Drive	AM	46.9	D	48.5	D	-			
	PM	63.0	E	65.2	E	+0.45%			
2. Soquel Avenue/ SR 1 SB Ramps	AM	29.6	C	30.4	C	-	Modify EB Approach	31.0	C
	PM	71.8	E	**75.9**	**E**	**+1.19%**		19.9	B
3. Soquel Avenue/ 17th Avenue	AM	20.1	C	20.7	C	-			
	PM	23.0	C	24.0	C	-			
4. Soquel Avenue/ Chanticleer Avenue	AM	18.3	A	24.9	C	-	Signalize	7.2	A
		(100.8)[3]	(F)	(126.5)	(F)	-			
	PM	**>180**	**F**	**>180**	**F**	-		8.5	A
		(>180)	**(F)**	**(>180)**	**(F)**	-			
5. 41st Avenue/ Gross Road	AM	45.6	D	47.6	D	-			
	PM	74.9	E	76.6	E	+0.97%			
6. 41st Avenue/ SR 1 SB Ramps	AM	46.6	D	48.5	D	-			
	PM	50.0	D	53.7	D	-			

Notes:

1 Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the *2000 HCM*. For side-street stop-controlled intersections, total control delay for the worst movement is presented in parenthesis.

2 LOS = Level of service. LOS calculations conducted using the Synchro level of service analysis software package.

3 Values in parentheses represent the delay on the worst case maneuver.

4 Significant

Mitigation Measures

Soquel Avenue / SR 1 Southbound Ramps: Intersection operations can be improved by modifying the eastbound lane configuration and signal timings. The eastbound approach would be re-striped to provide a dedicated left-turn lane and one through lane (from a shared left-turn/through lane and one through lane). The signal timings will be modified to provide protected phasing for the eastbound left-turn movement. No changes are proposed for the other approaches.

Soquel Avenue / Chanticleer Avenue: Peak-hour signal warrants are met at the Soquel Avenue/Chanticleer Avenue intersection during both peak hours. Attachment C contains the signal warrant worksheets. This improvement is currently in the County's plan for improvements along Soquel Avenue.

CONCLUSIONS

Five of the six study intersections are projected to operate at acceptable levels of service through Project Conditions. The addition of project traffic will result in a less-than-significant impact at all six study intersections.

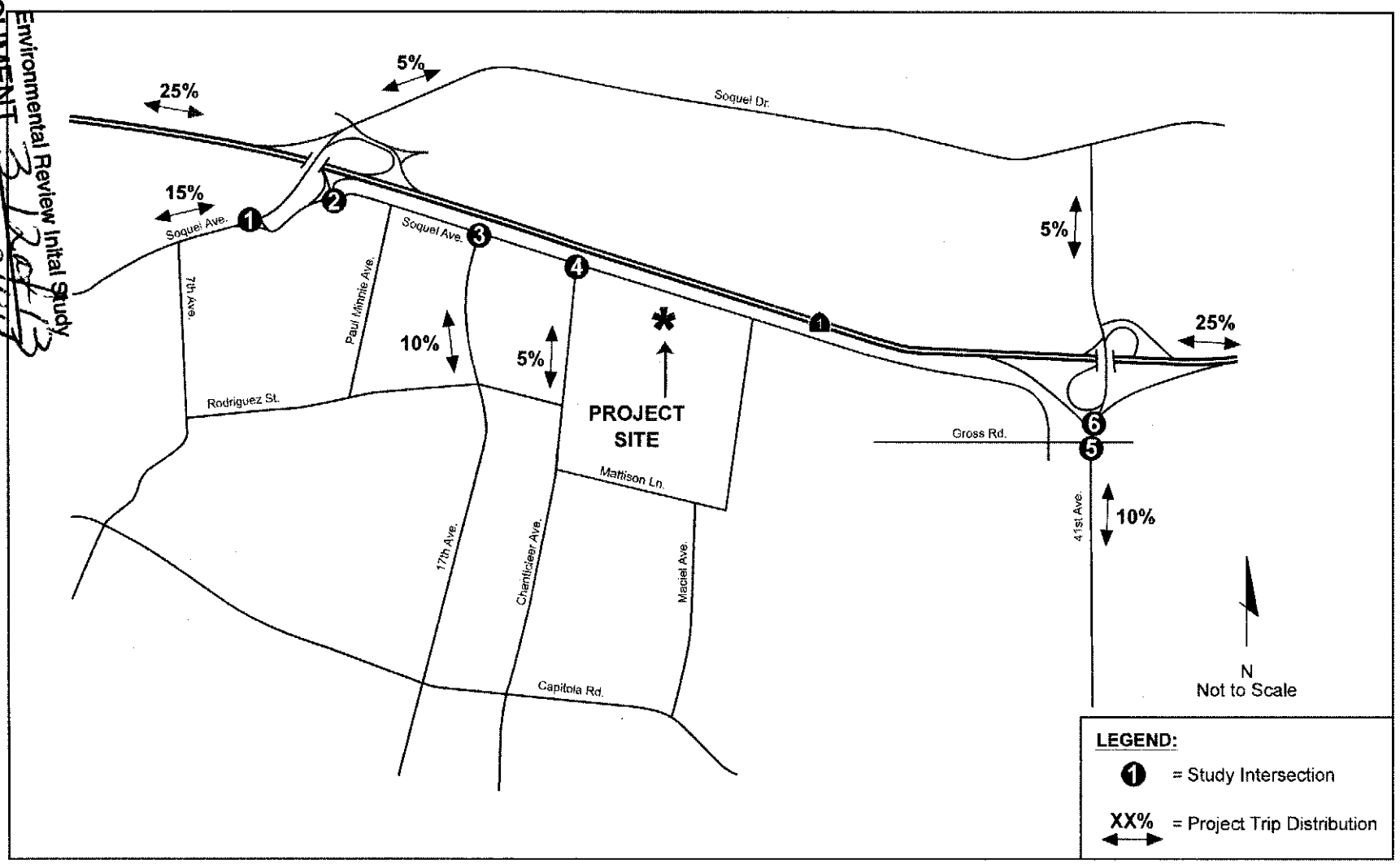
The proposed project is estimated to have a significant cumulative impact at the Soquel Avenue/SR 1 SB Ramps and Soquel Avenue/Chanticleer Avenue intersections. Improvements were identified at these two locations to provide acceptable operations. The proposed project is estimated to have a less-than-significant impact to the other study intersections.

The project should construct continuous sidewalks that are consistent with the Board-approved plan line for Soquel Avenue along the entire length of the project frontage to improve pedestrian circulation. Other sidewalk gap closures beyond the project frontage are necessary to provide access to bus stops located one-half mile from the project site. The project is expected to have a less-than-significant impact to bicycle and transit facilities.

County staff should review the site plan once available to ensure that adequate site access, on-site circulation, and parking supplies are provided.

ATTACHMENT 3
APPLICATION 07-0417

Environmental Review Initial Study



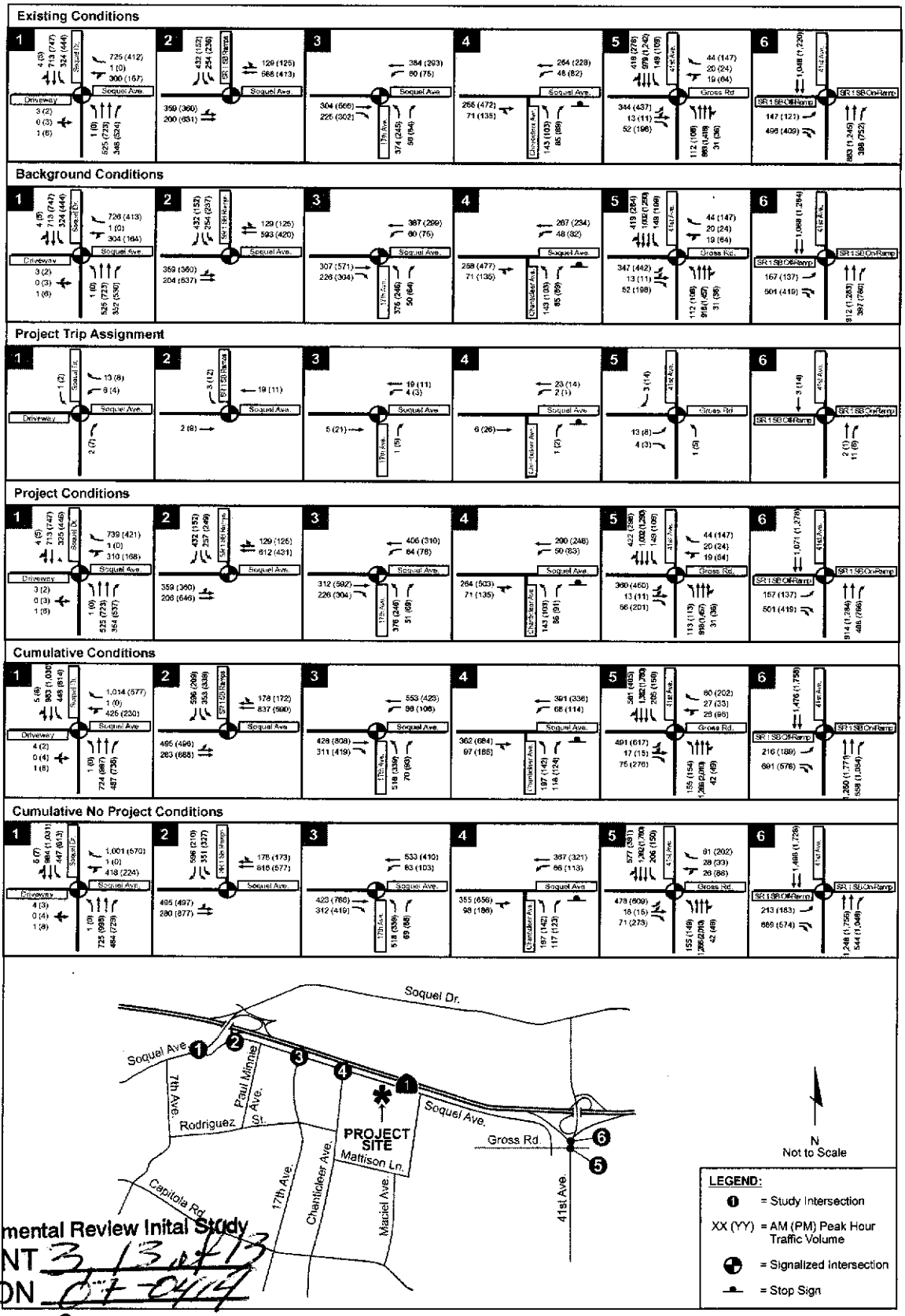
FEHR & PEERS
TRANSPORTATION CONSULTANTS

April 2007
SJ06-908

Nigh Lumber High-Density Housing Site

PROJECT LOCATION, STUDY INTERSECTIONS, AND PROJECT TRIP DISTRIBUTION

FIGURE 1



Environmental Review Inital Study
ATTACHMENT 3, 13 of 13
APPLICATION 07-0414

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December 2007
SJ06-903

High Lumber High-Density Housing Site

PEAK HOUR TRAFFIC VOLUMES AND INTERSECTION CONFIGURATIONS

FIGURE 2

ATTACHMENT D

NIGH LUMBER SITE, SANTA CRUZ, CALIFORNIA, ENVIRONMENTAL NOISE FEASIBILITY STUDY, APRIL 24, 2007

NIGH LUMBER SITE
SANTA CRUZ, CALIFORNIA

ENVIRONMENTAL NOISE FEASIBILITY STUDY

24 April 2007

Prepared for:

Sarah Neuse
County of Santa Cruz – Planning Department
701 Ocean Street, Suite 418
Santa Cruz, CA 95060
Email: pln320@co.santa-cruz.ca.us

Prepared by:

CHARLES M. SALTER ASSOCIATES, INC.
Alexander K. Salter, Consultant &
Robert P. Alvarado, Vice President
130 Sutter Street, Suite 500
San Francisco, CA 94104
Phone: 415.397.0442
Fax: 415.397.0454

CSA Project No. 07-0133

DESCRIPTION

This report provides a preliminary environmental noise study for the Nigh Lumber site in Santa Cruz, California. The purpose of the study is to quantify the noise environment at the project site and to provide preliminary mitigation recommendations for future development. This letter summarizes the project's acoustical standards, noise measurements, and preliminary mitigation measures to meet all County and State standards.

The project site is located in the County of Santa Cruz on the southern side of Soquel Avenue and Highway 1, between Chanticleer Avenue and Mattison Lane. The major noise sources at the project site include vehicular traffic on Highway 1 and Soquel Avenue along the northern property line.

In summary, the noise environment at the Nigh Lumber site can accommodate residential development with the incorporation of proper site planning and sound-rated construction at exterior building facades. For those unfamiliar with the fundamental concepts of environmental acoustics, please refer to Appendix A and Figure A1.

ACOUSTICAL CRITERIA

State of California – California Building Code (CBC)

The California Building Code (Appendix Chapter 12) contains acoustical requirements for interior sound levels in habitable rooms. In summary, the CBC requires an interior noise level no higher than L_{dn}[1] 45 dB. Projects exposed to an exterior L_{dn} of 60 dB or greater require an acoustical analysis showing that the proposed design will limit interior levels to the prescribed allowable interior level. Additionally, if windows must be in the closed position to meet the interior standard, the design must include a ventilation or air-conditioning system to provide a habitable interior environment.

County of Santa Cruz – Noise Element of the General Plan

Policy 6.9.1 in the Noise Element of the County of Santa Cruz General Plan is consistent with the State standards for residential developments. Descriptions of the various land use compatibilities are listed below in Table 1:

[1] Day-Night Average Sound Level (DNL or L_{dn}) — A descriptor established by the U.S. Environmental Protection Agency to represent a 24-hour average sound level with a 10 dB penalty applied to noise occurring during the nighttime hours (10 p.m. – 7 a.m.) to account for the increased sensitivity of people during sleeping hours.

TABLE 1: NOISE AND LAND USE COMPATIBILITY STANDARDS	
Residential	**Land-Use Category**
Less than 60 dB	Normally Acceptable.
Between 60 and 75 dB	Conditionally Acceptable
Greater than 75 dB	Unacceptable
Normally Acceptable: Specified land use is satisfactory, based on the assumption that any buildings involved are of normal conventional construction, without any special insulation requirements.	
Conditionally Acceptable: Specified land-use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.	
Unacceptable: New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies.	

Policy 6.9.1 also states that outdoor sports and recreation areas, including neighborhood parks and playgrounds are considered normally acceptable up to an L_{dn} of 65 dB.

EXISTING AND FUTURE NOISE ENVIRONMENT

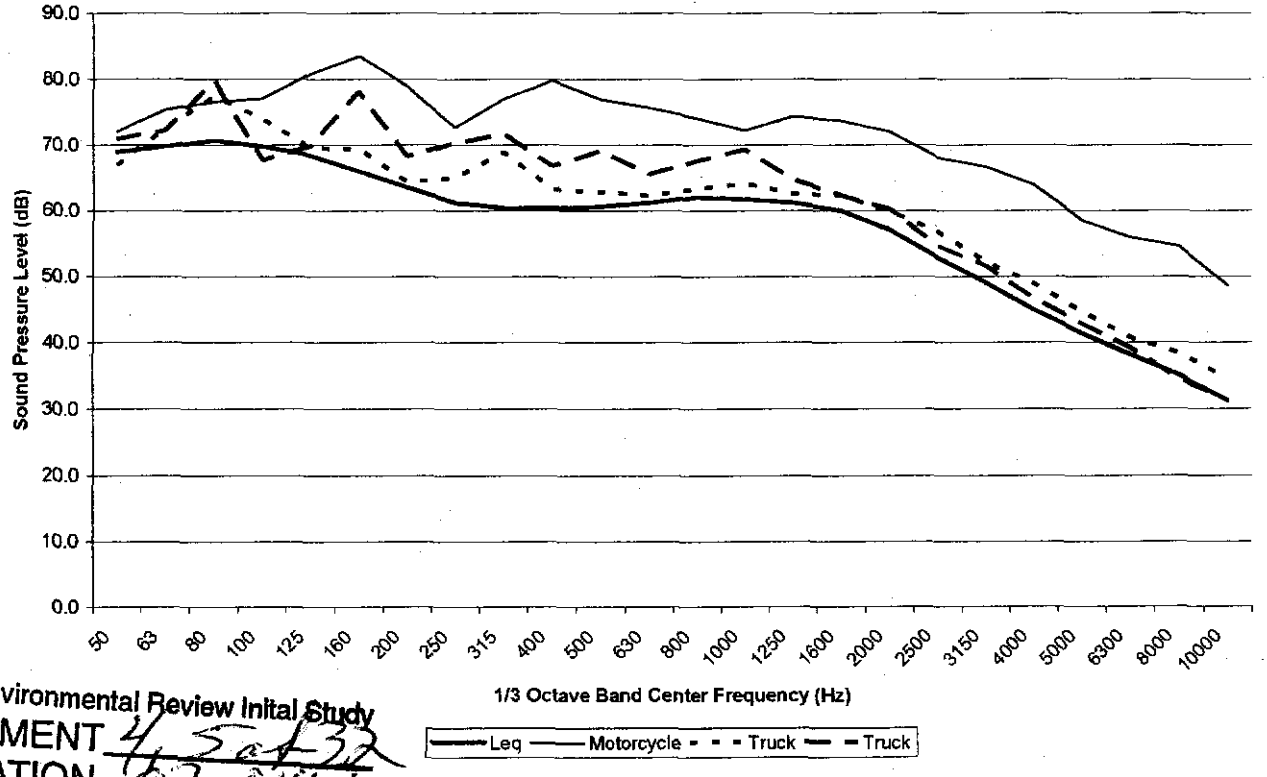
To quantify the existing noise environment at the project site, we conducted three continuous long-term 168-hour (L1 through L3) and four short-term, 15-minute, (S1 through S4) noise monitor measurements between 27 March and 3 April 2007. A summary of the acoustical measurements are listed below in Table 2 and shown in Figure 1.

TABLE 2: MEASURED DATA		
Monitor	**Location (On-Site)**	**Measured L_{dn}**
L1	Approximately 375-feet south of the Soquel Avenue centerline, on the western property line, 12-feet above grade.	61 dB
L2	Approximately 35-feet south of the Soquel Avenue centerline, on the eastern property line, 12-feet above grade.	74 dB
L3	Approximately 435-feet south of the Soquel Avenue centerline, approximately 230-feet east of the western property line, 15-feet above grade.	62 dB

TABLE 2 CONTINUED		
S1	Approximately 35-feet south of the Soquel Avenue centerline, on the eastern property line, 5-feet above grade.	72 dB*
S2	Approximately 35-feet south of the Soquel Avenue centerline, on the eastern property line, 25-feet above grade.	74 dB*
S3	Approximately 240-feet south of the Soquel Avenue centerline, on the eastern property line, 5-feet above grade.	51 dB*
S4	Approximately 240-feet south of the Soquel Avenue centerline, on the eastern property line, 25-feet above grade.	62 dB*
* Estimated by an L_{eq} offset from monitor L1		

In addition to quantifying the L_{dn} at each measurement location, the frequency characteristics of vehicular traffic along Highway 1 and Soquel Avenue were also qualified. Figure 2 below shows the noise spectrum of various motor vehicles along these roadways along with a 15-minute L_{eq} spectrum as measured at location S2.

Figure 2 - Measured Traffic Noise for Soquel Avenue and Highway 1



To verify the on-site measured noise levels during our survey are commensurate with average annualized noise levels, Soquel Avenue and Highway 1 were modeled using the California Specific Vehicle Noise Prediction Model (CALVENO), which is part of the Federal Highway Administration (FHWA) noise prediction model. Traffic data for Highway 1 was obtained from the "Annual Average Daily Truck Traffic on the California State Highway System" report, compiled by Traffic and Vehicle Data Systems in cooperation with the U.S. Department of Transportation and FHWA. According to the report, 110,000 vehicles, 3.4% of them trucks, pass the site each day. To obtain traffic data for Soquel Avenue, the number of vehicles during peak hour was estimated from a 15-minute traffic count at the site between 4:45pm and 5:00pm. The traffic analysis showed that the L_{dn} contribution due to vehicle traffic along Soquel Avenue and Highway 1 is 67 dB and 74 dB respectively. When both contributions are added to each other, the resultant L_{dn} noise level calculated using the CALVENO noise model is 75 dB. This is within 1 dB of our on-site measurements, which is not considered a noticeable change in noise level.

Future traffic levels for this project were not provided. However, we have assumed a 25% increase in future traffic volumes, which corresponds to an increase in the L_{dn} of 1 dB[2]. Therefore, we estimate future noise levels to range from an L_{dn} of 75 dB to 52 dB interior to the project.

ASSESSMENT OF NOISE

Exterior Noise Levels

Based on our on-site measurements we have prepared Figure 3 showing exterior noise contours throughout the site. The contours shown do not take into account shielding provided by future buildings since the site layout is unknown at this time. As a result, the contours will vary depending on the amount of shielding provided by proposed buildings in addition to receiver location.

To meet the County's outdoor noise goal of and L_{dn} of 65 dB at outdoor-use areas (e.g., parks and playgrounds), proper site planning should be exercised. For multi-family developments, a central outdoor use area should be provided interior to the project completely shielded from Soquel Avenue and Highway 1. Alternatively, the combination of a barrier along Soquel Avenue and shielding from future buildings would reduce noise levels within the County's standards, allowing outdoor-use areas to be located closer to Soquel Avenue and Highway 1. If single-family homes with backyards will be developed, the yards of these homes should be on the southern side, opposite Soquel Avenue and Highway 1. Barriers will likely be needed in addition to locating yards on the south side of the homes for single-family developments. Once a site layout has been developed, the design should be reviewed by an acoustical consultant to ensure exterior noise levels at outdoor use areas are compatible with County standards.

[2] Caltrans assumes a traffic volume increase of three-percent per year, which corresponds to a 1 dB increase over ten years. In the absence of City data, we have also used this same formula for the local roads.

If barriers are used, they would need to be constructed using a material at least three pounds per square foot (e.g., concrete, wood, lexan) and have no cracks or gaps, especially at the base.

Interior Noise Levels

Code Minimum

Since the site layout is unknown at this time we are supplying preliminary STC recommendations for exterior windows and doors in order to achieve the County and State interior noise requirement not exceeding an L_{dn} of 45 dB. For the purposes of this report, we have assumed typical room and window sizes (10-feet by 12-feet and 30% window area) with three part stucco exterior walls. Table 3 indicates the required range of STC ratings for buildings exposed to various noise levels throughout the site.

TABLE 3: REQUIRED STC RATINGS FOR EXTERIOR WINDOWS AND DOORS

L_{dn} Noise Level (dB)	STC Rating
70 to 75	STC 35 to 40
65 to 70	STC 30 to 35
60 to 65	No sound rating to STC 30
Less than 60	No sound rating

Shielding provided by barriers and future buildings will reduce the STC rating required. Once a site layout has been developed, an acoustical consultant should refine the STC recommendations in accordance with the proposed design.

Typical construction-grade dual-pane thermal windows achieve an STC rating of 28 to 30. It is important to note that the STC ratings are for full window assemblies (glass and frame) rather than just the glass itself. Tested sound-rated assemblies should be used. If non-tested assemblies are to be used, the STC rating of the glass may need to be increased.

Because windows must be closed to achieve the interior noise criteria, an alternate means of providing outside air (e.g., HVAC, Z-ducts, etc.) to habitable spaces is required for building facades exposed to an exterior L_{dn} of 60 dB, or greater. This would apply to all units on the northern side of the L_{dn} 60 dB contour line shown on Figure 3. Additional shielding provided by future buildings may decrease L_{dn} noise levels at residential units north of the 60 dB contour line below 60 dB, and should be evaluated once a site layout is available.

Market-Rate and Single-Event Interior Noise Standards

In our experience some developers may wish to exceed code minimum standards and market the project as "market-rate" housing. To meet the expectations of "market-rate" homeowners, we recommend reducing the interior L_{dn} 5 points less than the minimum State Standard, as well as reducing single-event noise levels to a maximum of 55 dBA in living rooms and 50 dBA in bedrooms. To meet L_{dn} 40 dB indoors, the STC ratings shown in Table 3 should be increased by approximately 5 points.

Our measurements show that single-event noise levels along Highway 1 were approximately 87 dBA (mostly due to truck and motorcycle pass-bys). The western property line experiences single-event noise levels of 84 dBA (due to truck pass-bys in the neighboring parking lot of the office park adjacent to the site). Depending on the setback of homes along the northern and western property lines, the STC ratings required to reduce single-event noise levels within market-rate standards will vary. Along the northern property line STC ratings would need to be increased by approximately 3 points. Therefore, reducing the L_{dn} to 40 dB indoors (increasing the STC ratings by 5 points) would also reduce single-event noise levels within market-rate standards.

For the western property line, STC ratings would need to be 35 to 40 at living rooms and 38 to 42 at bedrooms. Since the western property line is perpendicular to Highway 1 and Soquel Avenue, L_{dn} noise levels are not as high and will decrease with increased setback from the roadway. Therefore, controlling single-event noise levels to market-rate standards (STC 35 to 40 in living rooms and STC 38 to 42 in bedrooms) will also reduce the interior L_{dn} within market-rate standards. Once a site layout is available the STC recommendations to meet "market-rate" standards can be refined in accordance with the proposed design.

* * *

This concludes our environmental noise study for the Nigh Lumber environmental noise feasibility study. If you have any questions or comments, please do not hesitate to contact us.

Sincerely,

CHARLES M. SALTER ASSOCIATES, INC.

Alexander K. Salter
Consultant

Robert P. Alvarado
Vice President

Environmental Review Inital Study
ATTACHMENT 4, 2 of 32
APPLICATION 07-0414

A P P E N D I X A

FUNDAMENTAL CONCEPTS OF ENVIRONMENTAL NOISE

This section provides background information to aid in understanding the technical aspects of this report.

Three dimensions of environmental noise are important in determining subjective response. These are:

- The intensity or level of the sound
- The frequency spectrum of the sound
- The time-varying character of the sound

Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB), with 0 dB corresponding roughly to the threshold of hearing.

The "frequency" of a sound refers to the number of complete pressure fluctuations per second in the sound. The unit of measurement is the cycle per second (cps) or hertz (Hz). Most of the sounds, which we hear in the environment, do not consist of a single frequency, but of a broad band of frequencies, differing in level. The name of the frequency and level content of a sound is its sound spectrum. A sound spectrum for engineering purposes is typically described in terms of octave bands, which separate the audible frequency range (for human beings, from about 20 to 20,000 Hz) into ten segments.

Many rating methods have been devised to permit comparisons of sounds having quite different spectra. Surprisingly, the simplest method correlates with human response practically as well as the more complex methods. This method consists of evaluating all of the frequencies of a sound in accordance with a weighting that progressively de-emphasizes the importance of frequency components below 1000 Hz and above 5000 Hz. This frequency weighting reflects the fact that human hearing is less sensitive at low frequencies and at extreme high frequencies relative to the mid-range.

The weighting system described above is called "A"-weighting, and the level so measured is called the "A-weighted sound level" or "A-weighted noise level." The unit of A-weighted sound level is sometimes abbreviated "dBA." In practice, the sound level is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting characteristic. All U.S. and international standard sound level meters include such a filter. Typical sound levels found in the environment and in industry are shown in Figure A-1.

Although a single sound level value may adequately describe environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise is a conglomeration of distant noise sources, which results in a relatively steady background noise having no identifiable source. These distant sources may include traffic, wind in trees,

industrial activities, etc. and are relatively constant from moment to moment. As natural forces change or as human activity follows its daily cycle, the sound level may vary slowly from hour to hour. Superimposed on this slowly varying background is a succession of identifiable noisy events of brief duration. These may include nearby activities such as single vehicle pass-bys, aircraft flyovers, etc. which cause the environmental noise level to vary from instant to instant.

To describe the time-varying character of environmental noise, statistical noise descriptors were developed. "L10" is the A-weighted sound level equaled or exceeded during 10 percent of a stated time period. The L10 is considered a good measure of the maximum sound levels caused by discrete noise events. "L50" is the A-weighted sound level that is equaled or exceeded 50 percent of a stated time period; it represents the median sound level. The "L90" is the A-weighted sound level equaled or exceeded during 90 percent of a stated time period and is used to describe the background noise.

As it is often cumbersome to quantify the noise environment with a set of statistical descriptors, a single number called the average sound level or "L_{eq}" is now widely used. The term "L_{eq}" originated from the concept of a so-called equivalent sound level which contains the same acoustical energy as a varying sound level during the same time period. In simple but accurate technical language, the L_{eq} is the average A-weighted sound level in a stated time period. The L_{eq} is particularly useful in describing the subjective change in an environment where the source of noise remains the same but there is change in the level of activity. Widening roads and/or increasing traffic are examples of this kind of situation.

In determining the daily measure of environmental noise, it is important to account for the different response of people to daytime and nighttime noise. During the nighttime, exterior background noise levels are generally lower than in the daytime; however, most household noise also decreases at night, thus exterior noise intrusions again become noticeable. Further, most people trying to sleep at night are more sensitive to noise. To account for human sensitivity to nighttime noise levels, a special descriptor was developed. The descriptor is called the DNL (Day/Night Average Sound Level), which represents the 24-hour average sound level with a penalty for noise occurring at night. The DNL computation divides the 24-hour day into two periods: daytime (7:00 am to 10:00 pm); and nighttime (10:00 pm to 7:00 am). The nighttime sound levels are assigned a 10 dB penalty prior to averaging with daytime hourly sound levels.

For highway noise environments, the average noise level during the peak hour traffic volume is approximately equal to the DNL.

The effects of noise on people can be listed in three general categories:

- Subjective effects of annoyance, nuisance, dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as startle, hearing loss

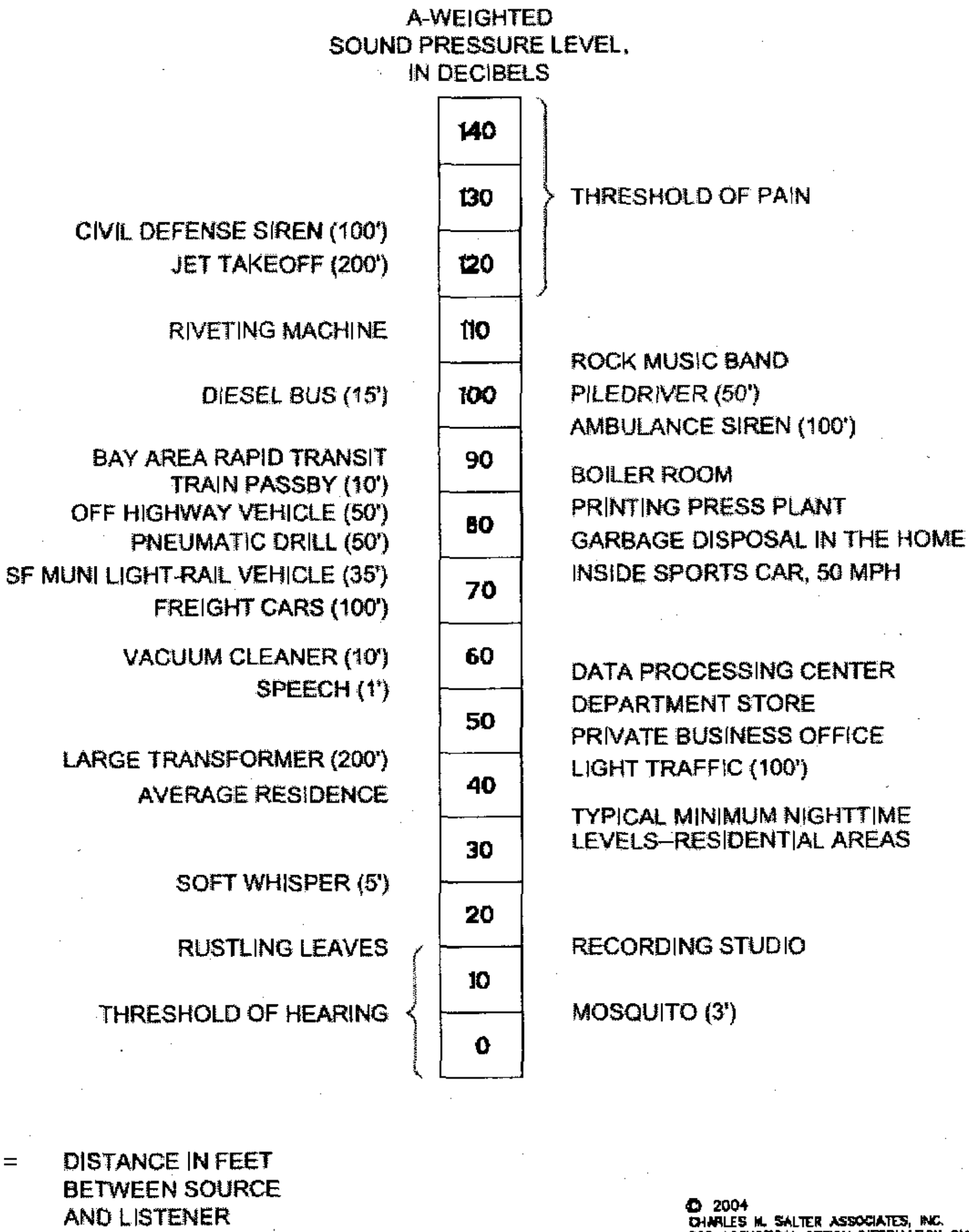
The sound levels associated with environmental noise usually produce effects only in the first two categories. Unfortunately, there has never been a completely predictable measure for the subjective effects of noise nor of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over time.

Thus, an important factor in assessing a person's subjective reaction is to compare the new noise environment to the existing noise environment. In general, the more a new noise exceeds the existing, the less acceptable the new noise will be judged.

With regard to increases in noise level, knowledge of the following relationships will be helpful in understanding the quantitative sections of this report:

Except in carefully controlled laboratory experiments, a change of only 1 dB in sound level cannot be perceived. Outside of the laboratory, a 3 dB change is considered a just-noticeable difference. A change in level of at least 5 dB is required before any noticeable change in community response would be expected. A 10 dB change is subjectively heard as approximately a doubling in loudness, and would almost certainly cause an adverse community response.

Environmental Review Inital Study
ATTACHMENT 4, Hot 32
APPLICATION 07-0414



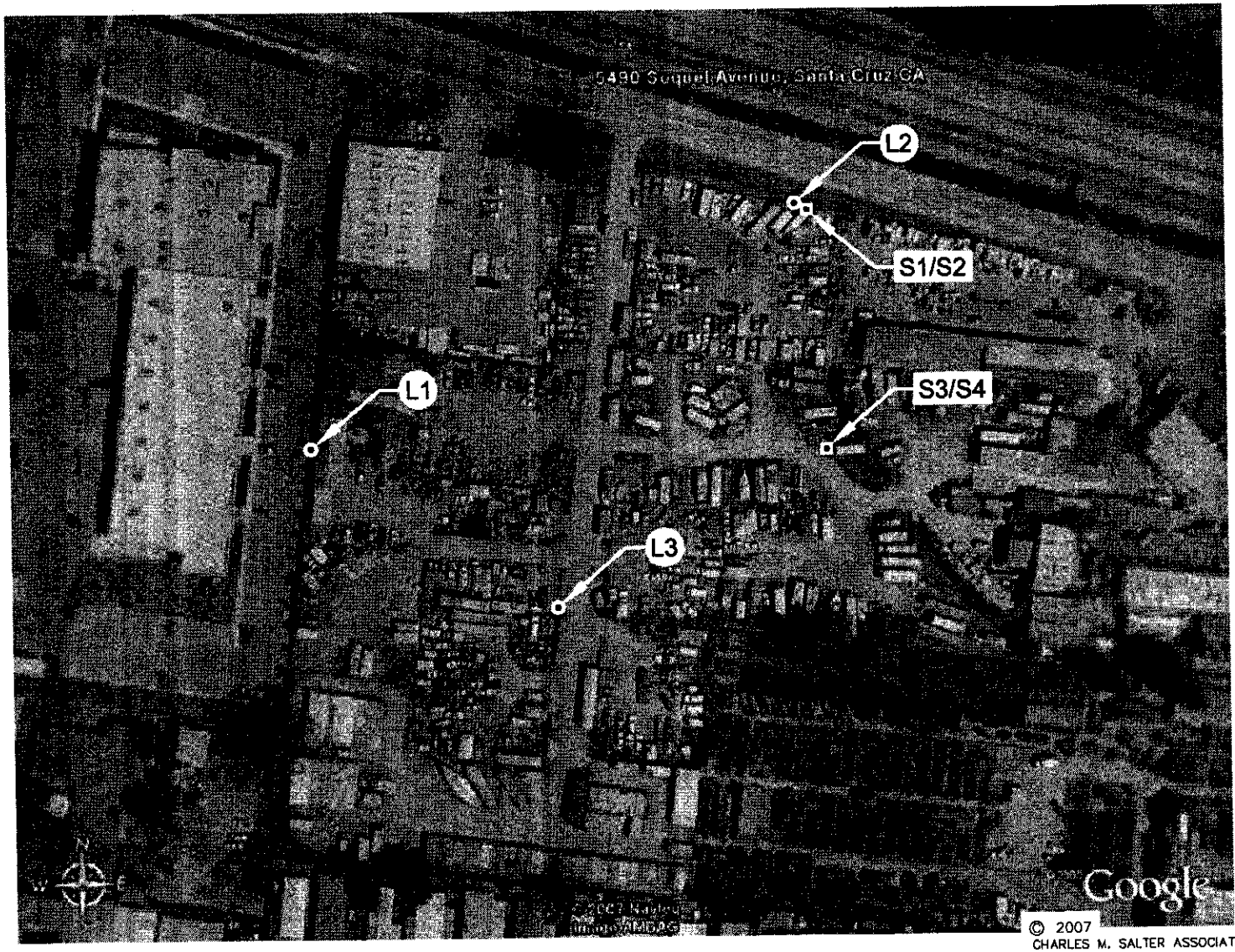
TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT AND INDUSTRY

FIGURE A1

1107 C 11.25.03

Environmental Review Inital Study
ATTACHMENT 4, 12 & 32
APPLICATION 07-0414

Environmental Review Initial Study
ATTACHMENT 4
APPLICATION 07-0133



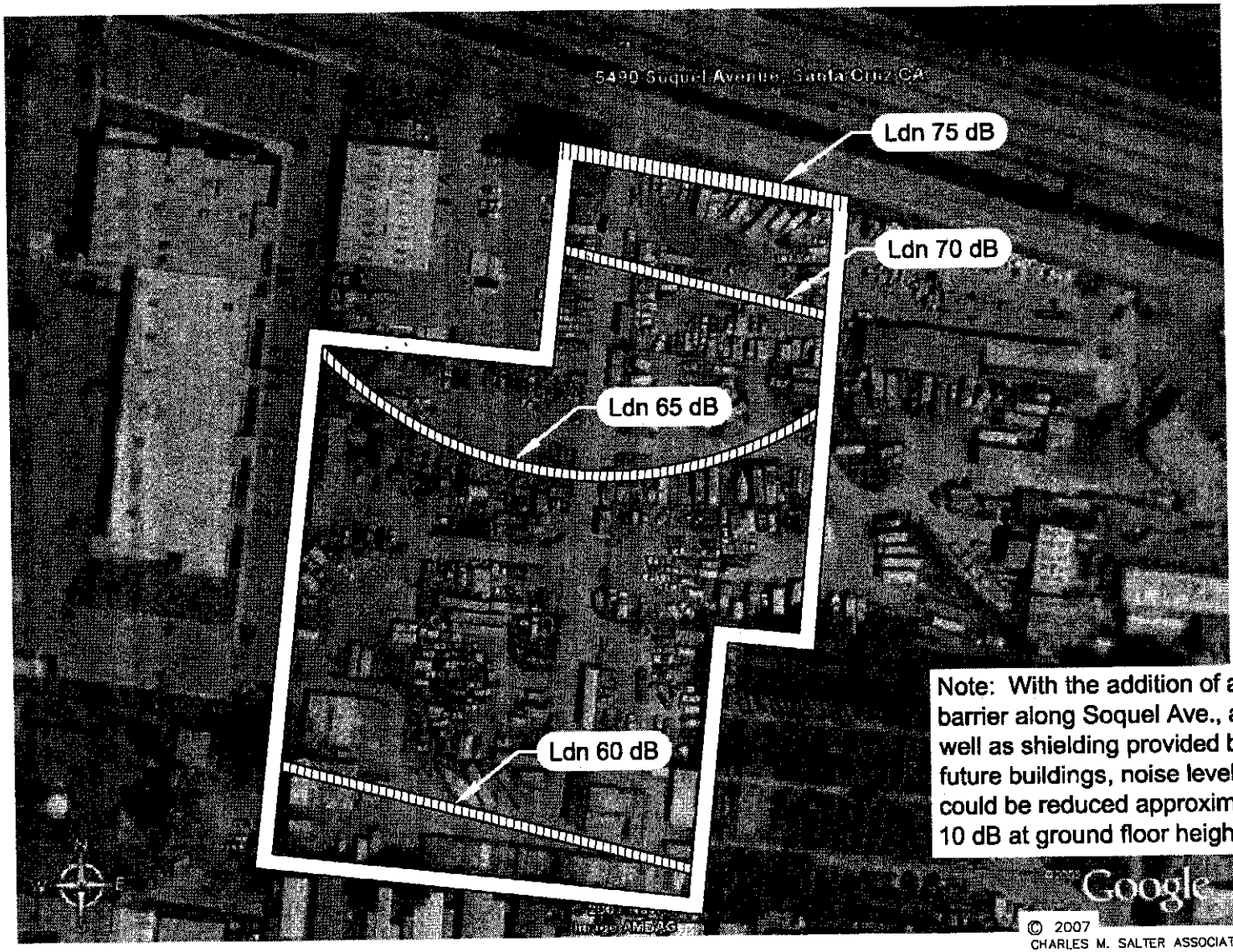
NIGH LUMBER SITE–SANTA CRUZ, CA.: LDN MEASUREMENT LOCATIONS

FIGURE 1

CSA # 07-0133

AKS 04.17.07

Charles M Salter Associates Inc
130 Sutter Street San Francisco California 94104 Tel 415 397 0442 Fax: 415 397 0454



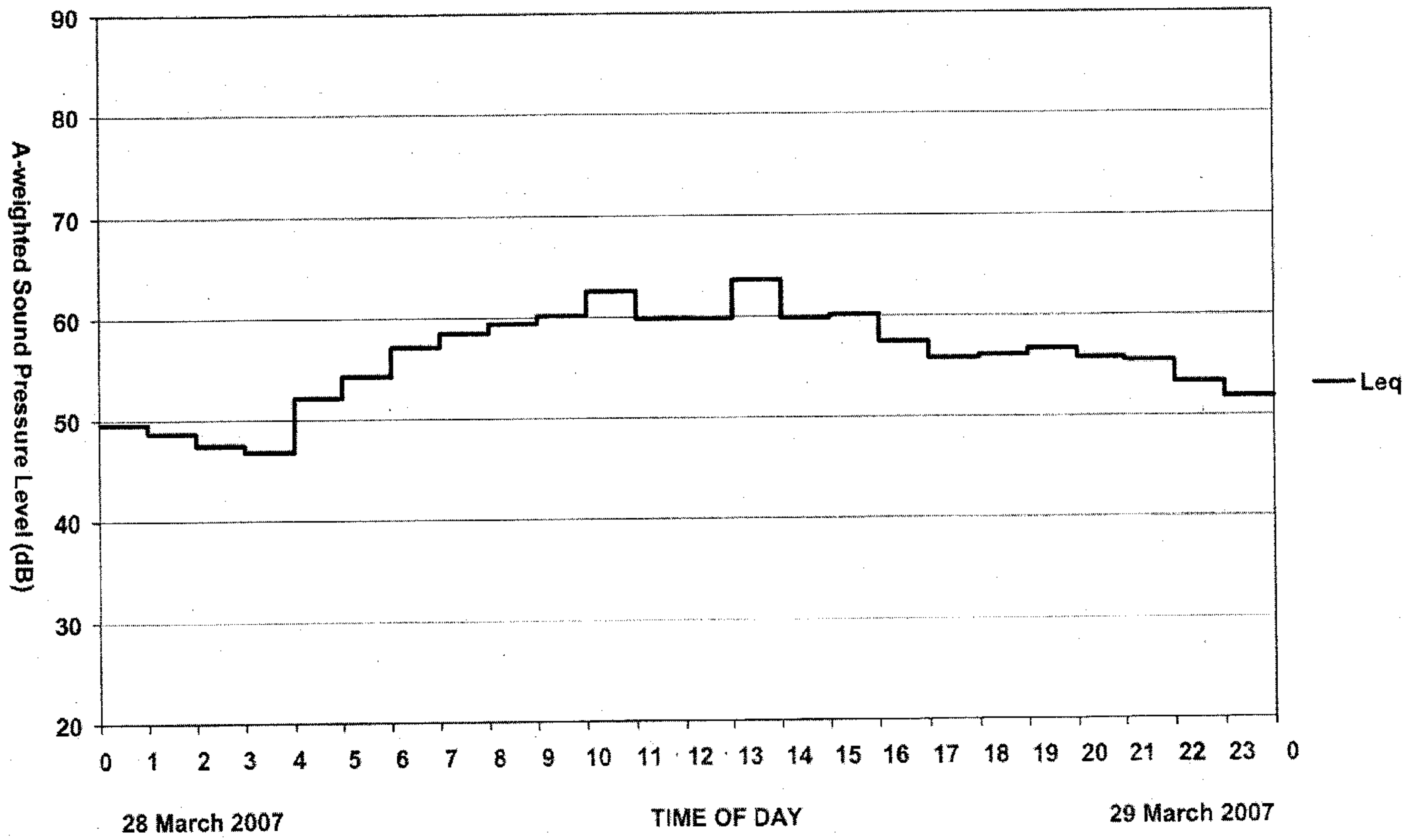
NIGH LUMBER SITE–SANTA CRUZ, CA.: L_{dn} NOISE CONTOURS

FIGURE 3

CSA # 07-0133

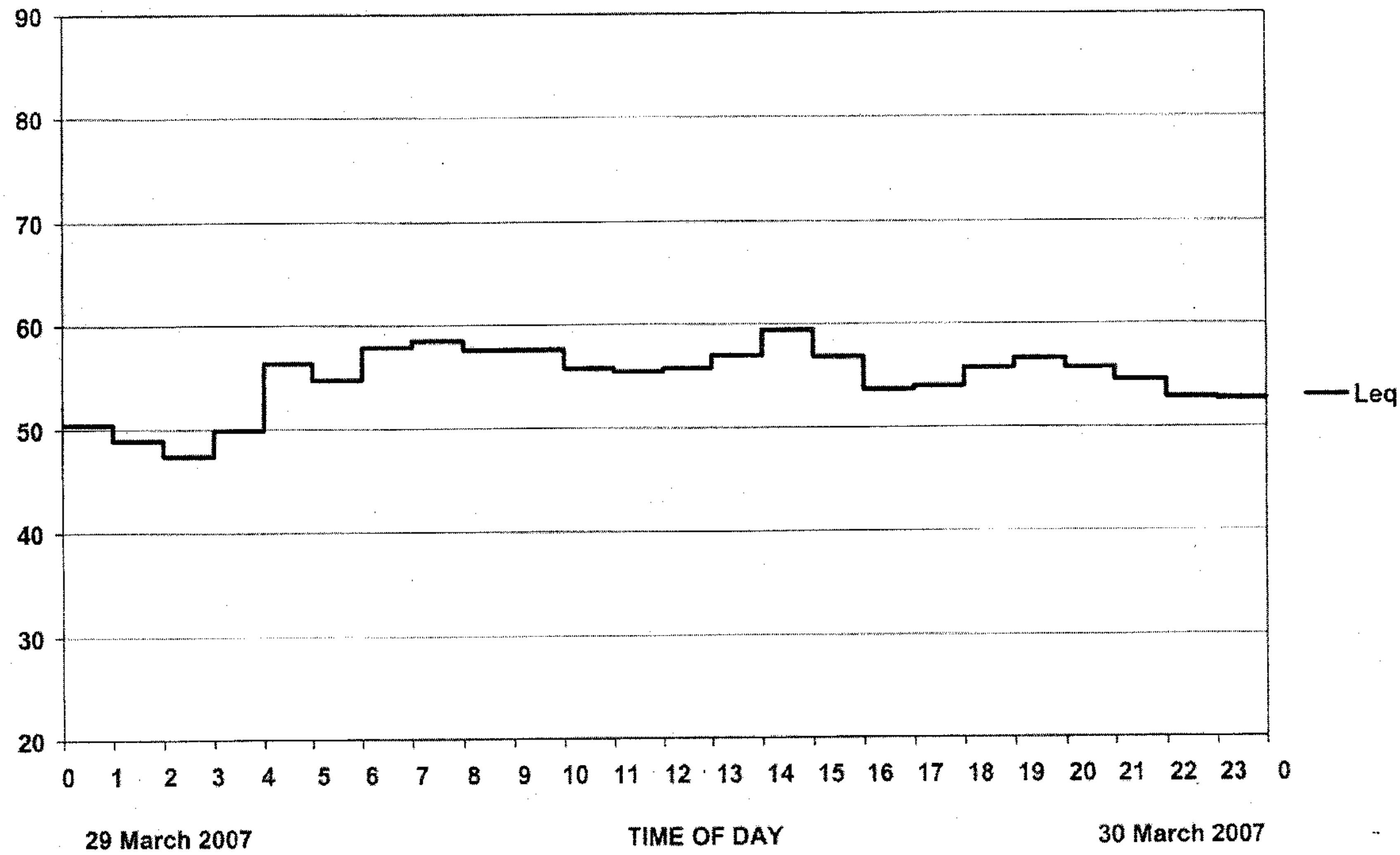
AKS 04.17.07

Charles M Salter Associates Inc
130 Sutter Street San Francisco California 94104 Tel: 415 397 0442 Fax: 415 397 0454



Hourly Leq Noise Levels - 28 March 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L1
DNL = 61 dB

Environmental Review Inital Study
ATTACHMENT 4, 15 of 32
APPLICATION 07-0414

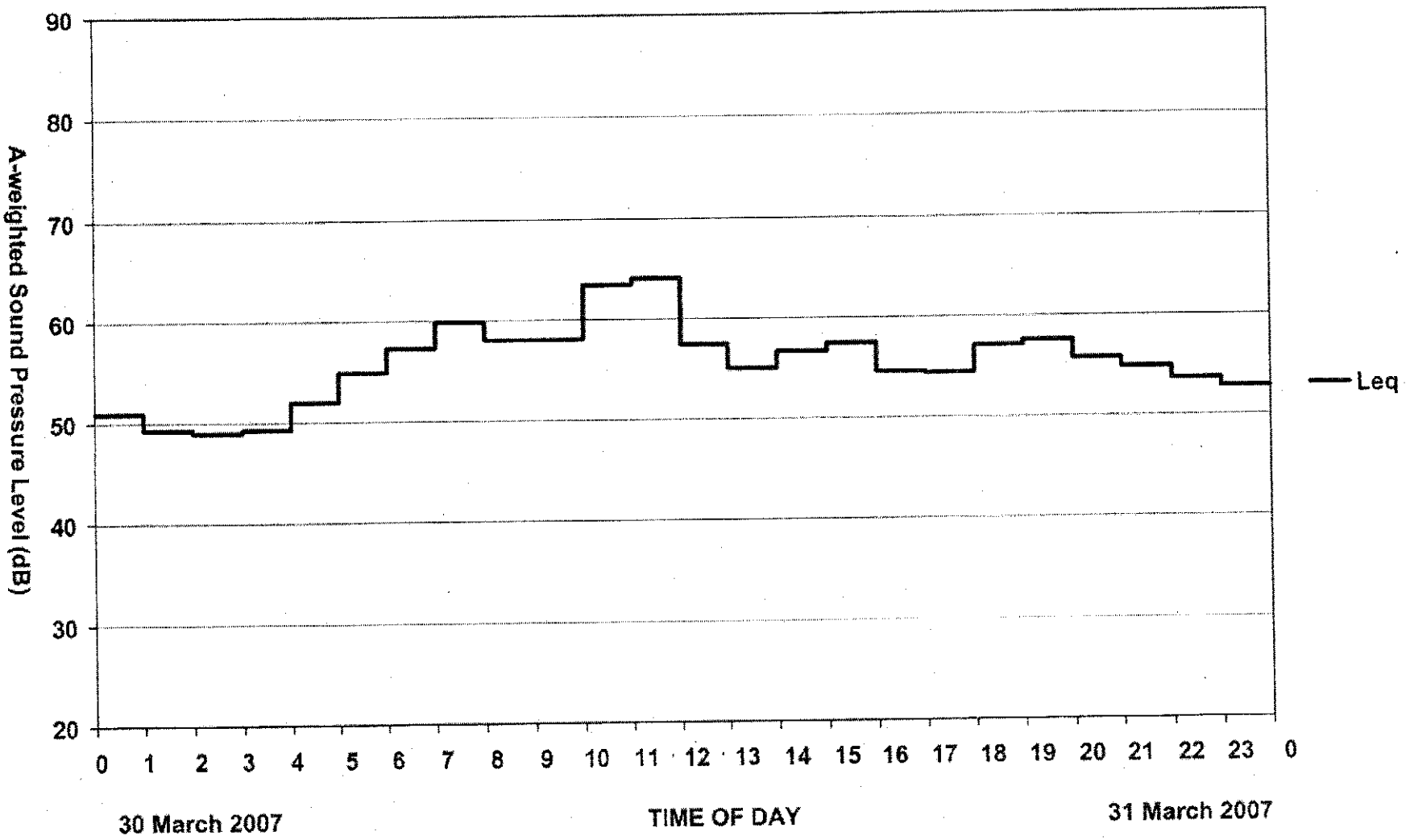


Hourly Leq Noise Levels - 29 March 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L1
DNL = 61 dB

Environmental Review Inital Study
ATTACHMENT 4, 16 of 32
APPLICATION 07-0414

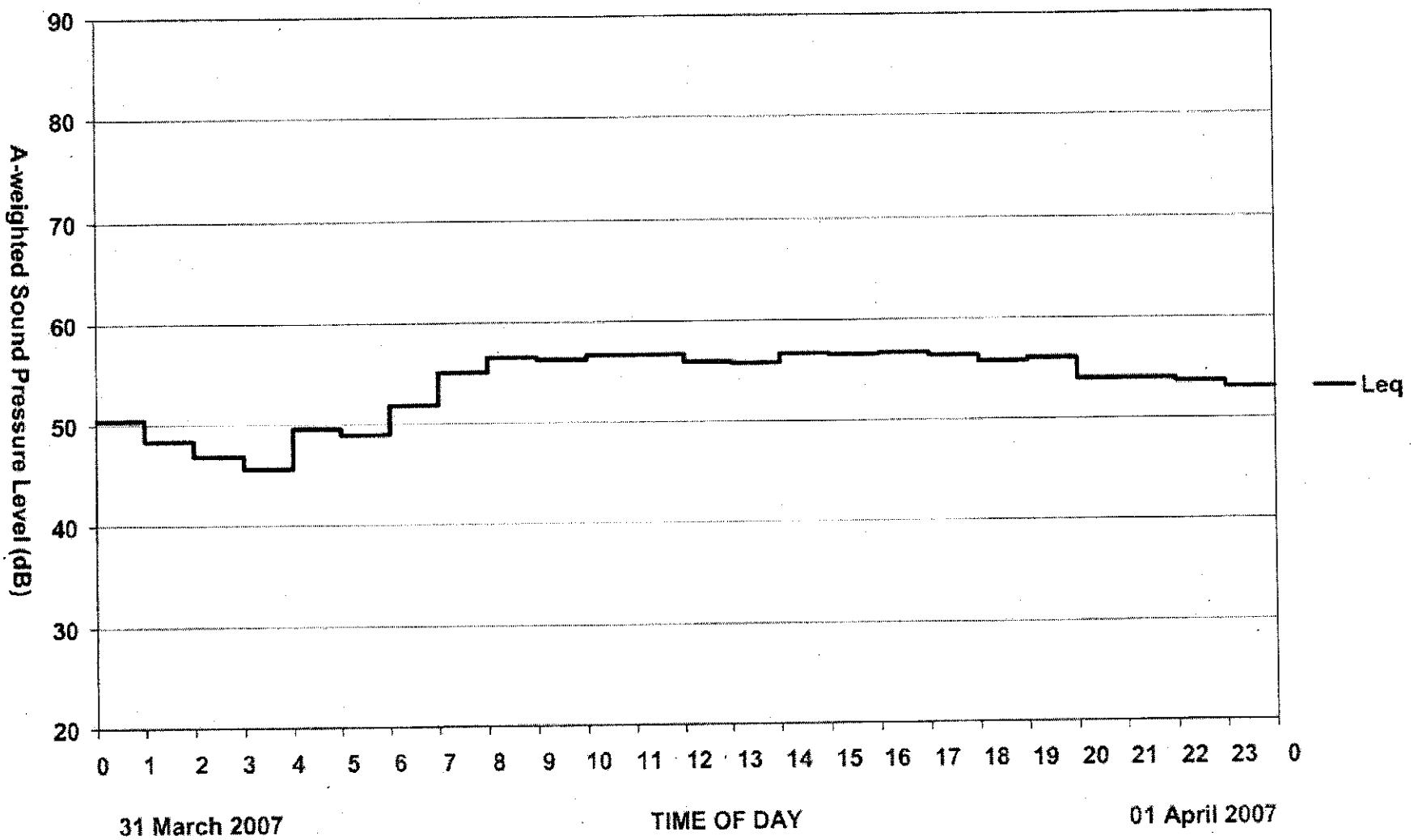
ATTACHMENT 4 (12 of 13)
APPLICATION 07-0414

Environmental Review Inital Study



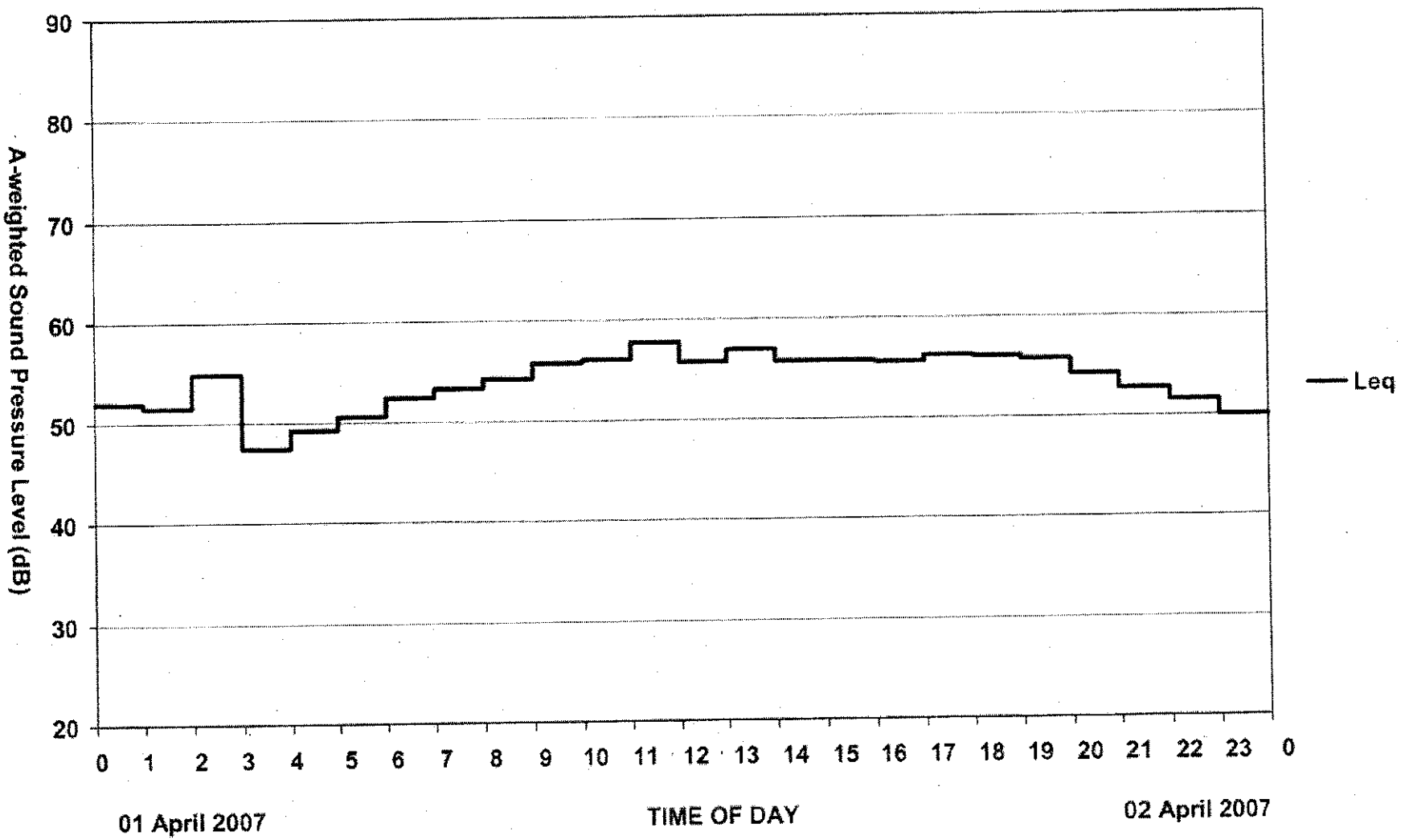
Hourly Leq Noise Levels - 30 March 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L1
DNL = 61 dB

Environmental Review Intial Study
ATTACHMENT 4 (Part 3 of 3)
APPLICATION 07-0411



Hourly Leq Noise Levels - 31 March 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L1
DNL = 58 dB

ATTACHMENT 4 to Environmental Review Inital Study
APPLICATION 07-0233



Hourly Leq Noise Levels - 1 April 2007
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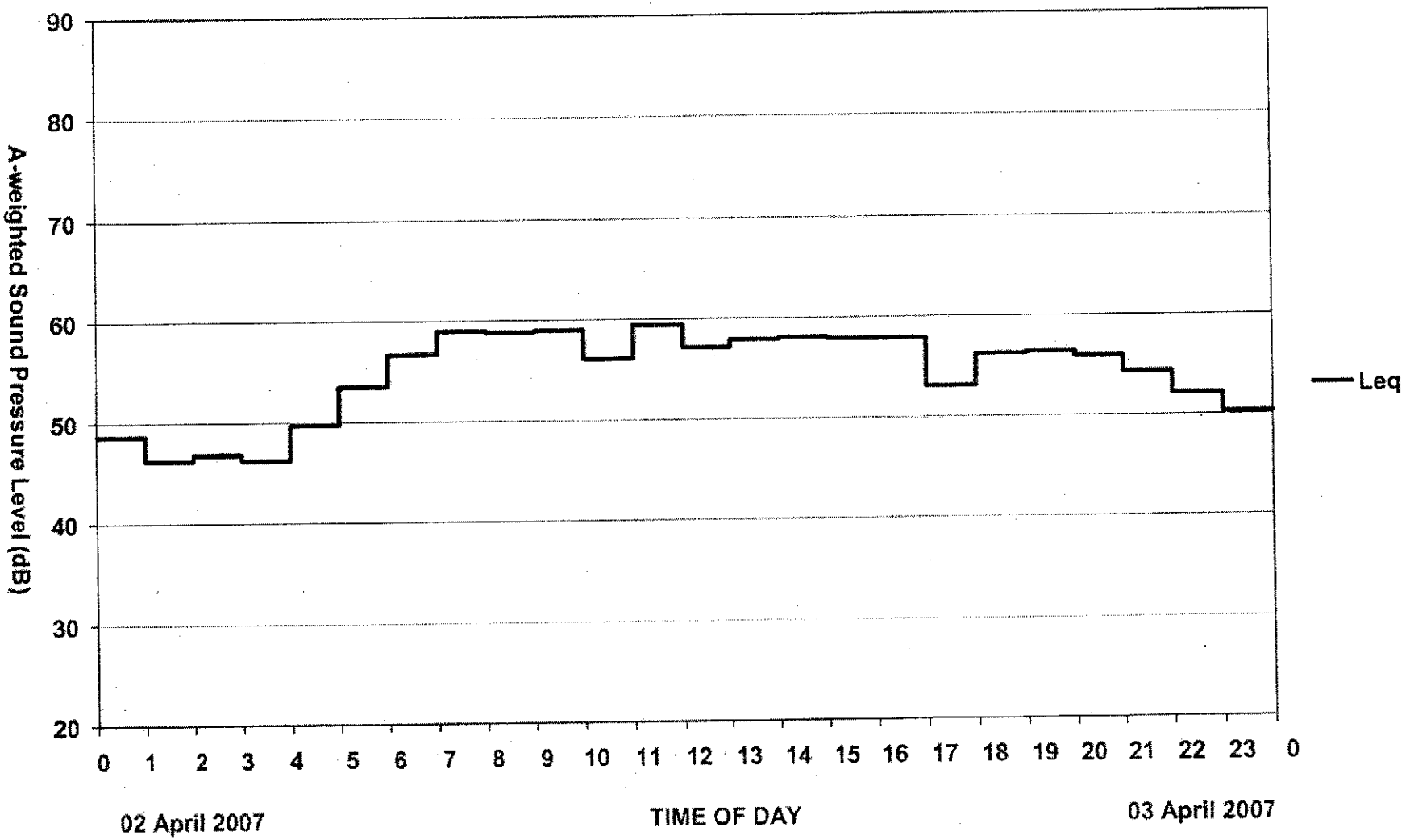
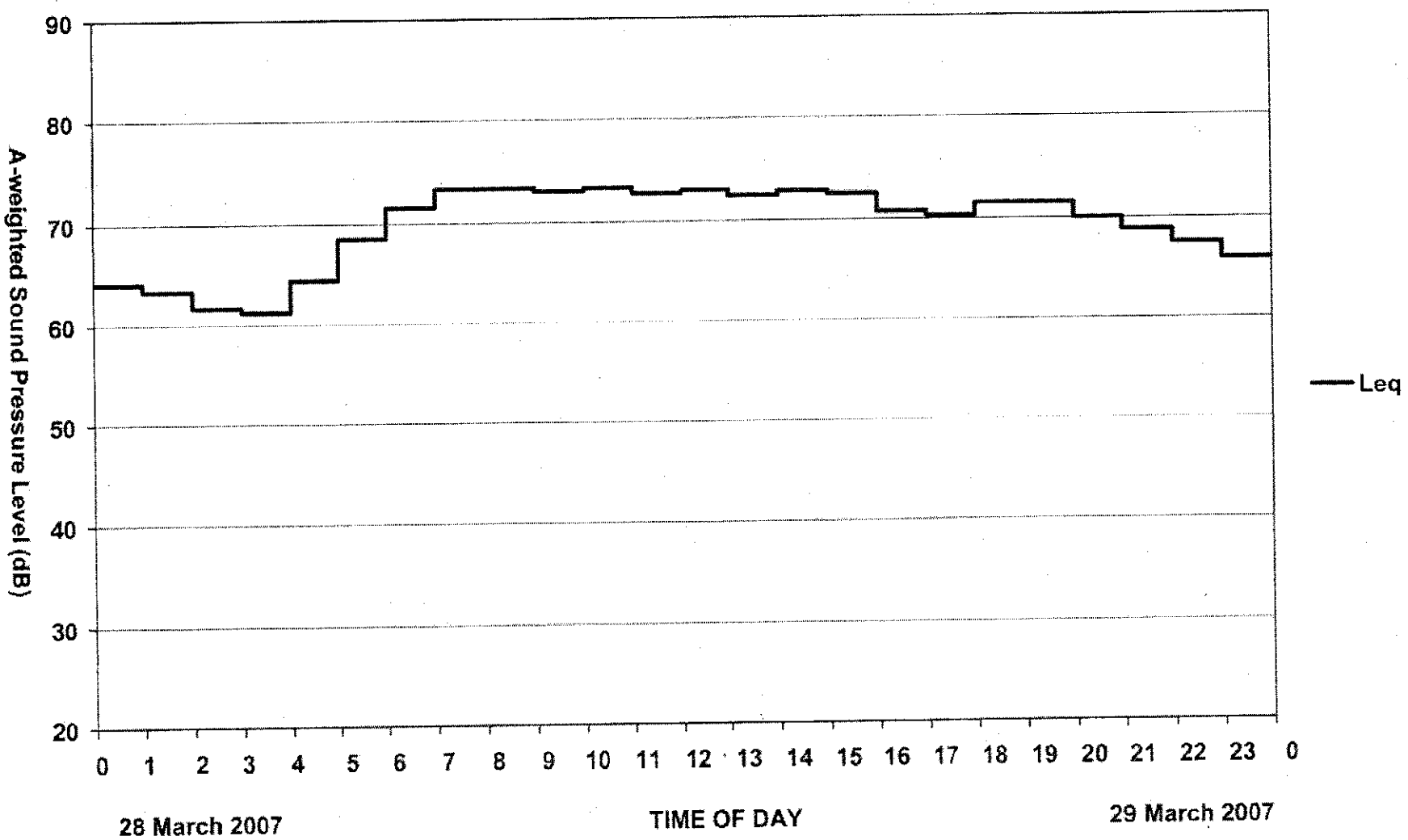
Location L1
DNL = 59 dB

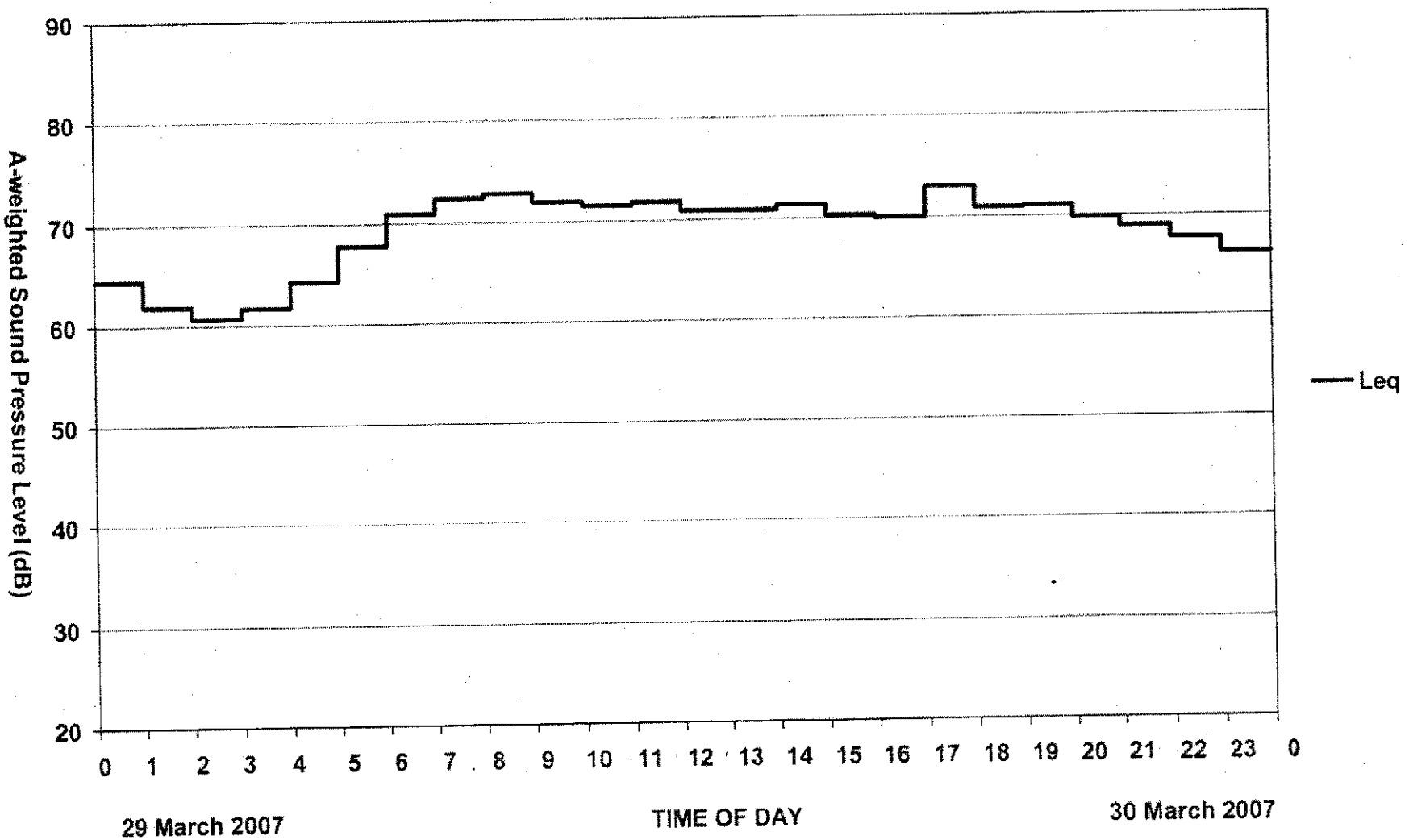


Hourly Leq Noise Levels - 2 April 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L1
DNL = 59 dB

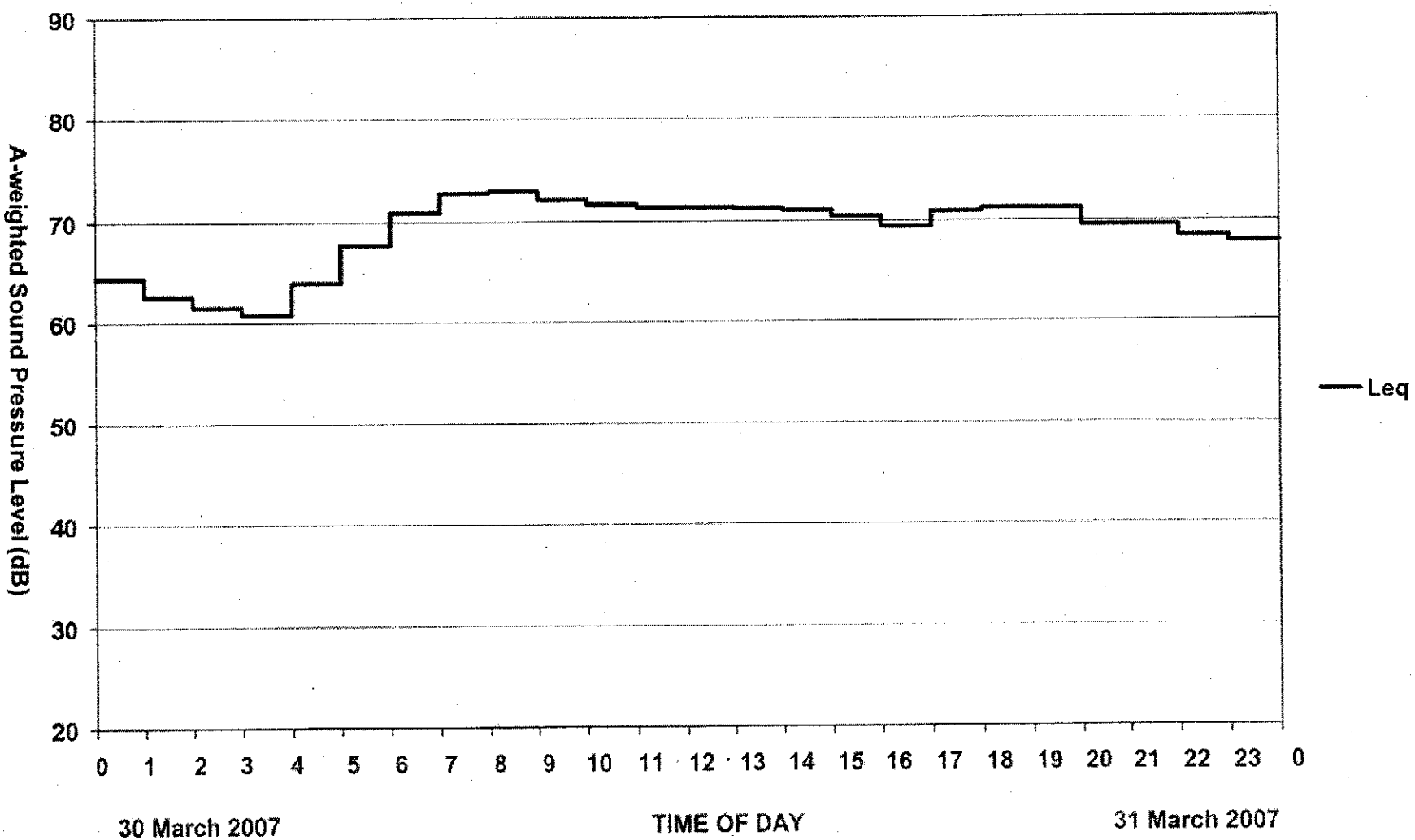


Hourly Leq Noise Levels - 28 March 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L2
DNL = 74 dB

Environmental Review Initial Study
ATTACHMENT 4
APPLICATION 07-0432



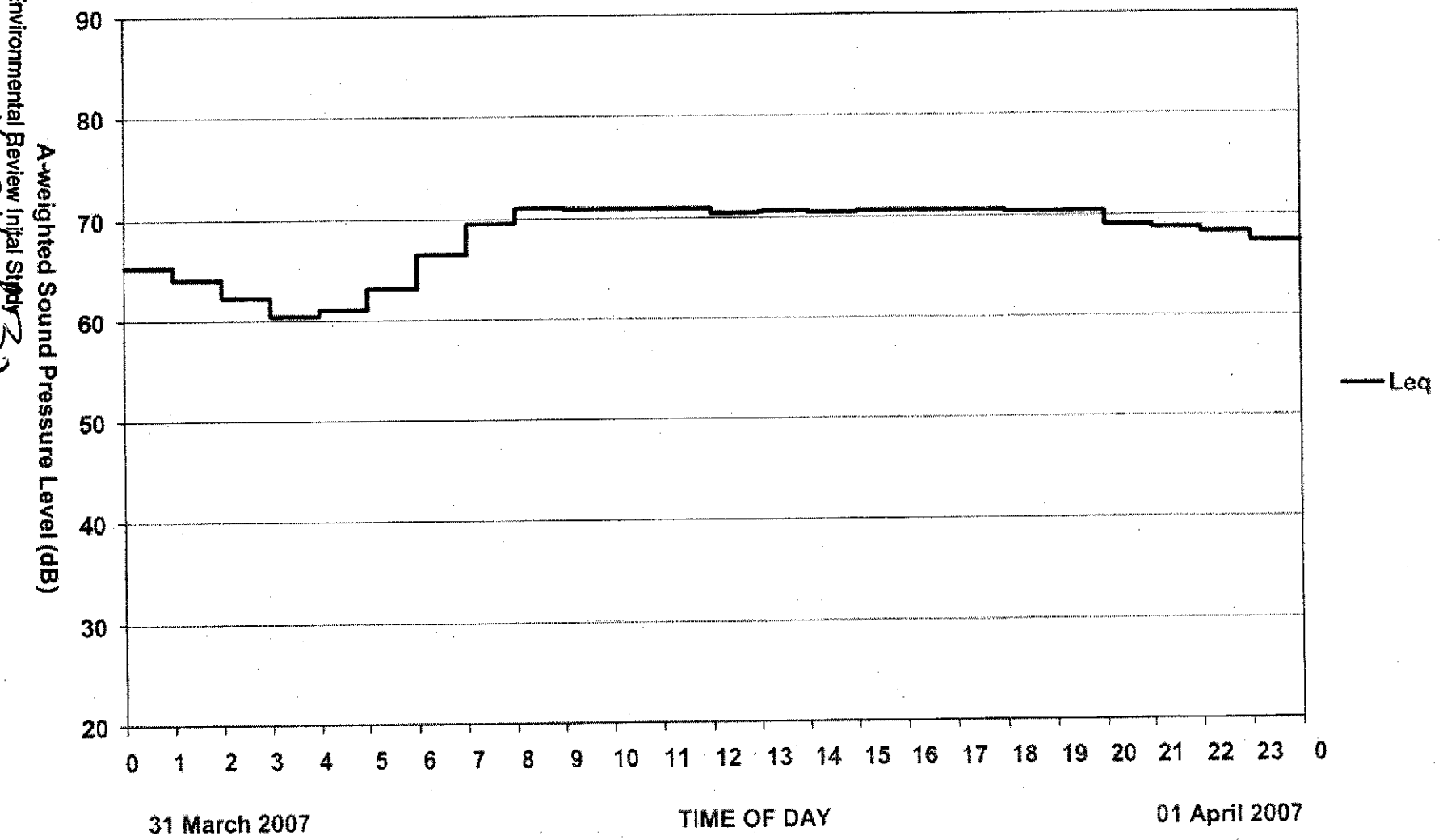
Hourly Leq Noise Levels - 29 March 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L2
DNL = 74 dB



Hourly Leq Noise Levels - 30 March 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L2
DNL = 74 dB

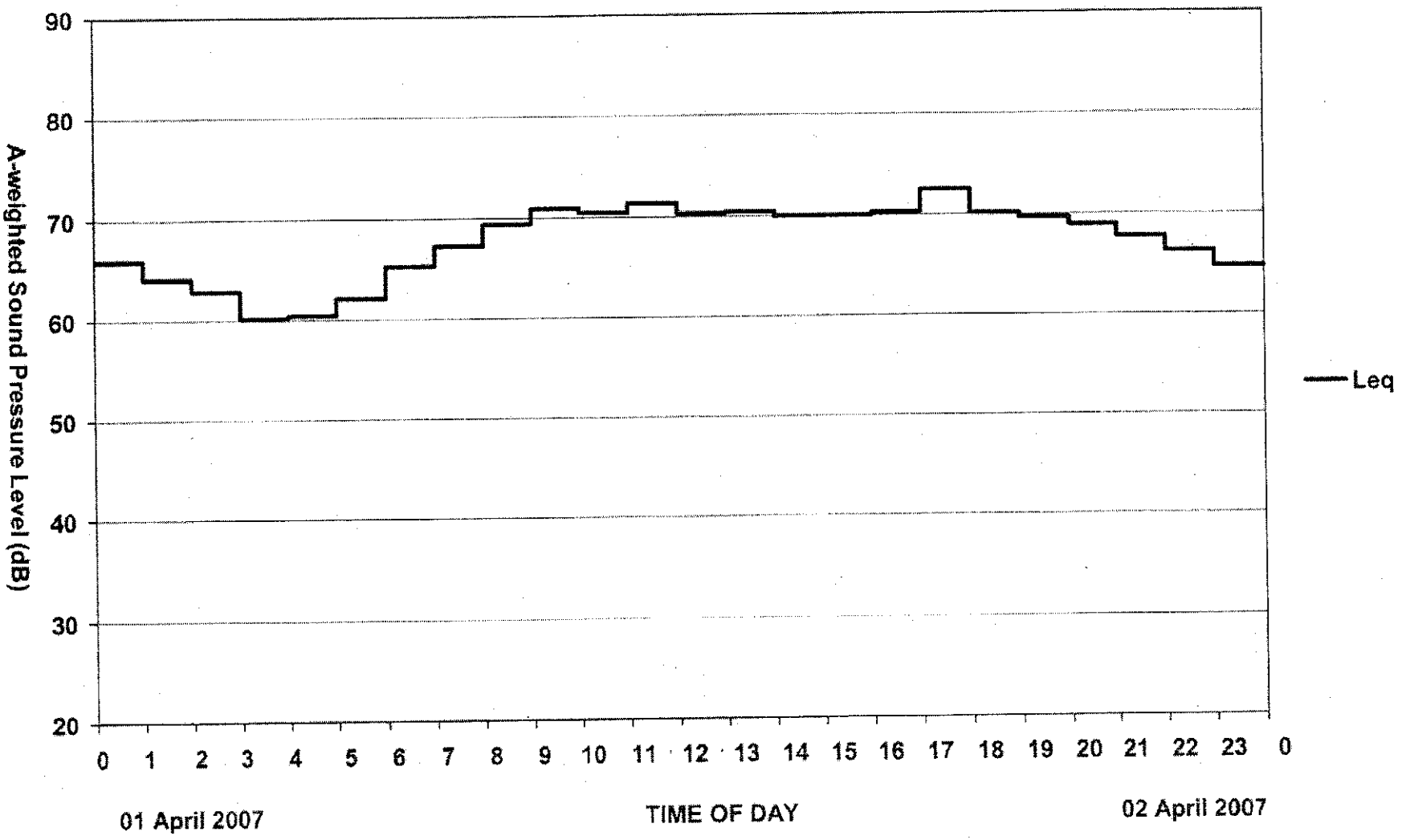
ATTACHMENT 4
APPLICATION 07-0244

Environmental Review Initial Study

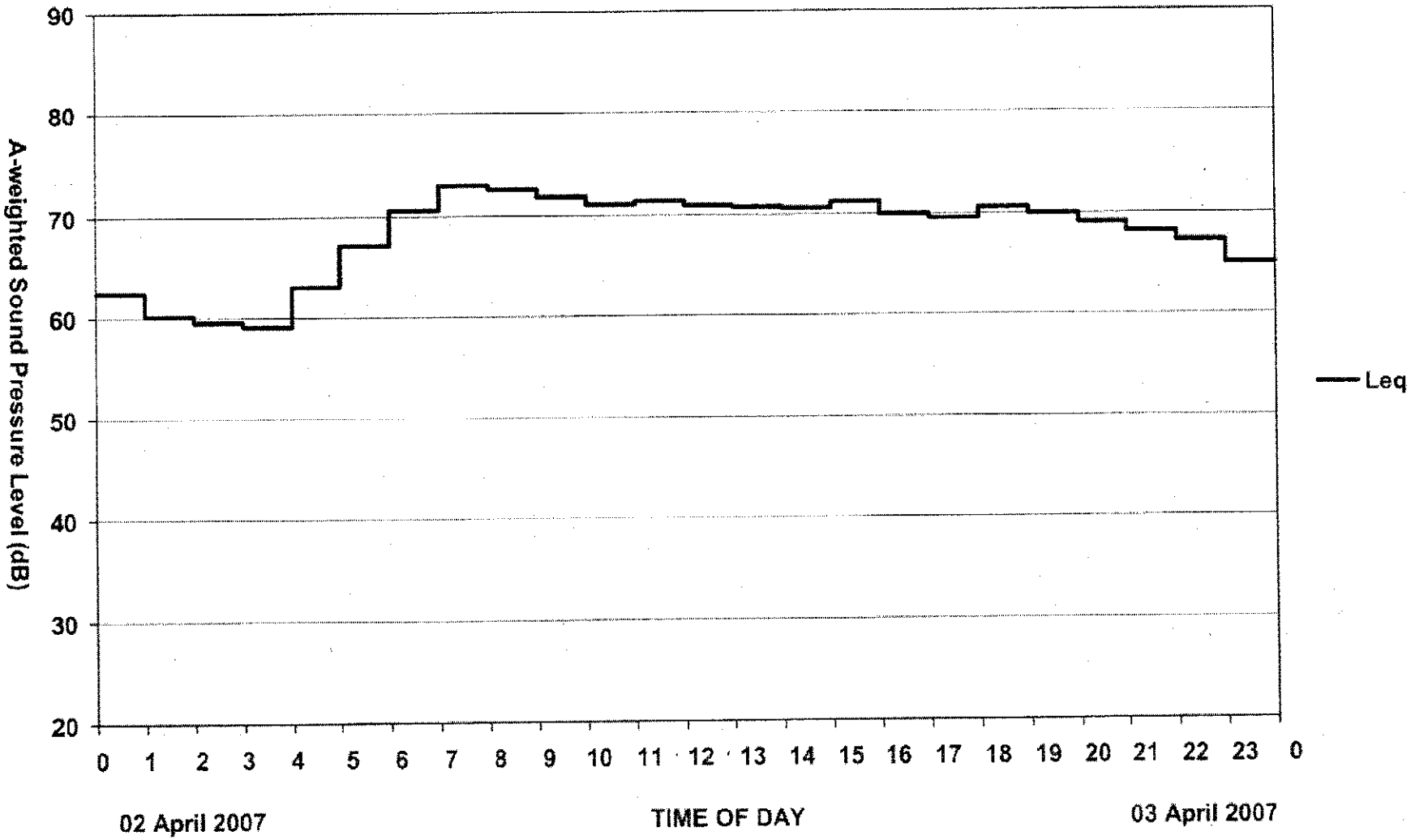


Hourly Leq Noise Levels - 31 March 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L2
DNL = 73 dB

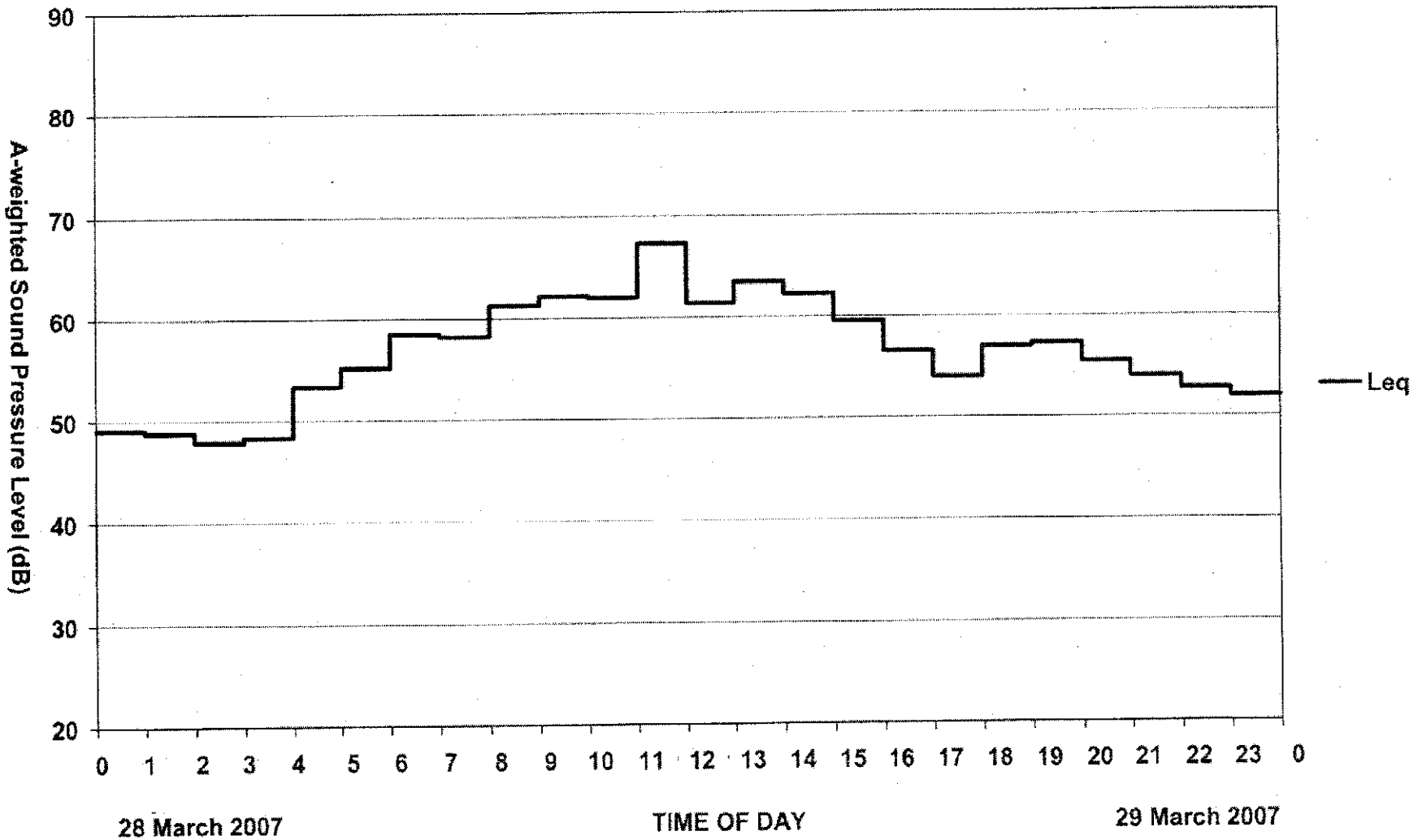
ATTACHMENT 4 Environmental Review Inital Study
APPLICATION 07-0414



Hourly Leq Noise Levels - 1 April 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L2
DNL = 72 dB

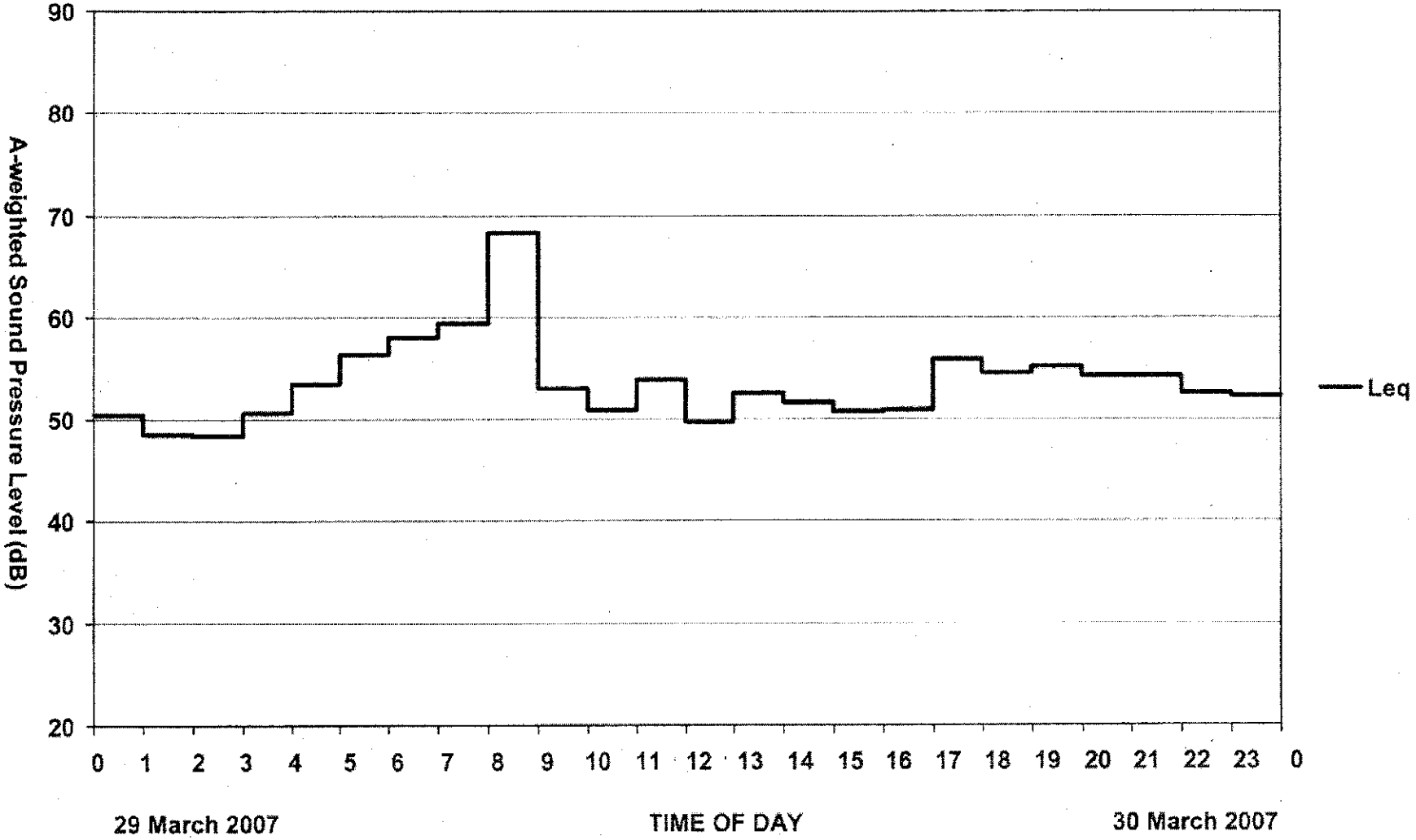


Hourly Leq Noise Levels - 2 April 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L2
DNL = 73 dB



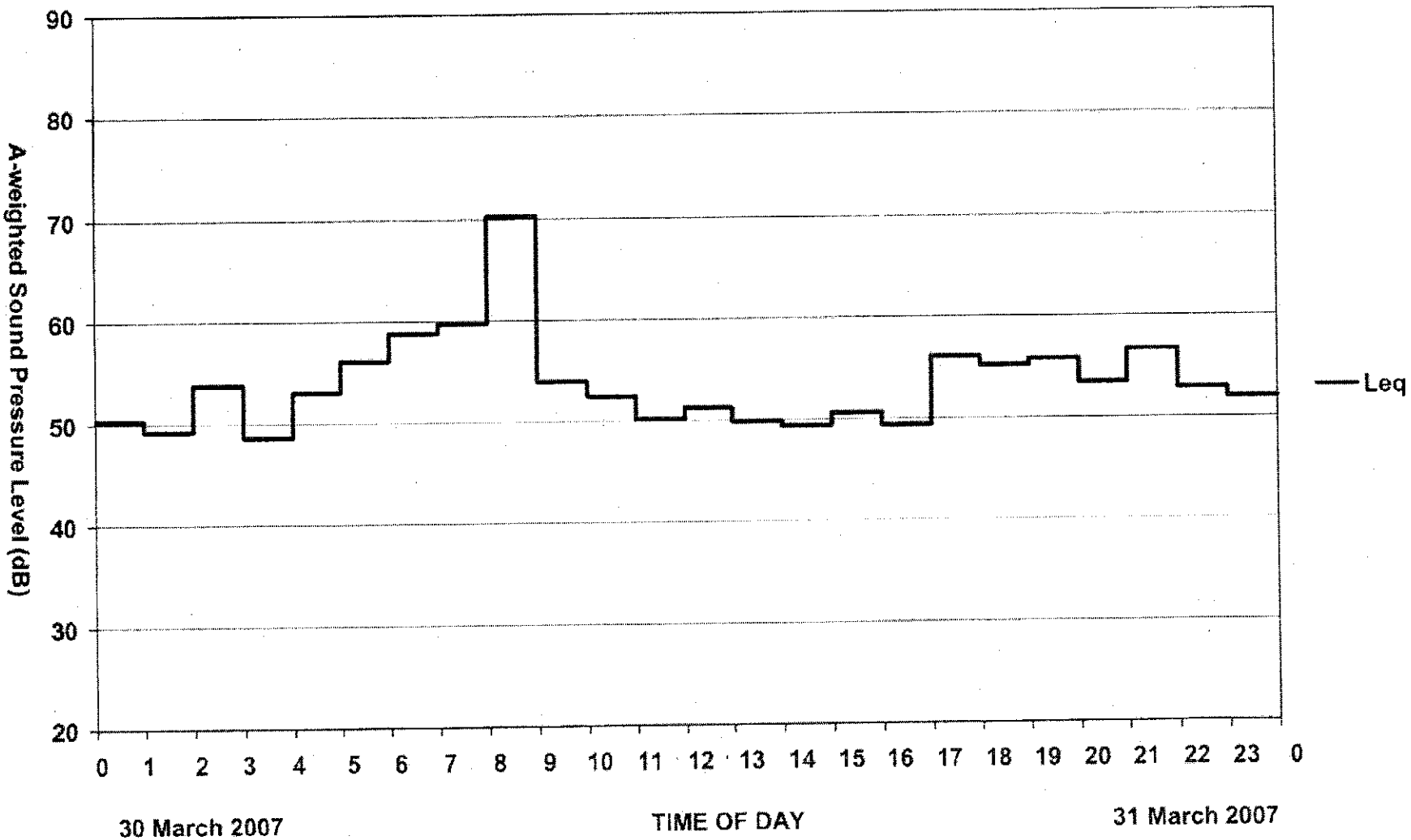
Hourly Leq Noise Levels - 28 March 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L3
DNL = 62 dB

ATTACHMENT 4 Environmental Review Initial Study
APPLICATION 07-0412



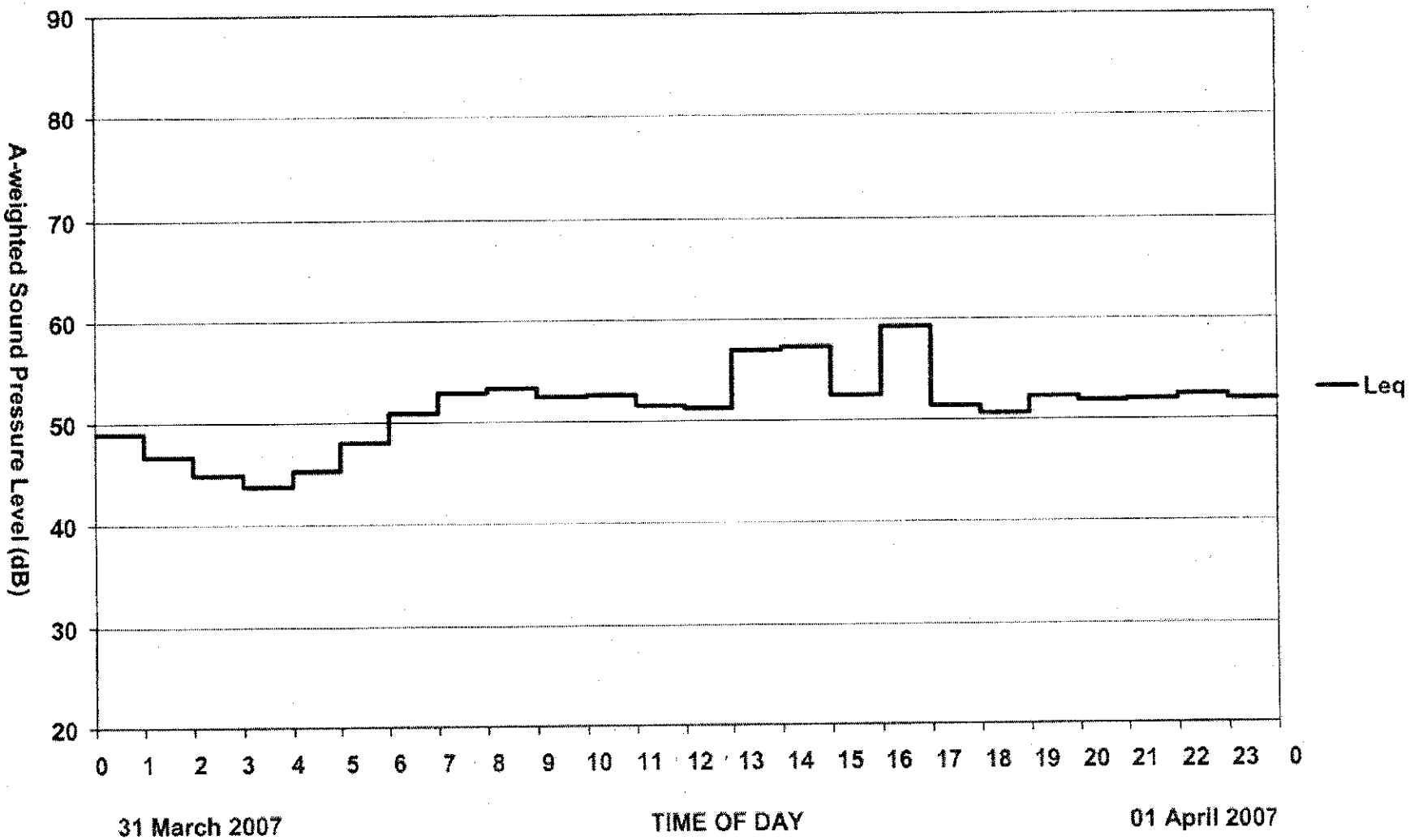
Hourly Leq Noise Levels - 29 March 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L3
DNL = 61 dB

Environmental Review Initial Study
ATTACHMENT 4, 2 of 32
APPLICATION 07-0414

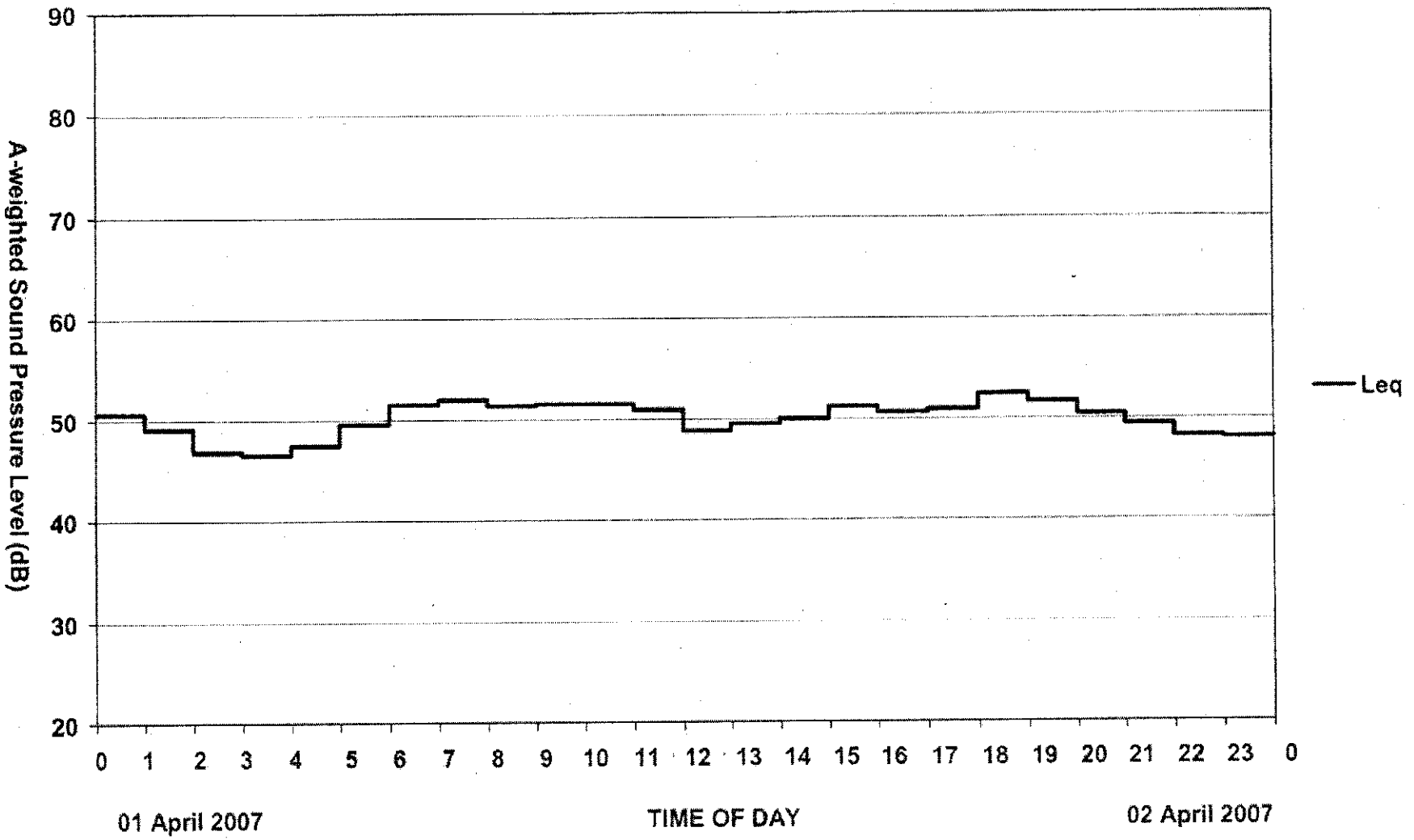


Hourly Leq Noise Levels - 30 March 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L3
DNL = 62 dB

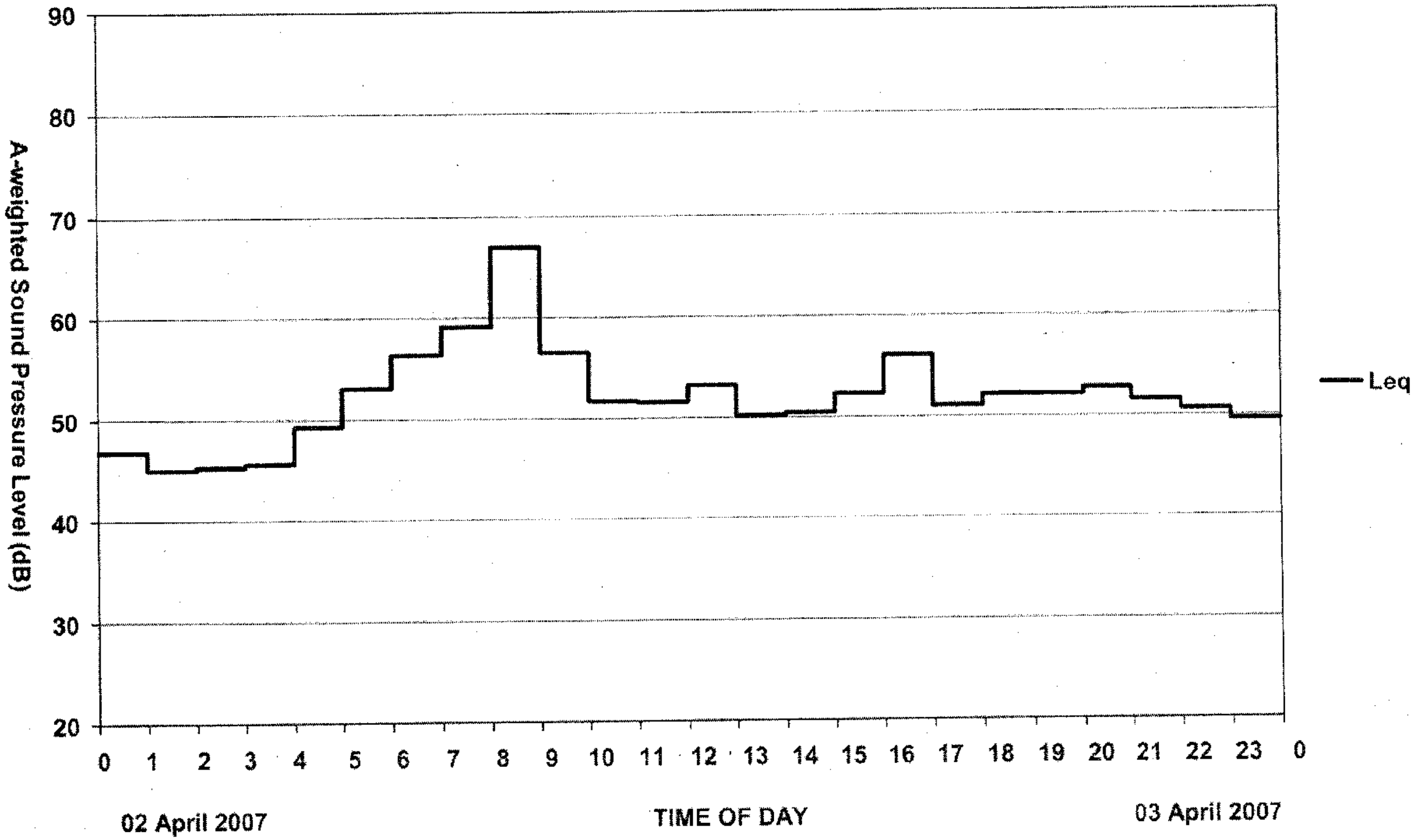
ATTACHMENT 4 Environmental Review Inital Study
APPLICATION 07-0443



Hourly Leq Noise Levels - 31 March 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L3
DNL = 57 dB



Hourly Leq Noise Levels - 1 April 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L3
DNL = 56 dB



Hourly Leq Noise Levels - 2 April 2007
5490 Soquel Avenue - Santa Cruz, CA
Location L3
DNL = 59 dB

Environmental Review Inital Study
ATTACHMENT 4, 32 of 32
APPLICATION 07-0414

ATTACHMENT E

DRAINAGE STUDY FOR NIGH PROPERTY, SANTA CRUZ, CALIFORNIA, AUGUST 2008

DRAINAGE STUDY

FOR

Nigh Property

Santa Cruz County, California

APN: 029-021-46, 47

FOR:

Santa Cruz County Planning Department

August, 2008

Job 08041

Prepared by: Ryan Chapatte

Environmental Review Inital Study
ATTACHMENT 5 2 of 26
APPLICATION 07-0414

IFLAND ENGINEERS
Civil Engineering ▪ Structural Design ▪ Land Development

5200 Soquel Avenue Suite 102
Santa Cruz, CA 95062
(831) 426-5313 FAX (831) 426-1763
www.iflandengineers.com

Introduction:

The purpose of the subject drainage study is to evaluate probable impacts to Rodeo Gulch resulting from development of the two most westerly parcels of the site commonly known as Nigh Lumber and consisting of 7.7 acres. The area under study is shown on the "Existing Conditions" vicinity map included herein.

The drainage area included in the study consists of approximately 60 acres lying both north and south of Highway 1 and includes the former Drive-In movie theater site, recently purchased by Sutter Health. This study assumes that no impacts will result from the change in use of that site.

Resources for the study include the County of Santa Cruz Zone 5 Master Plan, field site reconnaissance of existing channel conditions and outfalls, as well as subdivision improvement plans and constructed drainage systems within the study area.

Environmental Review Inital Study
ATTACHMENT 5 3 of 26
APPLICATION 07-0414

Existing Conditions:

The subject property is approximately 7.7 acres in total size and is located just south of Soquel Avenue between Mattison Lane and Chanticleer Avenue. The property is separated into two parcels. The east parcel contains a construction material supplier yard. The west parcel is an undeveloped plot of land that is used for storing cars, boats, RV's, etc.

Currently, the drainage from the properties north of Highway 1 flows through a 36" RCP culvert under Highway 1 followed by a combination of drainage ditches, vegetated swales, graded swales, concrete channels and underground storm drain pipes. The drainage makes its way through the subject property and then across multiple properties before it is finally discharged into Rodeo Gulch through the outfall approximately 1,500 feet south of Highway 1. A more detailed description of the existing drainage path is outlined in the *Existing Drainage* section of this report. The attached *Existing Drainage Map* shows the existing drainage features.

Since there have been no major developments in recent years in the drainage basin just north of Highway 1, the Zone 5 Master Drainage Plan will serve as the source for the drainage quantity used in the analysis of the drainage from the properties north of Highway 1. These properties include the former Drive-In movie theater, Good Shepard Middle School, the Emerald Bay Apartments along Soquel Drive and some of the residential properties along Mattison Lane.

The Zone 5 Master Drainage Plan was also used to quantify the existing drainage in Rodeo Gulch at the points of interest (A, B, C & D). According to Master Drainage Plan, the flow rates and capacities at points along Rodeo Gulch are as follows.

Point:	Type	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)	Capacity (cfs)
A	Natural channel	332	520	677	864	663
B	Concrete culvert	332	520	677	864	656
C	Natural channel	339	528	688	877	549
D	Natural channel	371	574	744	945	675

Based on this data, the existing channel is capable of handling a 25 year storm event within the study area.

The attached *Vicinity Map – Existing Conditions* shows the existing drainage basin as well as the points of interest.

Environmental Review Inital Study
ATTACHMENT 5, 4 of 26
APPLICATION 07-0414

dskproj\2008\080... dwg\Exhibit.dwg 08Aug08 01:35:29 PM ryanchapatte © IFLAND ENGINEERS, INC.

300' 0' 150' 300' 600'

GRAPHIC SCALE: 1 INCH = 300 FEET

Vicinity Map - Existing Conditions

SCALE: 1" = 300'

Environmental Review Inital Study
ATTACHMENT 5, 5 of 26
APPLICATION 07-0414

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SCALE: 1" = 300'

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FAX (831) 426-1763
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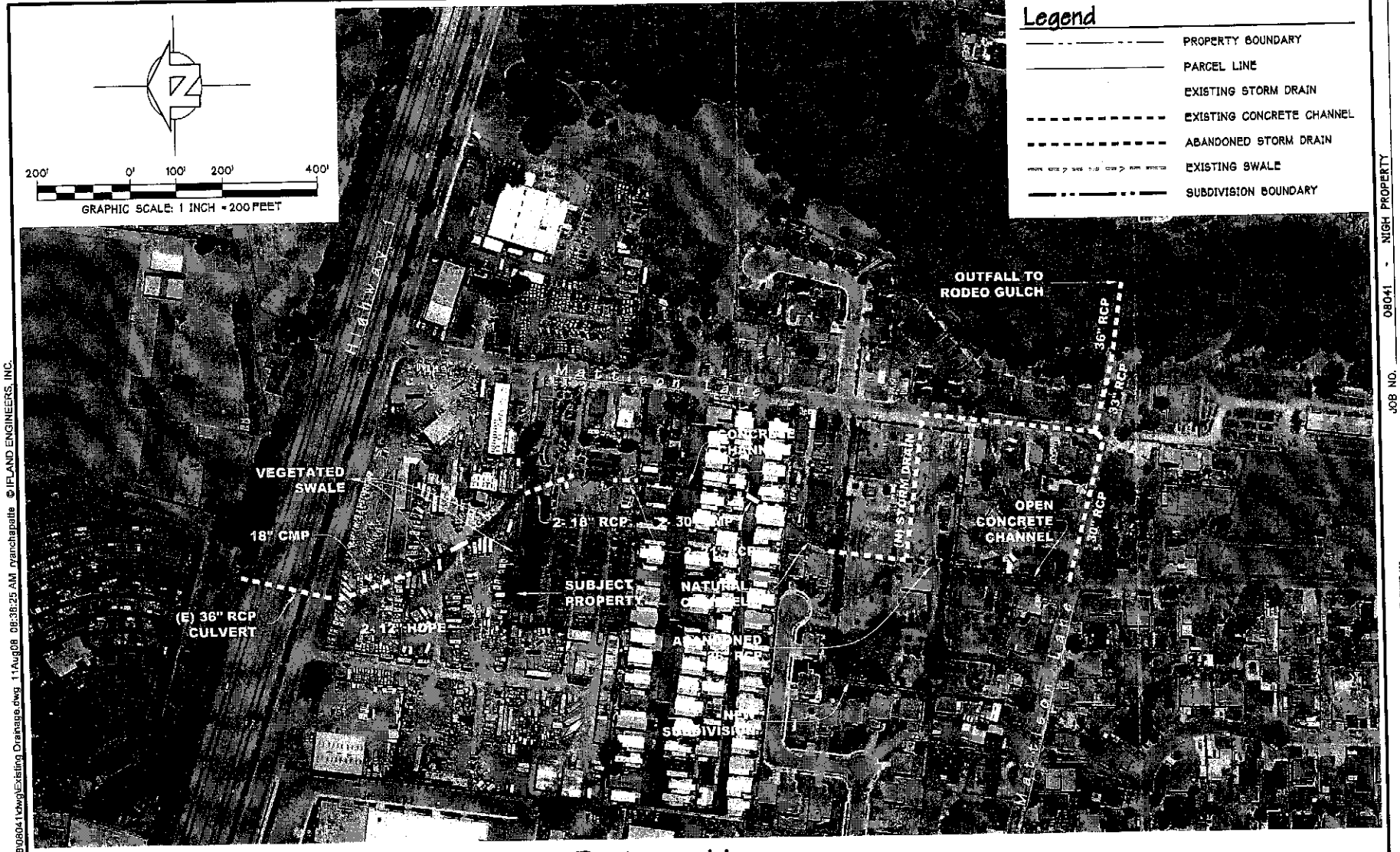

Existing Drainage Map

SCALE: 1" = 200'

JOB NO. 08041 - NIGH PROPERTY
SHEET NO. ____ OF ____
CALCULATED BY RYAN DATE 7/28/08
SCALE: 1" = 200'

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Environmental Review Inital Study
ATTACHMENT 5, 6 of 26
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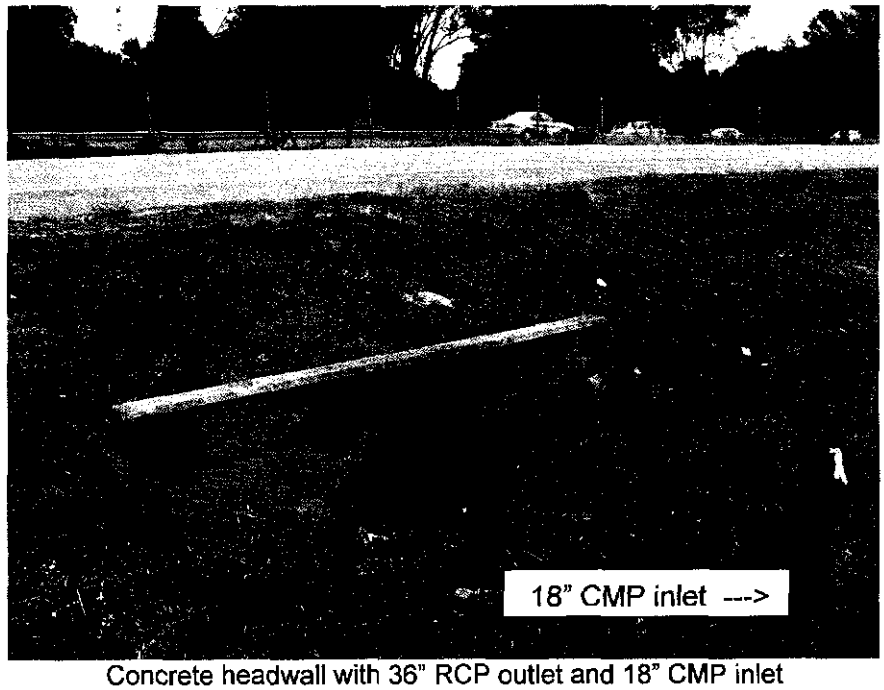
Existing Drainage

The following is a summary of the existing drainage path within the study area beginning north of Highway 1 and discharging into Rodeo Gulch approximately 1,500 ft south of the Highway.

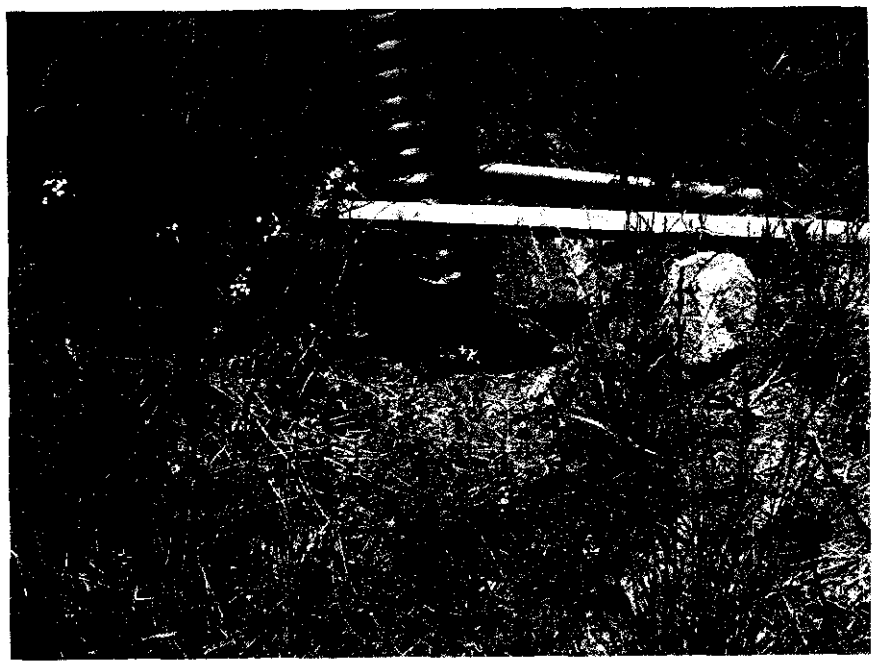
All runoff from the drainage basin just north of Highway 1 is collected in a drainage ditch paralleling the northern side of the Highway and conveyed under the freeway through a 36" RCP culvert. The partially filled 36" RCP outlets to another drainage ditch south of Highway 1 along Soquel Avenue. Along with the discharge from the 36" RCP, this ditch also collects some surface runoff from Soquel Avenue and the adjacent property.



Concrete headwall with 36" RCP outlet and 18" CMP inlet

Runoff exits the drainage ditch through a partially buried 18" CMP that carries runoff into the subject property.

The 18" CMP cuts across the northeast corner of the west parcel of the subject property and discharges into a heavily vegetated swale on the east parcel of the subject property. The condition of the 18" CMP at the outlet is very poor (see image below).

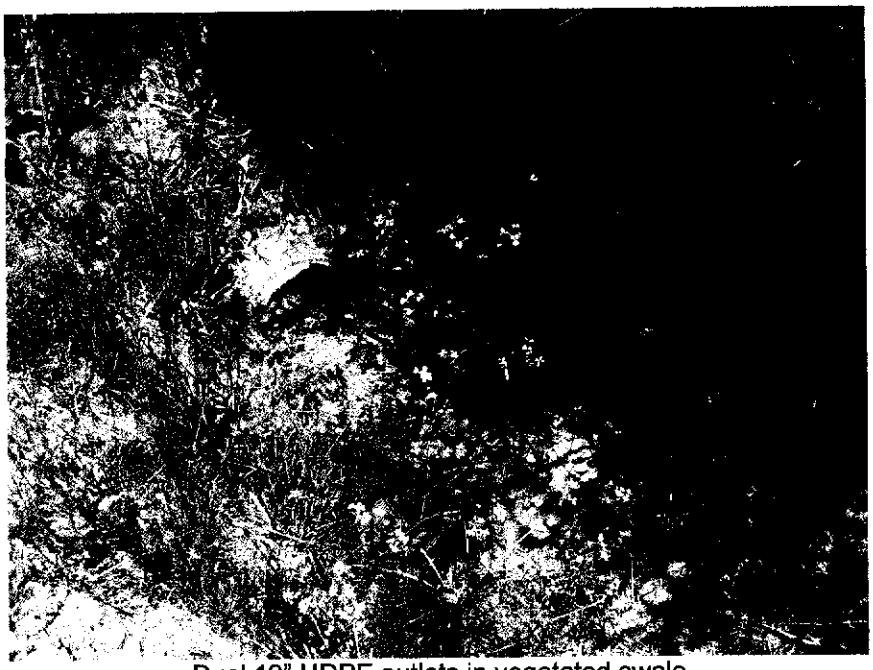


18" CMP outlet

The vegetated swale is broken up into two separate swales connected by dual 12" HDPE pipes which carry the runoff under a gravel road.

Dual 12" HDPE inlet pipes in vegetated swale

Both the inlets and outlets of the 12" HDPE pipes are partially buried and subject to clogging.



Dual 12" HDPE outlets in vegetated swale

The vegetated swale extends to the southwest corner of the property just north of the plant nursery where it merges with another vegetated swale that runs along the southern property line.

Looking downstream at vegetated swale

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At the point where the swales converge, there is a concrete headwall with two 18" RCP inlets.

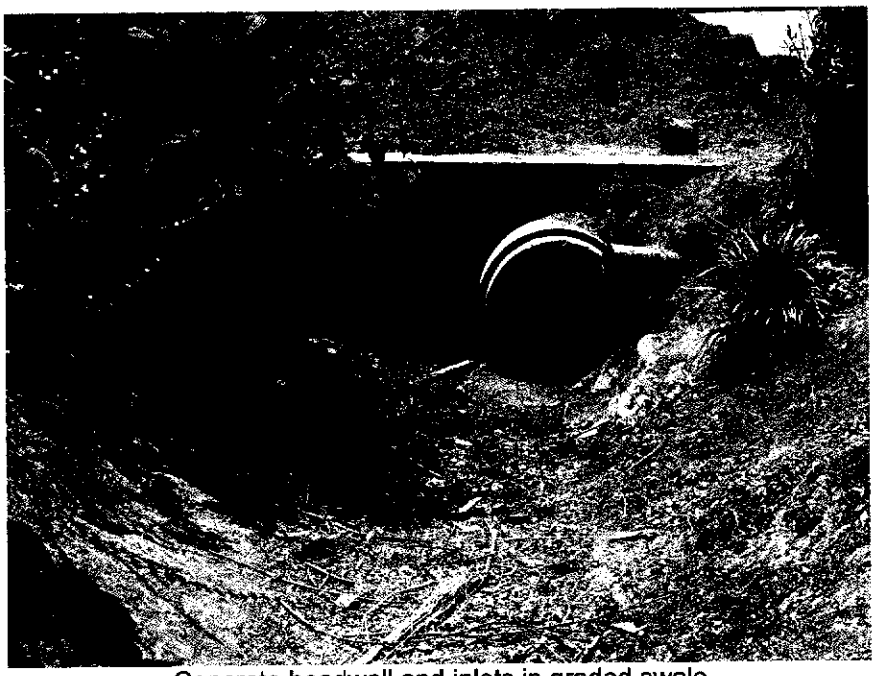
Concrete headwall with 18" RCP inlets

These 18" pipes carry runoff under the plant nursery (Far West Nursery) where they discharge into a graded swale.

Outlets into graded Swale

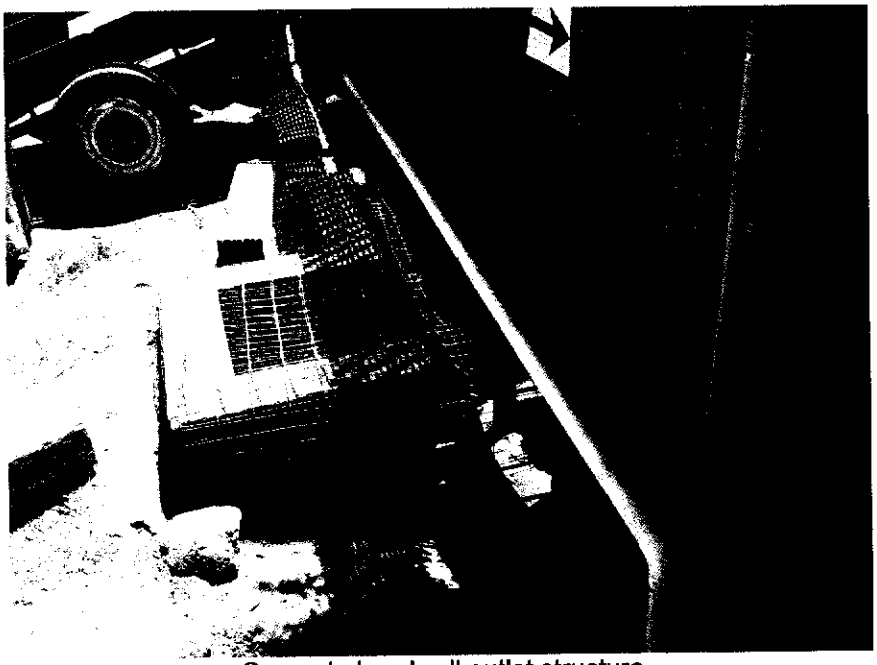
Almost all of the drainage from the nursery site is collected in the graded swale. There are two inlets on the property that collect runoff and discharge to the swale through 6" pipes. One 6" outlet is located at the beginning of the swale (see picture above) and the other is located towards the end of the swale.

The graded swale terminates at a concrete headwall. The headwall has two inlet pipes which carry runoff to the northern property line of the mobile home park. A 6" outlet is shown in the picture below.

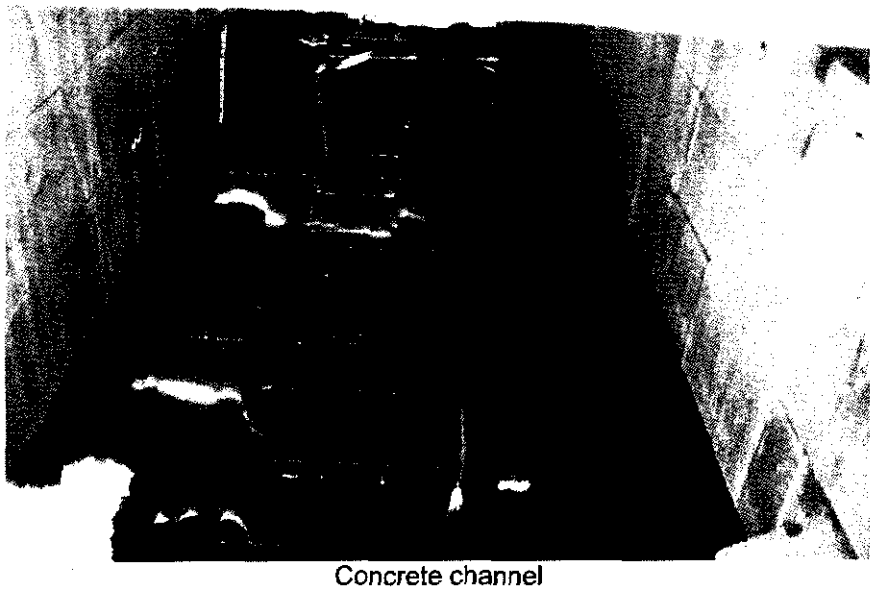


Concrete headwall and inlets in graded swale

At the property line between the nursery and the mobile home park, runoff discharges from the outlet structure and into a concrete channel that runs under the mobile home park.



Concrete headwall outlet structure



Concrete channel

The concrete channel carries runoff into the mobile home park. From the Santa Cruz County Zone 5 Drainage Inventory Maps, it appears that drainage makes its way through the mobile home park by way of two concrete channels connected by dual 30" CMP's. Once exiting the mobile home park, drainage enters a natural channel and is picked up in a drainage inlet.

Prior to construction of the subdivision, drainage was conveyed across the property through a 36" RCP and discharged into an open concrete channel that leads to an inlet along Mattison Lane.

Open concrete channel and inlet along Mattison Lane

However, it is assumed that the 36" RCP was removed during the construction of the subdivision and the drainage from the mobile home park is now intercepted by the subdivision's storm drain system and is piped to the storm drain running down Mattison Lane (N/S).

Although the 36" RCP no longer conveys runoff to the open channel, the channel still collects runoff from the adjacent properties. Runoff is then piped to a curb inlet along Mattison Lane (E/W) and then piped in a 30" RCP down to the bend in Mattison Lane.

Curb inlet along Mattison Lane

The storm drain lines running north/south and east/west down Mattison Lane eventually meet at a manhole in the sidewalk where the street bends. At this intersection, there are two curb inlets which also tie into the manhole. Drainage is carried from this manhole via 33" RCP to another manhole and then is finally discharged out a 36" RCP into Rodeo Gulch.

Proposed Conditions:

The proposal is to discharge the drainage from the properties north of Highway 1 into Rodeo Gulch approximately 1,500 feet upstream from its current discharge point. This is would likely be achieved by intercepting the drainage once it crosses under the freeway and diverting it through a storm drain to the gulch.

The recommended route of the diversion pipe is along Soquel Avenue within the road right-of-way. Although the pipe would be as much as 10 feet deep at the high point in the road, this route would not require the acquisition of an easement through private property. This route is not only the most practical but also the most economical.

The attached *Vicinity Map – Proposed Conditions* shows proposed drainage basins and the location of the proposed outfall to Rodeo Gulch.

Since, there is no development associated with this proposal; there will be no net increase in runoff. Therefore, there will be no impacts south of the existing outfall, since the flow rates will remain the same. The area affected would be the 1,500 feet of Rodeo Gulch between Highway 1 and the existing outfall. This area would see and increase in runoff roughly equal to the amount of runoff from the properties north of Highway 1 (Drainage Basin F).

The following table illustrates the change in flow rates in Rodeo Gulch based on adding an additional outfall 1,500 feet north of outfall 1.

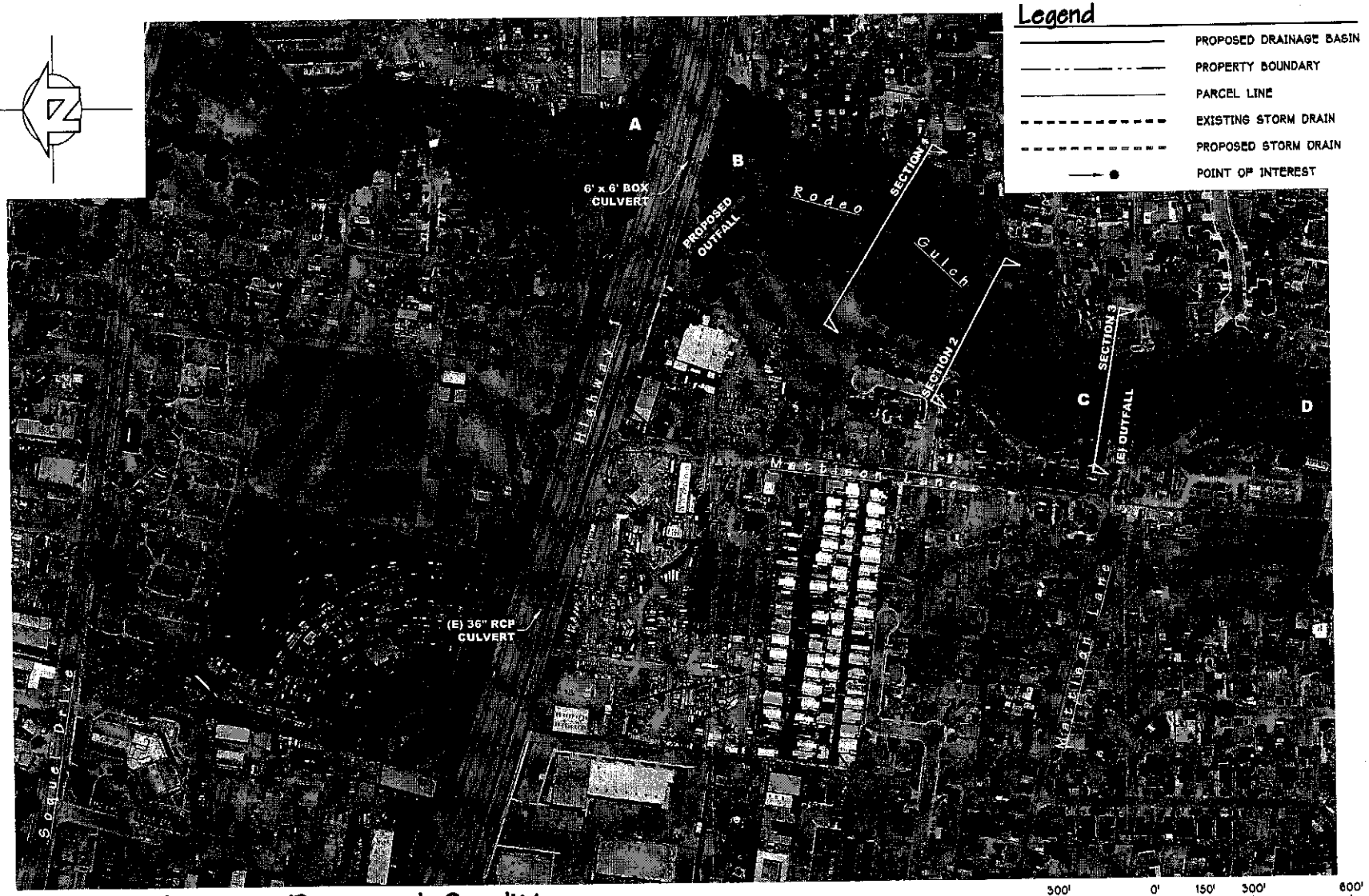
Point:	Type	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)	Capacity (cfs)
A	Natural channel	332	520	677	864	663
B	Concrete culvert	332	520	677	864	656
C	Natural channel	**376**	**579**	**748**	**948**	549
D	Natural channel	371	574	744	945	675

By diverting the drainage from the properties north of Highway 1 to the gulch 1,500 feet north of its current discharge point, the flow rate in the gulch increased by 51 cfs, or 9.7%, for a 25 year storm.

According to the Zone 5 Master Drainage Plan, the flow capacity for the 1,500 foot section of Rodeo Gulch north of outfall 1 is 549 cfs. Therefore, the increase flow rate would exceed the capacity of the gulch. However, after further analysis of the 1,500 foot span of gulch, it was determined that the capacity, as determined by the Zone 5 Master Drainage Plan, was underestimated.

Based on three cross-sections, it has been concluded that the 1,500 foot section of Rodeo Gulch has the capacity to easily handle runoff for a 25 year storm and a 100 year storm with plenty of capacity to spare.

Pages 13, 14 & 15 show the calculations used to determine the depth of flow at points along the gulch. The cross-sections are shown on page 12.



Vicinity Map - Proposed Conditions

SCALE: 1" = 300'

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SCALE: 1" = 300'

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APPLICATION 07-0471

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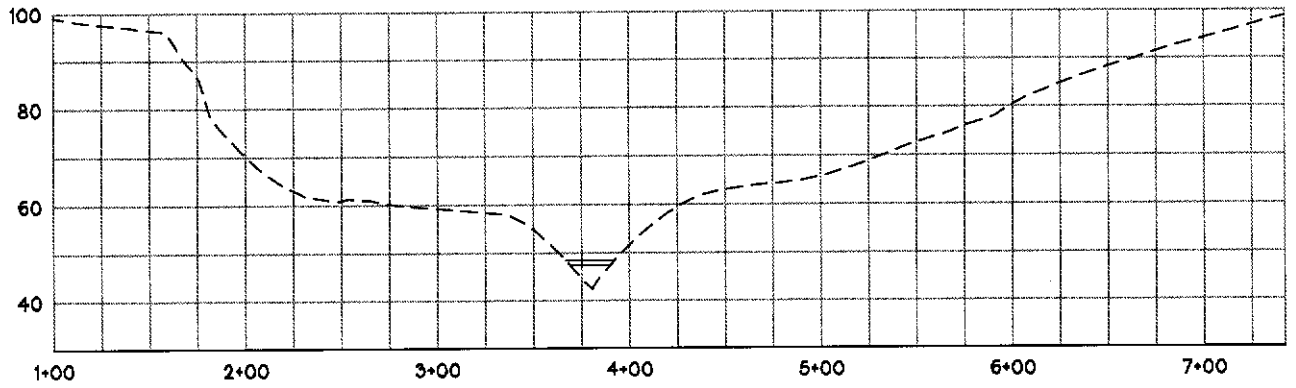
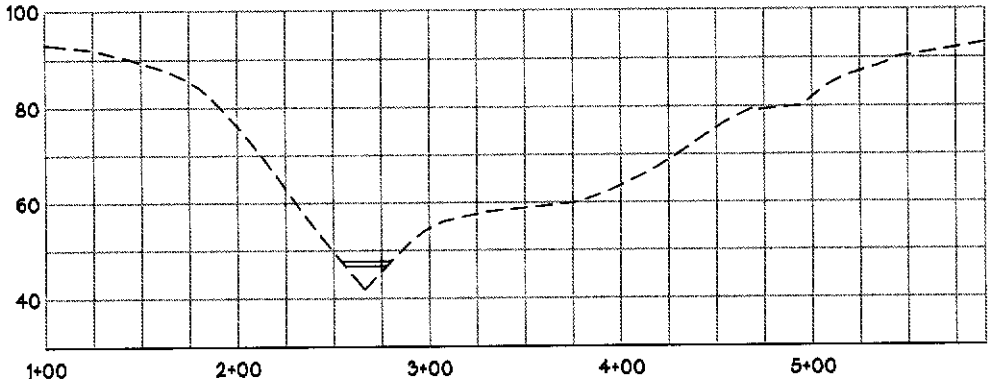
SHEET NO. _____ OF _____
CALCULATED BY RYAN DATE 07/31/08
SCALE: AS SHOWN



Section 1

SCALE: 1" = 10' (HORZ)
1" = 5' (VERT)

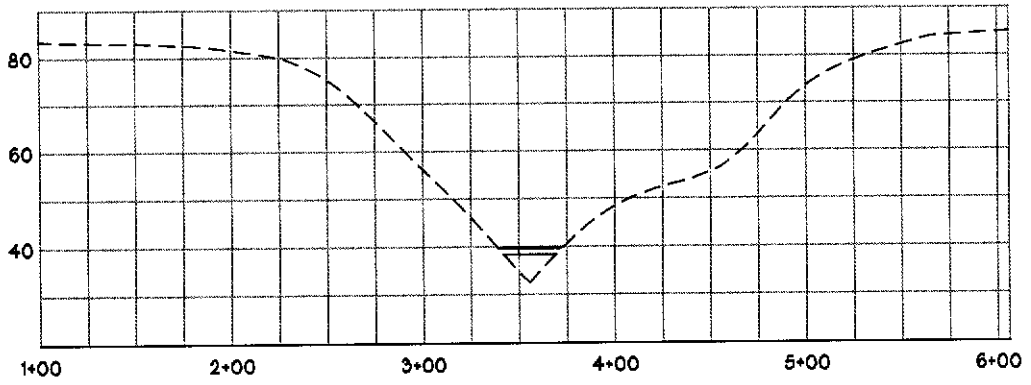


Legend

- EXISTING GRADE
- WATER SURFACE (100 YEAR STORM)
- WATER SURFACE (25 YEAR STORM)

Section 2

SCALE: 1" = 10' (HORZ)
1" = 5' (VERT)



Section 3

SCALE: 1" = 10' (HORZ)
1" = 5' (VERT)

Rodeo Gulch Cross-Sections w/ Diverted Flow

Environmental Review Initial Study
ATTACHMENT 5, Page 24
APPLICATION 07-0414

Section 1

Channel Calculator

Given Input Data:

Shape ..... Trapezoidal
Solving for ..... Depth of Flow
Flowrate ..... 579.0000 cfs (25 year)
Slope ..... 0.0180 ft/ft
Manning's n 0.0400
Height ..... 0.0000 in
Bottom width ..... 0.0000 in
Left slope ..... 0.3545 ft/ft (V/H)
Right slope ..... 0.4105 ft/ft (V/H)

Computed Results:

Depth ..... 60.0935 in
Velocity ..... 8.7838 fps
Full Flowrate ..... 579.0000 cfs
Flow area 65.9166 ft2
Flow perimeter ..... 338.0979 in
Hydraulic radius ..... 28.0747 in
Top width ..... 315.9072 in
Area 65.9166 ft2
Perimeter ..... 338.0979 in
Percent full ..... 100.0000 %

Channel Calculator

Given Input Data:

Shape ..... Trapezoidal
Solving for ..... Depth of Flow
Flowrate ..... 948.0000 cfs (100 year)
Slope ..... 0.0180 ft/ft
Manning's n 0.0400
Height ..... 120000.0000 in
Bottom width ..... 0.0000 in
Left slope ..... 0.3545 ft/ft (V/H)
Right slope ..... 0.4105 ft/ft (V/H)

Computed Results:

Depth ..... 72.2980 in
Velocity ..... 9.9361 fps
Full Flowrate ..... 948.0000 cfs
Flow area 95.4096 ft2
Flow perimeter ..... 406.7627 in
Hydraulic radius ..... 33.7764 in
Top width ..... 380.0653 in
Area 95.4096 ft2
Perimeter ..... 406.7627 in
Percent full ..... 100.0000 %

Section 2

Channel Calculator

Given Input Data:

Shape .... Trapezoidal
Solving for .... Depth of Flow
Flowrate .... 579.0000 cfs (25 year)
Slope .... 0.0320 ft/ft
Manning's n 0.0400
Height .... 120000.0000 in
Bottom width .... 0.0000 in
Left slope .... 0.5000 ft/ft (V/H)
Right slope .... 0.4167 ft/ft (V/H)

Computed Results:

Depth .... 58.0567 in
Velocity .... 11.2443 fps
Full Flowrate .... 579.0000 cfs
Flow area 51.4927 ft2
Flow perimeter .... 280.7558 in
Hydraulic radius .... 26.4107 in
Top width .... 255.4383 in
Area 51.4927 ft2
Perimeter .... 280.7558 in
Percent full .... 100.0000 %

Channel Calculator

Given Input Data:

Shape .... Trapezoidal
Solving for .... Depth of Flow
Flowrate .... 948.0000 cfs (100 year)
Slope .... 0.0320 ft/ft
Manning's n 0.0400
Height .... 120000.0000 in
Bottom width .... 0.0000 in
Left slope .... 0.5000 ft/ft (V/H)
Right slope .... 0.4167 ft/ft (V/H)

Computed Results:

Depth .... 69.8475 in
Velocity .... 12.7194 fps
Full Flowrate .... 948.0000 cfs
Flow area 74.5321 ft2
Flow perimeter .... 337.7750 in
Hydraulic radius .... 31.7745 in
Top width .... 307.3157 in
Area 74.5321 ft2
Perimeter .... 337.7750 in
Percent full .... 100.0000 %

Environmental Review Inital Study
ATTACHMENT 5 B at 26
APPLICATION 07 0414

Section 3

Channel Calculator

Given Input Data:

Shape ..... Trapezoidal
Solving for ..... Depth of Flow
Flowrate ..... 579.0000 cfs (25 year)
Slope ..... 0.0100 ft/ft
Manning's n 0.0400
Height ..... 120000.0000 in
Bottom width ..... 0.0000 in
Left slope ..... 0.4308 ft/ft (V/H)
Right slope ..... 0.4000 ft/ft (V/H)

Computed Results:

Depth ..... 69.5086 in
Velocity ..... 7.1587 fps
Full Flowrate ..... 579.0000 cfs
Flow area 80.8809 ft2
Flow perimeter ..... 362.8409 in
Hydraulic radius ..... 32.0990 in
Top width ..... 335.1194 in
Area 80.8809 ft2
Perimeter ..... 362.8409 in
Percent full ..... 100.0000 %

Channel Calculator

Given Input Data:

Shape ..... Trapezoidal
Solving for ..... Depth of Flow
Flowrate ..... 948.0000 cfs (100 year)
Slope ..... 0.0100 ft/ft
Manning's n 0.0400
Height ..... 120000.0000 in
Bottom width ..... 0.0000 in
Left slope ..... 0.4308 ft/ft (V/H)
Right slope ..... 0.4000 ft/ft (V/H)

Computed Results:

Depth ..... 83.6252 in
Velocity ..... 8.0978 fps
Full Flowrate ..... 948.0000 cfs
Flow area 117.0693 ft2
Flow perimeter ..... 436.5308 in
Hydraulic radius ..... 38.6181 in
Top width ..... 403.1793 in
Area 117.0693 ft2
Perimeter ..... 436.5308 in
Percent full ..... 100.0000 %

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APPLICATION 07-0414

Summary

By diverting the drainage from north of Highway 1 to Rodeo Gulch, there will be a substantial decrease in runoff traveling through the subject property as well as the neighboring properties. With most of the drainage structures in these properties undersized and/or poorly maintained, the decrease in runoff should allow the these structures to function more properly, thus alleviating the impacts on the properties.

As shown in the cross-sections, the additional runoff in the gulch will have only a minimal affect on the massive gulch. The capacity of the 1,500 foot section of Rodeo Gulch far exceeds any amount of runoff that could be generated by the contributing drainage basins. Additionally, any development to the former Drive-In Theater property would be required to maintain pre-development rate of runoff per Zone 5 requirements. Since this property is currently totally paved over, it is likely that any development would decrease the amount of pervious surface thus, decrease the amount of runoff.

Santa Cruz County
Zone 5 Master Drainage Plan

(Maps & Tables)

Environmental Review Inital Study
ATTACHMENT 5, 22 of 26
APPLICATION 07-0414

County of Santa Cruz
Stormwater Facilities Management System
Conveyance Facilities
05 - Rodeo Creek Basin

10/20/98

LOCATION			EXISTING SECTION										DESIGN DISCHARGE (cfs)						Section Capacity
ID	Comments	Type	USIE	DSIE	USGE	DSGE	Length	Slope	Man N	No	Size*	Base*	2	5	10	25	50	100	
050010-050020	O/S Zone 5	Natural Channel					2856		.035				13	34	53	85	111	143	
050020-050030	O/S Zone 5	Natural Channel					2793		.035				33	84	133	212	278	355	
050030-050040	O/S Zone 5	Natural Channel					805		.035		37.9	45.0	46	119	187	298	390	499	
050040-050050	O/S Zone 5	Natural Channel					925		.035		39.0	29.3	57	145	228	363	476	608	
050050-050060	O/S Zone 5	Natural Channel					1862		.035		147.5	66.4	61	155	243	386	505	646	
050060-050070	O/S Zone 5	Natural Channel					890		.035		56.5	27.4	64	161	253	401	525	671	
050070-050080	O/S Zone 5	Natural Channel					584		.035	1	76.1	34.7	65	164	257	407	534	683	
050080-050090	O/S Zone 5	Natural Channel					673		.035		109.3	74.3	71	180	282	448	587	752	
050090-050100		Natural Channel			90	70	1030	.0194	.035		80.7	43.2	73	186	290	460	604	774	724
050100-050110		Natural Channel			70	63	1138	.0062	.035		132.0	65.0	75	190	297	470	615	789	708
050110-050120		Natural Channel			63	60	1527	.0020	.035		188.2	64.1	79	201	311	490	641	820	733
050120-050122		Natural Channel	60.00	55.00			68	.0735	.035		53.3	47.4	86	216	332	520	677	864	663
050122-050130		Box	55.00	50.40			311	.0148	.013	1	6.0	6.0	86	216	332	520	677	864	656
050130-050140		Natural Channel	50.40		58	47	1436	.0077	.035		123.8	95.3	88	220	339	528	688	877	549
050140-050150		Natural Channel			47	36	930	.0118	.035		116.5	82.8	99	244	371	574	744	945	675
050150-050152		Natural Channel			36	33	1110	.0027	.035		131.5	56.9	103	251	382	590	763	970	507
050152-050154		Pipe			50	49	64	.0156	.013	2	72.0		103	251	382	590	763	970	1058
050154-050160		Natural Channel			32	30	126	.0159	.035	1	95.8	00.5	103	251	382	590	763	970	497
050160-050170		Natural Channel			30	26	924	.0043	.035		158.3	55.2	123	280	421	645	833	1056	447
050170-050180		Natural Channel			26	18	822	.0097	.035	1	134.2	79.7	166	359	512	734	911	1153	794
050180-050190		Natural Channel			18	14	530	.0075	.035		223.9	68.6	180	392	561	803	990	1237	995
050190-050200		Natural Channel			14	12	1065	.0019	.035		258.7	32.1	199	432	616	878	1079	1340	750
050200-050210	Pond	Natural Channel					882		.035				208	451	644	918	1125	1394	
050210-050215	Pond	Natural Channel					1207		.035				217	470	670	953	1167	1442	
050215-050220	Pond	Natural Channel					1054		.035				246	528	750	1059	1292	1585	

*NOTE: Size = diameter in inches for pipes, depth in feet for boxes and improved channels, and area in square feet for natural channels.
Base = Base width in feet for boxes and improved channels, and wetted perimeter in feet for natural channels.

(convdat2)

KVL Consultants, Inc.

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County of Santa Cruz
Stormwater Facilities Management System

Conveyance Facilities

05 - Rodeo Creek Basin

10/20/98

LOCATION ID	Comments	Type	USIE	DSIE	EXISTING SECTION USGE	DSGE	Length	Slope	Man N	No	Size*	Base*	DESIGN DISCHARGE (cfs) 2	5	10	25	50	100	Section Capacity
050300-050040		Natural Channel			182	163	613	.0310	.035		60.3	21.1	5	13	20	32	42	54	283
050310-050040	Ditch	Natural Channel					534		.035				3	8	13	21	27	35	
050400-050410		Natural Channel			240	180	629	.0954	.035		4.7	12.8	2	5	7	11	14	17	32
050410-050050		Natural Channel			180	140	410	.0976	.035		4.7	12.8	4	9	14	21	26	32	32
050500-050510	O/S Zone 5	Natural Channel					1056		.035		12.9	44.4	2	5	8	13	17	22	
050510-050520	O/S Zone 5	Natural Channel					1277		.035		11.3	31.8	3	8	13	20	26	33	
050520-050060	O/S Zone 5	Natural Channel					789		.035		6.9	14.3	5	12	19	30	39	50	
050600-050610		Pipe	216.50	212.79	228	218	385	.0102	.013		18.0		1	2	3	5	6	8	11
050610-050090		Pipe	212.79	90.00			617	.1990	.013		18.0		2	4	6	8	11	13	47
050700-050702		Pipe	105.82	104.27	108	110	269	.0058	.013		27.0		8	13	16	21	23	27	24
050702-050710		Pipe	104.27	102.18	110	113	378	.0055	.013		30.0		8	13	16	21	23	27	30
050710-050112		Pipe	102.18	100.01	113		179	.0121	.013		30.0		26	43	56	71	82	95	45
050712-050114		Pipe	100.01	98.02			155	.0128	.013		36.0		26	43	56	71	82	95	76
050714-050120	Ditch	Natural Channel					131		.035				26	43	56	71	82	95	
050720-050722		Pipe	107.44	106.00	115	114	241	.0060	.013	1	18.0		10	16	21	26	30	34	8
050722-050710		Pipe	105.60	102.18	114	113	301	.0114	.013		24.0		10	16	21	26	30	34	24
050800-050802		Pipe	107.40	106.90			180	.0028	.013	1	36.0		13	26	37	51	60	71	35
050802-050804	Ditch	Natural Channel					806		.035	1			13	26	37	51	60	71	
050804-050805		Pipe			108	108	40	.0125	.013	2	21.0		13	26	37	51	60	71	35
050805-050806	Ditch	Natural Channel					110		.035	1			13	26	37	51	60	71	
050806-050807		Pipe	102.00	101.40			35	.0171	.013	2	30.0		13	26	37	51	60	71	107
050807-050808	Ditch	Natural Channel					215	.0149	.035				13	26	37	51	60	71	
050808-050809		Pipe	98.31	95.30	102	99	233	.0129	.013	1	36.0		13	26	37	51	60	71	76
050809-050810	Ditch	Natural Channel					268		.035	1			13	26	37	51	60	71	
050810-050820		Pipe	87.90	77.60			306	.0337	.013		30.0		22	44	62	85	100	119	75

*NOTE: Size = diameter in inches for pipes, depth in feet for boxes and improved channels, and area in square feet for natural channels.
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County of Santa Cruz
Stormwater Facilities Management System
Conveyance Facilities
05 - Rodeo Creek Basin

10/20/98

LOCATION			EXISTING SECTION										DESIGN DISCHARGE (cfs)						Section
ID	Comments	Type	USIE	DSIE	USGE	DSGE	Length	Slope	Man N	No	Size*	Base*	2	5	10	25	50	100	Capacity
050820-050822		Pipe	77.60	60.00			177	.0994	.013		36.0		26	52	73	99	117	138	210
050822-050824		Pipe	60.00	52.00			59	.1356	.013		36.0		26	52	73	99	117	138	246
050824-050140	Ditch	Natural Channel					78			1			26	52	73	99	117	138	
050900-050150	Ditch	Natural Channel					482						5	10	15	21	25	30	
051000-051005		Pipe	81.70	76.58		91	922	.0056	.013	1	36.0		9	19	27	36	43	50	50
051005-051010		Pipe	76.58	61.24	91	76	1803	.0085	.013	1	42.0		9	19	27	36	43	50	93
051010-051020		Pipe	61.24	49.50	76	63	708	.0166	.013	1	42.0		19	38	54	75	89	105	130
051020-050160		Pipe	49.50	29.00	63		565	.0363	.013	1	42.0		24	49	69	96	114	135	192
051100-051110		Pipe	87.82	77.26	97	87	1103	.0096	.013	1	36.0		15	27	37	48	56	65	65
051110-051118		Pipe	77.26	60.58	87	71	2019	.0083	.013	1	36.0		25	44	59	78	90	106	61
051118-051120		Pipe	60.58	56.59	71		464	.0086	.013	1	42.0		25	44	59	78	90	106	93
051120-051130		Natural Channel			66	56	666	.0150	.035		39.8	38.6	45	83	114	154	179	208	211
051130-050170		Natural Channel			56	28	531	.0527	.035	1	39.8	38.6	45	85	118	161	189	223	396
051200-051203		Pipe	78.08	76.28	84	81	347	.0052	.013	1	27.0		11	21	28	38	44	51	22
051203-051204		Pipe	76.26	69.68	81		373	.0176	.013		30.0		11	21	28	38	44	51	54
051204-051206		Natural Channel			74	70	301	.0133	.035		16.1	26.6	11	21	28	38	44	51	56
051206-051208		Pipe	66.00	63.60			134	.0179	.013		36.0		11	21	28	38	44	51	89
051208-051210		Pipe	63.60	63.51			45	.0020	.013	2	30.0		11	21	28	38	44	51	37
051210-051120		Natural Channel	63.51	56.59	67	56	427	.0162	.035		10.4	13.5	19	36	49	65	76	89	47
051300-051308		Pipe	52.12	49.20	60		476	.0061	.013	1	21.0		5	9	13	17	20	24	12
051308-051310		Pipe	49.20	44.27	58	52	297	.0166	.013	1	18.0		5	9	13	17	20	24	14
051310-050112		Pipe	42.50	31.24	53		161	.0699	.013	2	18.0		13	27	38	53	62	74	56
051312-050180		Natural Channel			42	18	834	.0379	.035		11.9	16.1	13	27	38	53	62	74	80
051320-051322		Pipe	54.20	48.72		52	498	.0110	.013		18.0		3	7	10	15	17	21	11
051322-051310		Pipe	48.72	44.27	52	52	207	.0215	.013		24.0		3	7	10	15	17	21	33

*NOTE: Size = diameter in inches for pipes, depth in feet for boxes and improved channels, and area in square feet for natural channels.
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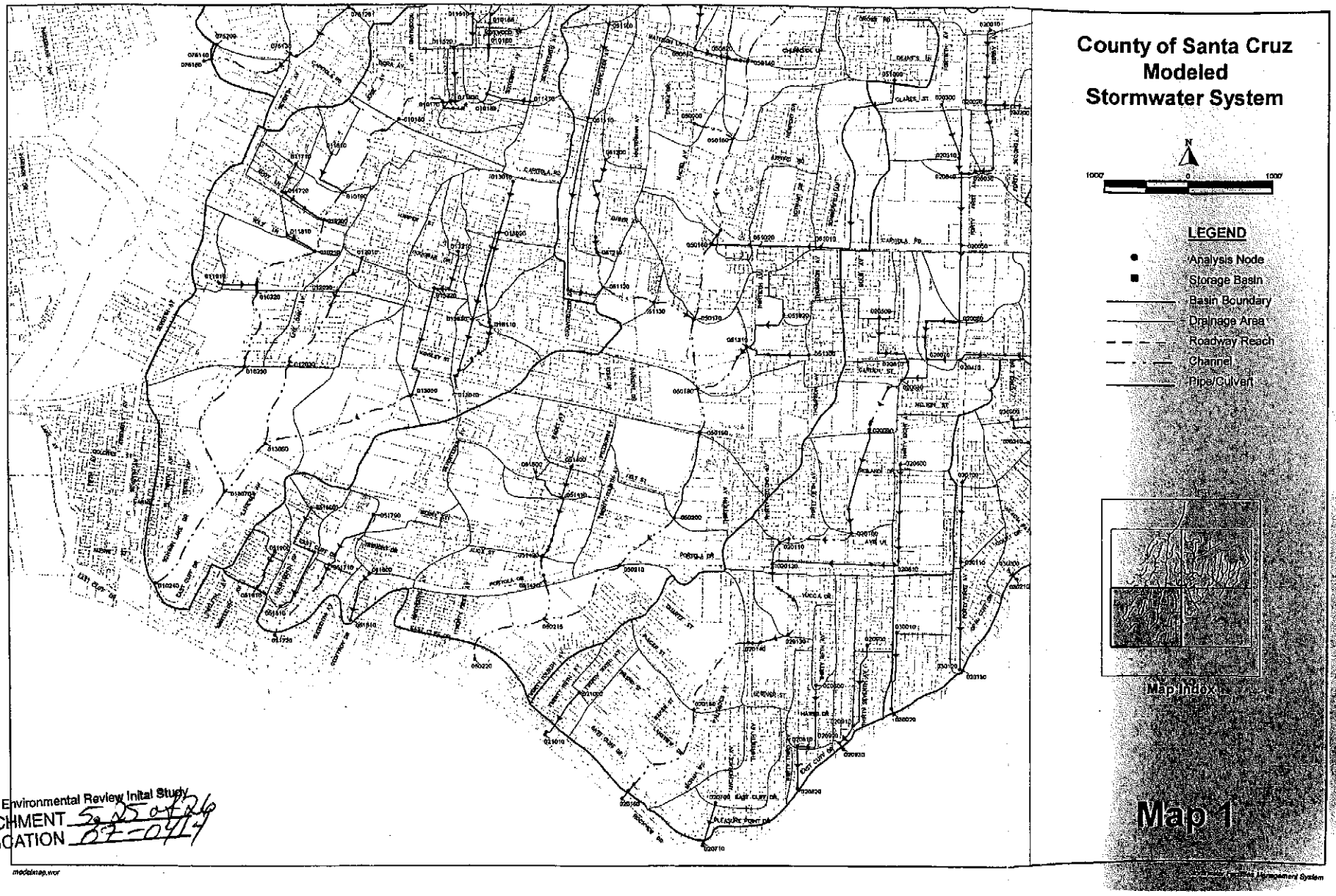

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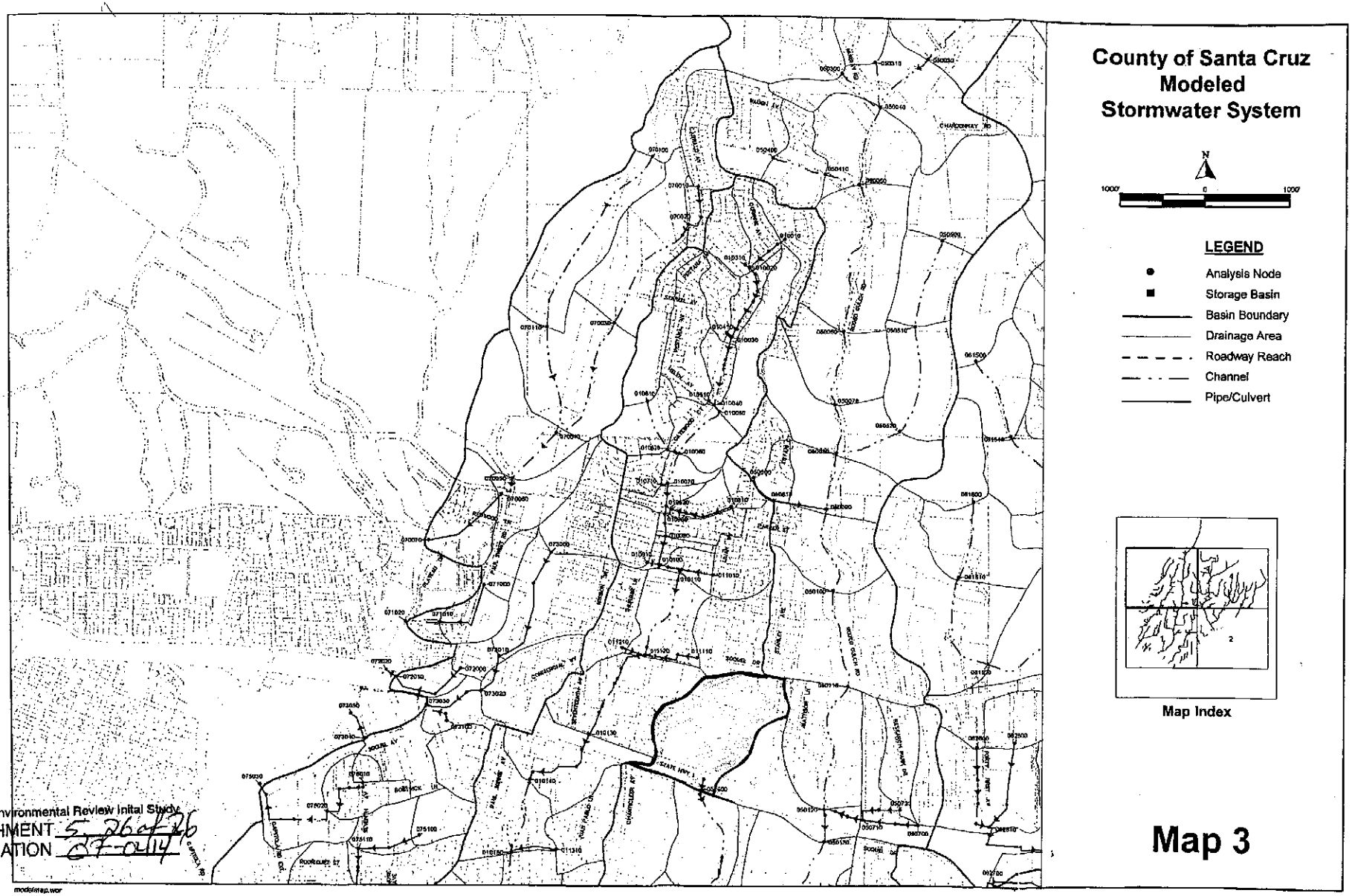

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ATTACHMENT F

ENVIRONMENTAL SITE ASSESSMENT, PHASE I UPDATE,
5940 SOQUEL AVENUE, SANTA CRUZ, CALIFORNIA,
OCTOBER 22, 2007

Environmental Review Inital Study
ATTACHMENT 6, Lot 3
APPLICATION 07-0414

ceres
ASSOCIATES

Environmental Site Assessment
Phase I Update
AAI/ASTM E1527-05 Standard:

Open Storage Land
5940 Soquel Avenue
Santa Cruz, California
Project #: CA1781-1

Prepared for:
Paz, LLC

October 22, 2007

Prepared by:
Ceres Associates
424 First Street
Benicia, California 94510
Tel. (707) 748-3170
Fax (707) 748-3171

Environmental Review Inital Study
ATTACHMENT 6 Ref 3
APPLICATION 07-0414

Prepared for:

Paz, LLC
7 Moraga Via
Orinda, California 94563

PHASE I ENVIRONMENTAL SITE ASSESSMENT UPDATE: AAI/ASTM E1527-05 STANDARD
Open Storage Land
5940 Soquel Avenue
Santa Cruz, California

Project : CA1781-1
Date: October 22, 2007

Prepared by:

Katie Simpson
Environmental Specialist

I declare that, to the best of my profession knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312. I have the specific qualifications based on the education, training, and experience to assess a property of the nature, history, and setting of the Property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth on 40 CFR Part 312:

FOR
Ryan Meyer, REA 07936
Project Manager

Ceres Associates
424 First Street
Benicia, California 94510
(707) 748-3170
(707) 748-3171 (Fax)

Environmental Review Inital Study
ATTACHMENT 6, 3 of 8
APPLICATION 07-0414

ceres ASSOCIATES

1.0 SUMMARY WITH RECOMMENDATIONS

At the request of Paz, LLC, Ceres Associates conducted a Phase I Environmental Site Assessment (ESA) Update ("Update") for 5940 Soquel Avenue, Santa Cruz, Santa Cruz County, California ("Property") *(refer to Figure 1 - Property Location Map)*. This Update was conducted according to the guidelines of the US EPA's All Appropriate Inquiry (AAI).

The research included a Property and adjacent sites survey, interviews with informed persons, reviews of public records, an environmental database search report, review of previous reports, and current photographs.

This report has been prepared under the supervision of an individual who meets the US EPA's requirements for an Environmental Professional *(refer to Appendix B - Professional Qualifications)*.

1.1 PROPERTY SUMMARY

Property Summary Information

The Property is approximately 4.99 acres in size and has been developed with several dirt storage lots, one office and storage building having approximately 1,000 square feet of floor space and one storage building having approximately 500 square feet of floor space. According to the previous Phase I ESA, these buildings were constructed prior to 1963. One mobile office trailer having approximately 1,200 square feet of floor space is also located on the Property *(refer to Figure 2 - Property Map)*.

Date Range	Use	
	Northern Portion	Southern Portion
1937 – 1963	Agriculture	Agriculture
1963 – 1975	Vehicle Storage	Agriculture
1975 – 1985	Vehicle Storage	Fallow Field
1985 – 1999	Vehicle Storage	Vehicle Storage

The Property is currently in use as an open storage land that is occupied by Bay Mini Storage, Ocean Blue Towing, Harmonic Landscaping, Prime Landscape Service Co., Olivera Roofing Co., Coast Concrete, and Dogherra's Towing.

Environmental Database Report

The Property was not listed on the database report that was acquired for this Update.

Hazardous Substances and Storage Tanks

The following hazardous materials were observed on the Property: roofing cement, roof coating, paint,

oil, brickform antique release, brickform liquid release, tractor fluid, hydraulic fluid, concrete lacquer, brick sealer, waste oil, and a parts washer.

These materials were not stored in secondary containment. Minor staining was observed on the soil beneath the drums of engine oil and hydraulic fluid in the Coast Concrete storage lot. Moderate staining was observed on the concrete beneath the waste oil tank and the containers of gear oil in the Dogherra's Towing storage lot. Staining or leaking was not observed on or near the other materials.

One approximately 2,500-gallon storage tank was also on the Property. It appeared that the tank was used to store non-potable water. The tank appears to be a former motor fuel tank. Mr. Frandler did not know the origin of the tank.

Asbestos

Suspect asbestos-containing materials (ACM) were noted during the Property survey. Based on the construction date around 1963, there is a possibility that some of the construction materials in the building may contain asbestos fibers.

Previous Phase I ESA

Ceres Associates reviewed a Phase I ESA prepared for the Property by Ceres Associates, dated November 20, 1999. According to the report, the Property was developed similarly to its current appearance with numerous individual storage lots, one single-story wood-frame office and storage structure having approximately 1,000 square feet of floor space, and one single-story storage structure having approximately 500 square feet of floor space. Theses structures were developed prior to 1963. One mobile office trailer having approximately 1,200 square feet of floor space was located adjacent to the east of the structures. Dirt-covered roads were located on the Property to provide means by which to navigate the Property interior. A sump was located at the western portion of the Property to drain surface water.

The Property was in use by Dogherra's Towing, A-1 Courtesy Towing, Coast Concrete, ABC Roofing Supply Company, and private individuals, for storage of wrecked, abandoned, and impounded vehicles, storage of roofing materials, and storage of various types of trucks, buses, airplanes, machinery, and equipment.

Hazardous Materials

Hazardous materials observed at the time of the previous report included oil drums, gasoline containers, partially-filled buckets of used motor oil, batteries, and motor vehicles with attached fuel tanks. Some of the containers were not covered or sealed. These materials were not stored in secondary containment. Due to recent rainfall at the time of the previous report, surface staining could not be recognized at the Property.

One approximately 2,500-gallon former underground storage tank (UST), stored above ground, was observed at the western portion of the Property. The UST was used for storage of non-potable water for use by Coast Concrete. Information regarding the origin of the UST was not found.

File Review

According to the previous report, Ceres Associates reviewed files available at the Santa Cruz Environmental Health Department (EHD). According to the agency, hazardous materials permits for an acetylene-oxygen torch set, waste oil, and batteries issued to Larry's Mobile Towing expired in 1994. The permits listed that USTs were not located at the Property. A 1994 EHD inspection report indicated that the business was closed and "no hazardous materials remain on site."

A 1998 EHD official inspection report for Sam Nigh Lumber located at the Property address indicated "no areas of contamination noted; all automobiles should be drained of fluids if non-functioning; [and] remove batteries."

A 1999 EHD official inspection report for Castle Plastering located at the Property address indicated that an aboveground storage tank (AST) "has been removed after emptying—close file". According to Cheryl Bell of EHD, additional information regarding the AGT was not found in the agency's file.

Recommendations

According to the previous report, Ceres Associates made the following recommendations: draining and disposing fluids from non-functioning vehicles located at the Property; collecting soil samples in the vicinity of the sump and drain for sampling of petroleum hydrocarbons; disposing of abandoned tires, batteries, and used oil located at the Property; investigating the origin of the approximately 2,500-gallon former UST; and proper storage of fuel containers using secondary containment systems.

Regulatory Review and Previous Reports

Information regarding previous or current environmental concerns at the Property since the date of the previous Phase I ESA was not found during Ceres Associates' regulatory review for this Update. Further, Ceres Associates was not provided and did not find environmental reports addressing Property conditions, other than the Phase I ESA that is the subject of this Update.

1.2 SURROUNDING AREA SUMMARY

The Property predominantly lies amongst warehouses, office buildings, and residences. Ceres Associates did not observe indications of environmental concern on adjacent or nearby sites that would be thought to have an impact on the environmental quality of the Property.

Further, sites listed on the environmental database report appear to have a low potential to have impacted the environmental quality of the Property.

1.3 CONCLUSIONS

According to the previous Phase I ESA, from at least 1937 to approximately 1963, the Property was in agricultural use. From 1963 until approximately 1975, the Property was used for vehicle storage and agricultural purposes. From 1975 until approximately 1999, the Property was used for vehicle storage.

Hazardous Materials

Hazardous materials observed on the Property included roofing cement, roof coating, paint, oil, brickform antique release, brickform liquid release, tractor fluid, hydraulic fluid, concrete lacquer, brick sealer, waste oil, and a parts washer. These materials were not stored in secondary containment. Minor to moderate staining was observed on the soil and concrete beneath some of these materials. This observed staining and noted lack of secondary containment is consistent with observations made during the previous Phase I ESA.

Care should be taken to store these materials in appropriate secondary containment. Further, based on the historic and current improper storage of hazardous materials on the Property and the staining observed near some of the hazardous materials, soil sampling should be conducted to assess if the subsurface environment has been impacted.

Storage Tank

One approximately 2,500-gallon storage tank was also located on the Property. It appeared that the tank was used to store non-potable water. The tank appears to be a former motor fuel tank. Mr. Frandler did not know the origin of the tank. Files were not found that indicated the presence of a former fuel underground storage tank (UST) on the Property. Further, it is not likely that known historic uses of the Property would require a fuel UST. Therefore, it is not likely that the tank was originally in use as a UST on the Property.

The tank has been used to store non-potable water since at least 1999. Based on this use, it does not appear likely that the tank will significantly impact the environmental quality of the Property.

Non-functioning Vehicles

Several non-functioning vehicles were observed on the Property. According to a Dogherra's Towing employee, these vehicles are not usually drained of fluids while stored on the Property. To prevent potential leaking or spilling of fluids, the vehicles should be drained of fluids and the car batteries should be removed prior to storage on the Property, as required by the 1998 Environmental Health Department Inspection Report for the Property.

Sump

According to the previous Phase I ESA, a sump was formerly located on the western portion of the Property, in the current Prime Landscape Service Co. storage lot. According to the Prime Landscape Service Co. business owner, the sump was removed from their lot approximately 7 years ago. The owner did not know the location of the former sump. Ceres Associates did not observe evidence of a former sump during the Property survey or find evidence soil sampling related to the removal/operation. The Property owners should determine the location of the former sump and an appropriate number of soil

samples should be collected and analyzed to assess the potential of subsurface impacts.

Waste Oil Tank

One 55-gallon waste oil tank is located on the Property. According to a Dogherra's Towing employee, the waste oil tank will be removed from the Property soon. Care should be taken to ensure that the tank is removed, if no longer in use, or, that the tank is stored in appropriate secondary containment.

Parts Cleaner

One parts cleaner was observed on the Property. A Dogherra's Towing employee stated that the parts cleaner contained very little solvent and was no longer used. Staining or leaking was not observed on the concrete beneath the parts cleaner. Care should be taken to ensure that the parts cleaner is removed from the Property if no longer in use and that the remaining solvent is disposed of properly.

1.4 RECOMMENDATIONS

Based on the findings of this assessment, Ceres Associates recommends the following:

- Prior to renovation or demolition, sampling should be conducted to assess if asbestos is contained in the construction materials of the building. The California Health and Safety Code requires owners of structures with ACM to notify tenants and employees that the building has ACM.
- All hazardous materials on the Property should be stored in appropriate secondary containment to prevent spills or leaks.
- Based on the surface staining near hazardous materials, the improper storage noted in the previous Phase I ESA, and the potential collection and drainage of motor fuel and oil by the sump formerly located on the Property, Ceres Associates recommends advancing several soil borings and collecting soil samples in these areas to assess potential subsurface impacts.
- Ceres Associates recommends draining the fluids and removing the batteries from the non-functioning vehicles on the Property to prevent potential discharges.
- The waste oil tank should be removed from the Property, if no longer in use, or, if the tank is not removed from the Property, it should be stored in appropriate secondary containment to prevent further leaking and spilling.
- The parts cleaner should be removed from the Property, if no longer in use, and that the remaining solvent should be disposed of properly.

The summary, conclusions, and recommendations are subject to the limitations provided in section 5.0 of this report.