



## Staff Report to the Planning Commission

Application Number: **05-0252**

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**Applicant:** John Swift, Hamilton-Swift  
Landuse Consulting

**Agenda Date:** April 26, 2006

**Owner:** Steven & Lesa John, Trustees; Rob  
Marani/Store More

**Agenda Item #:** 9

**APN:** 030-061-18, 19 and 20

**Time:** After 9:00 a.m.

**Project Description:** Proposal to combine Assessor's Parcel Numbers 030-061-18 and 030-061-20, to transfer about 28,102 square feet from APNs 030-061-18 and 20 to APN 030-061-19, to construct two self-storage buildings on APN 030-061-18 & 20, to construct a car dealership on APN 030-061-19, to grade about 16,000 cubic yards, to increase the number of signs and exceed the 50 square foot size maximum, to rezone the properties from the C-2 zone district to the **C-4** zone district, and to amend the General Plan to change the General Plan land use designation from C-C (Community Commercial) to C-S (Service Commercial).

**Location:** Property located on the north side of Soquel Drive, about 400 feet west from 41st Avenue, at 3711, 3715 and 3801 Soquel Drive in Soquel.

**Supervisory District:** First District (District Supervisor: Beautz)

**Permits Required:** Commercial Development Permit, Lot Line Adjustment, Riparian Exception, Sign Variance, Preliminary Grading Approval, Rezoning and General Plan Amendment

**Staff Recommendation, based on the attached findings:**

- Recommend that the Board of Supervisors certify the Mitigated Negative Declaration as complying with the requirements of the California Environmental Quality Act; and
- Adopt the Resolution sending a recommendation to the Board of Supervisors to approve a General Plan land use designation amendment and zone district amendment for Assessor's Parcel Numbers 030-061-18, 19 and 20; and
- Recommend that the Board of Supervisors approve the Commercial Development Permit, Lot Line Adjustment, Riparian Exception, Sign Variance and Preliminary Grading Approval proposed under Application Number **05-0252**, pending Board approval of the General Plan Amendment and Rezoning.

## Exhibits

- |    |  |    |                            |
|----|--|----|----------------------------|
| A. | Project plans                                    | F. | Assessor's Parcel Map      |
| B. | Findings   | G. | Zoning & General Plan Maps |
| C. | Conditions                                       | H. | Comments & Correspondence  |
| D. | Mitigated Negative Declaration and Initial Study | I. | Excerpt from Traffic Study |
| E. | Resolution                                       |    |                            |

## Parcel Information

|                                  |   |
|----------------------------------|---|
| Parcel Size:                     | APN 030-061-18: 88,446 square feet<br>APN 030-061-19: 149,229 square feet<br>APN 030-061-20: 30,954 square feet |
| Existing Land Use - Parcel:      | Vacant commercial land  |
| Existing Land Use - Surrounding: | commercial – mattress store, <del>car</del> repair, contractors yard.<br>Mobile Home Park                       |
| Project Access:                  | Soquel Drive  |
| Planning Area:                   | Soquel  |
| Land Use Designation:            | C-2 (Community Commercial)  |
| Zone District:                   | C-C (Community Commercial)  |
| Coastal Zone:                    | <u>  </u> Inside <u>XX</u> Outside  |

## Environmental Information

|                    |  |
|--------------------|--|
| Geologic Hazards:  | Not mapped/no physical evidence on site                          |
| Soils:             | Preliminary Soils Report completed                               |
| Fire Hazard:       | Not a mapped constraint  |
| Slopes:            | Mostly level with headwaters of an urban arroyo                  |
| Env. Sen. Habitat: | Ephemeral arroyo   |
| Grading:           | About 16,000 cubic yards proposed                                |
| Tree Removal:      | Removal of Eucalyptus grove and restoration of arroyo vegetation |
| Scenic:            | Not a mapped resource  |
| Drainage:          | Engineered drainage plans – no changes in drainage directions    |
| Archeology:        | Not mapped/no physical evidence on site                          |

## Services Information

|                            |                                       |
|----------------------------|---------------------------------------|
| Urban/Rural Services Line: | <u>XX</u> Inside <u>  </u> Outside    |
| Water Supply:              | City of Santa Cruz Water Department   |
| Sewage Disposal:           | Santa Cruz County Sanitation District |
| Fire District:             | Central Fire                          |
| Drainage District:         | Zone 5                                |

## History

The subject parcels were formerly developed with a warehouse building and attached residential unit,

a group of 11 non-conforming cottages and main building and a kennel facility. Demolition permits were obtained for these structures in March 2005, and the parcels are currently vacant. During the demolition, several trees including a large redwood were removed. Currently, there is minimal vegetation, with the exception of the eucalyptus grove, on the property.

The project site is included on the 01/06/2006 list of hazardous sites in Santa Cruz County because old underground gasoline storage tanks contaminated the soil with hydrocarbons. Remediation work was conducted at this site between August and September 2005 with the bulk of the contaminated soils removed to the Marina landfill in accordance with a Remediation Plan approved by the Department of Environmental Health Services (EHS). The consulting geologist has submitted a final report for the completion of the site remediation to EHS, which is currently under review. The report does indicate that the remedial soils excavation was successful in reducing contamination to trace levels, which is acceptable. A final acceptance letter from EHS is required before issuance of building and grading permits at this site.

In addition, asbestos and lead contamination was found in the former buildings prior to demolition and in the surrounding soil following demolition. The buildings were constructed in the 1930's through the 1950's, when the use of asbestos-containing building materials and lead-containing paints was common. A portion of the buildings was demolished without necessary asbestos and lead abatement. The remainder of the buildings were demolished and contaminated soil removed by a firm licensed for that type of remediation. Environmental Health Services has reviewed and approved the remediation report for the asbestos and lead. Additional documentation relative to both remediation efforts is included in the Initial Study and attachments (Exhibit D).

Prior to 1994, the subject parcels were zoned C-4 with a C-S (Service Commercial) General Plan designation. The General Plan designation for a large group of parcels on the north side of Soquel Drive near 41<sup>st</sup> Avenue ~~was~~ changed from C-S to C-C (Community Commercial) as part of the 1994 General Plan update. These parcels were rezoned to C-2 in conformance with their new General Plan designation. This change in the General Plan and zoning resulted in a number of established commercial businesses becoming non-conforming with respect to the zone district and General Plan. The General Plan designations were changed in this area in an attempt to revitalize this commercial area and encourage retail oriented development. The intended revitalization has not occurred in this stretch of Soquel Drive. Barriers to change appear to be the shape of these parcels (deep and narrow parcels with limited road frontage), the number of smaller parcels which cannot meet on-site parking requirements for most C-2 uses and the large number of parcels in different ownership. In addition, the County now has a shortage of vacant or underutilized C-4 zoned parcels. For these reasons, the zoning is proposed to return to **C-4** and the General Plan designation to return to C-S. A separate proposal to rezone and amend the General Plan designation for the surrounding C-2/C-C parcels is being processed by the Policy section of the Planning Department concurrent with this application.

### **Project Setting**

The project site is located within the Soquel planning area fronting onto Soquel Drive, an arterial street. The project site is generally level with a slight slope to the north (rear of the parcel) and to the east. There is an ephemeral drainage at the northeast end of APN 030-061-19. A Riparian Presite for this project was completed under application 03-0410 in October 2003 to evaluate the arroyo located at the rear of APN 030-061-19 and to determine the extent of the arroyo and the appropriate

development setbacks. A dense grove of eucalyptus trees is located at the northeast end of the parcel, in and around the ephemeral drainage. There is a mobile home park bordering the northern and northwestern boundaries of the subject property. There are several non-conforming single-family dwellings (dwellings on parcels with commercial zoning and General Plan designation) on the west side of the subject parcels with commercial structures (mattress store, warehouse) to the west along Soquel Drive. East of the subject parcels are several ~~car~~ repair shops and miscellaneous commercial buildings. The properties across Soquel Drive from the subject property are a mixture of retail commercial, light industrial and office uses.

The applicant proposes to adjust the boundaries between three existing commercial properties to result in two parcels of 4.07 acres (Parcel **A**) and 2.05 acres (Parcel B) each with a 20-foot wide shared driveway easement between the parcels. The applicant has requested a General Plan amendment and a Rezoning to return the resultant parcels to the C-S (Service Commercial) land use designation and the C-4 zoning in place prior to the adoption of the 1994 General Plan. On Parcel **A**, the applicant proposes to construct an approximately 38,800 square foot car dealership building with 221 parking spaces for customers, employees and inventory. **An** 80,753 square foot mini-storage structure (three stories and a basement) with an attached office building, a 20,832 square foot, two story mini-storage structure, and parking for 51 cars is proposed on Parcel B.

The site improvements associated with the proposed development include an engineered drainage system with on-site detention, parking and access driveways, landscaping, and frontage improvements and street trees along Soquel Drive. Because of poor quality fill and soil on the property, even though the slope is relatively flat, the proposed improvements require approximately 15,730 cubic yards of excavation on this six acre site, of which 13,000 cubic yards of this material will be exported off site. It is expected that much of the exported material may be suitable as fill material for other permitted projects, including an identified location currently in the process of annexation to the City of Watsonville. Unsuitable fill materials and any fill that cannot be accommodated at a permitted site would be hauled to the Marina Landfill for disposal, where clean fill dirt is accepted at no charge. About 11,800 cubic yards of imported fill is proposed, including the volume of gravel needed for the underground drainage detention system. The applicant also proposes to remove the eucalyptus grove at the northeast end of the property adjacent to the ephemeral channel and restore this area with native species including willow (via cuttings), eight Coast Live oaks and six redwoods. The tree removal and restoration is addressed in the section of this report titled "Riparian Issues" and in the findings for the Riparian Exception.

## ANALYSIS AND DISCUSSION

### Zoning & General Plan Consistency

The applicant proposes to adjust the boundaries between the three subject parcels to result in two parcels of 4.07 acres (Parcel **A**) and 2.05 acres (Parcel B) each. The proposed lot line adjustment will reduce the number of parcels from three to two and will increase the size of the resultant parcels increasing their suitability for viable commercial development. The proposed lot line adjustment is consistent with both the existing and proposed General Plan designations and zone districts.

The proposed mini-storage **and** car dealership are not allowed uses under the existing General Plan and zoning (C-C and zoned C-2). These uses are allowed in the Service Commercial (C-S) land use



designation and the C-4 zone district. Consequently, the applicant has applied for a General Plan amendment and rezoning. The existing uses in the surrounding area are C-4 type uses or non-conforming residences. As discussed previously, the parcel geography (deep and narrow parcels with limited road frontage), small sizes and multiple ownerships have proven to be obstacles to retail development along the north side of Soquel Drive. In fact, there has been no new C-2 development in the vicinity of the subject parcels since the 1994 General Plan and zoning changes. The uses associated with C-2 zoning, community serving shopping and services, generate a large amount of traffic. In addition, there are areas of traffic congestion within Soquel Village (east of the project area) and at the 41<sup>st</sup> Avenue/Highway 1 interchange that create traffic challenges at the existing service levels. It could be difficult to fully develop the subject parcels and the parcels immediately surrounding them with C-2 uses without increasing the traffic and circulation challenges in this corridor. Moreover, C-4 uses, including this project, are likely to generate less traffic than C-2 retail uses. For these reasons, retail development has not occurred on the subject and surrounding parcels and returning to the original land use designation and zoning is appropriate. County Code Section 13.01.090 permits General Plan amendments to be recommended by your Commission by resolution to the Board of Supervisors for approval. This resolution is required to include the reasons for the recommendation, a statement of consistency of the proposal to the other parts of the adopted General Plan, and a statement of findings regarding compliance with the California Environmental Quality Act. Please refer to Exhibit 1, the Planning Commission resolution, for the required elements.

The C-2 and C-4 development standards are identical. In addition, increased side and rear yard setbacks of 30 feet are required when the commercial property is adjacent to residentially zoned property. The proposed site development standards for the car dealership (Parcel A) are as follows:

| <b>CAR DEALERSHIP – PARCEL A</b> |                 |                 |
|----------------------------------|-----------------|-----------------|
| <b>SITE STANDARD</b>             | <b>REQUIRED</b> | <b>PROPOSED</b> |
| <b>FRONT SETBACK</b>             | 10 feet minimum | ~ 150 feet      |
| <b>SIDE SETBACK (east)</b>       | 0 feet minimum  | ~ 40 feet       |
| <b>SIDE SETBACK (west)</b>       | 0 feet minimum  | ~ 45 feet       |
| <b>REAR SETBACK</b>              | 30 feet minimum | > 260 feet      |
| <b>HEIGHT</b>                    | 35 feet maximum | 22.5 to 29 feet |
| <b>STORIES</b>                   | 3 maximum       | 2               |

The proposed mini-storage facility on Parcel B is comprised of two buildings. The second building at the rear of the parcel abuts residential property at the side and rear property line. The proposed site development standards for the mini-storage development (Parcel B) are the following:

| <b>SITE STANDARD</b>            | <b>REQUIRED</b> | <b>PROPOSED</b>  |
|---------------------------------|-----------------|------------------|
| <b>FRONT SETBACK</b>            | 10 feet         | 20 feet          |
| <b>SIDE SETBACK (east)</b>      | 0 feet          | 6 to 21 feet     |
| <b>SIDE (west – commercial)</b> | 0 feet          | 0.8 feet         |
| <b>REAR SETBACK</b>             | 30 feet         | > 200 feet       |
| <b>HEIGHT</b>                   | 35 feet         | 25.75 to 31 feet |
| <b>STORIES</b>                  | 3 maximum       | 3                |

| MINI STORAGE BUILDING #2 – PARCEL B |           |           |
|-------------------------------------|-----------|-----------|
| SITE STANDARD                       | REQUIRED  | PROPOSED  |
| FRONT SETBACK                       | 10 feet   | >400 feet |
| SIDE SETBACK (east)                 | 0 feet    | ■ 24 feet |
| SIDE (west -residential)            | 30 feet   | 38 feet   |
| REAR SETBACK                        | 30 feet   | 67 feet   |
| HEIGHT                              | 35 feet   | 24.5 feet |
| STORIES                             | 3 maximum | 2         |

The proposed mini-storage facility has 99,735 square feet of storage in two buildings with about 1,800 square feet of ancillary commercial space (an office) located on the Soquel Drive frontage. A total of 51 spaces, three of which are ADA accessible are proposed for this site. Nine parking spaces are required for the ancillary office (one space per 200 square feet). The parking requirements found in County Code Section 13.10.552(b) do not include requirements for mini-storage facilities or self-storage facilities. County Code does require, however, that uses not specified provide the same number of spaces as the most similar use. The warehouse or storage identified in the parking schedule, however, is for uses that include commercial or industrial components, and is not applicable to the proposed use. Generally, mini-storage facilities are minimal traffic generators with minimal parking requirements. The Store More facility in Aptos was the most recent mini-storage facility approved in the unincorporated area. This facility provided one space per 2,000 square feet of structure (storage and administrative office). Subsequent site visits have shown that the parking on this and other newer mini-storage sites is largely underutilized. Using the one space per 2,000 square feet formula, 50 spaces would be required for the mini-storage facility. The applicant is requesting a 14 percent reduction in required parking (8 spaces) in accordance with County Code Section 13.10.553 (Variations to Requirements). This code section allows a reduction in parking when there are two or more businesses with non-coinciding peak parking demands sharing a common parking area. For 2-4 businesses, the standard reduction is 10% (6 spaces), however, County Code Section 13.10.553(b) allows for the Approving Body to allow a larger reduction if it can be demonstrated that parking demands for the uses occur at different times. While a business has not yet been identified for the office area, it is anticipated that this ancillary use could be a packing and shipping facility or mailbox office, and there are a number of potential small office or general neighborhood services that could occupy this space. Peak demand for these uses tends to be the lunch and after-work hours, while use of the mini-storage tends to be sporadic and variable. The proposed parking reduction would result in 1 parking space per 2,375 square feet of storage. Based on the underutilization of parking in several similar mini-storage facilities in the area, this parking ratio will provide adequate parking for the proposed uses on the site.

### Signage

The applicant proposes signage that exceeds the 50 square foot, single sign maximum requirements as stated in County Code 13.10.581(k), and therefore requires a Variance to the size and number of signs. Specifically, the car dealership has proposed followings signs:

- 2 Honda icon signs at 30 square feet each (5'x 6' each, 60 square feet total)
- Honda sign at 36 square feet (2'x18')
- Dealership name (Ocean) sign at 20 square feet (~2'x10')
- 3 service reception signs at 12 square feet each (36 square feet total)
- Directional sign at 48 square feet
- Monument sign – Honda, 64 square feet

The total signage for the car dealership on Parcel A is 216 square feet, not including the directional sign. The sign ordinance, while appropriate for smaller scale commercial development, such as an individual retail or “mom and pop” store, does not provide adequate sign area for large-scale commercial development or shopping centers. All such larger scale stores (such as Toys R Us and Circuit City – 834 square feet total, Home Depot at 300 square foot primary sign, Safeway at 346 square feet of signage, Felton Rite Aid – 50 square feet plus a 25 square foot monument sign, Abbott’s Thrift in Felton – 120 square feet) have all received variances for signage substantially larger than the 50 square foot maximum established in the code. Overall, the proposed signage is in keeping with the scope and scale of the proposed car dealership and is essential to its proper design and function. With the exception of the proposed monument sign, all of the individual signs are less than 50 square feet. The width of the dealership buildings front elevation is 178 feet. The largest sign on the faqade is 36 square feet, which is relatively small with respect to length of faqade, but in aggregate with the logo and service signs are in proportion to the size of the structure. Given the aggregate amount of signage, staff recommends that the monument sign be reduced to 50 square feet in keeping with the single sign maximum. Because additional signage and sign area are recommended for this site in order to provide adequate visibility, staff has included as an operational condition that supplemental advertising such as temporary banners, flagging strung from the light standards, inflatable figures or large advertising balloons or the like be prohibited at this site. This excessive advertising is not necessary and this condition will avoid a cluttered or excessively “busy” appearance that many car dealerships sometimes have.

On the mini-storage property, the applicant proposes a 50 square foot sign for the business office on the front faqade and a 50 square foot sign for the mini-storage facility on the eastern faqade. Thus, the mini-storage property would have two signs with a combined area of 100 square feet, and a height of 4 feet each. The street-side faqade for this structure is significantly narrower than that of the car dealership at 72 feet for the building with an 86-foot wide covered patio. It is staffs opinion that the business sign is disproportionately large for this facade. The sign regulations provide a formula for calculating maximum signage for smaller structures where the 50-foot sign would be too large. Based on the formula of 0.5 square feet of sign area per foot of building width, the recommended sign area would be between 36 and 43 square feet for this sign. Staff is recommending a 40-square foot maximum sign at this location in order to provide adequate visibility while keeping the sign in proportion with the building’s faqade. The proposed mini-storage sign is 50 square feet in size. The mini-storage sign is located on very lengthy side elevation and is set back about 150 feet from Soquel Drive. Due to its distance from Soquel Drive, its location on a lengthy faqade and the need for visibility, staff supports this 50 square foot overall size.

Special circumstances exist at this site, in that limiting the signage to 50 square feet maximum and one sign for each commercial lot (Parcel A and B) would result in signs disproportionately small with respect to the commercial structures and their uses. In addition, given the curve of Soquel Drive and the speeds at which traffic travels along this stretch, signage meeting the sign regulations would be more difficult to discern for passing traffic. Moreover, there is limited opportunity for

motorists to safely **turn** around should they **miss** the driveway for the car dealership or storage complex. Thus, additional signage and increased aggregate maximum **sizes** would facilitate traffic flow and visibility of these businesses without creating excessively large and out-of-scale signs.

## Design Review

The development of these lots will be an improvement to the area. Soquel Drive is an arterial street that lacks sidewalks and is underdeveloped through this section. The proposed design of the *car* dealership will be integrated with the Soquel Drive commercial corridor. The mini-storage facility has been oriented to keep massing from the street frontage and provides a commercial business space and outdoor area that provides a pleasing commercial frontage. The project will construct separated sidewalks, plant street trees and provide landscaping on a site previously lacking these amenities.

The proposed mini-storage and car dealership development generally complies with the requirements of the County Design Review Ordinance. Specifically, the proposed project will incorporate site and architectural design features such as increased front setbacks, articulated front facades and landscaping to reduce the visual impact of the proposed development on surrounding land uses. The applicant will utilize a larger size street tree in order to achieve a higher canopy to avoid blocking a view of the car display and meet the County's street tree requirements. A combination of Crape myrtle, a smaller tree with showy flowers, and London plane tree, a larger scale deciduous tree are proposed along Soquel Drive. The original project design proposed a 10-foot front yard setback for the mini-storage with a greater height and a large barn-like design (similar to the Store More facility in Aptos). While the design is attractive, it was the opinion of Planning Department staff that while the design worked for the Aptos location, which is at the base of a steep slope at the edge of the urban services line, it appeared out of place in the context of the more urban commercial environment of the Soquel Drive and 41<sup>st</sup> corridors. In addition, the scale of the two large barn doors (17.5 feet by 15 feet each) and a 32-foot high gable at the minimum setback was out of scale with the surrounding development. To address these issues, the applicant modified the design, pulling the structure back an additional 10 feet (20 feet total setback at the closest point) and increasing the landscaped area. The facade was lowered at the street elevation to **26** feet and a small business space was added at the front elevation **to** create more vitality along the street frontage. The applicant proposes an outdoor courtyard area, which would further enhance the streetscape. A diamond patterned finish is proposed on the western (side) facade to visually break-up the massing along this side. The Urban Designer recommends that this treatment be carried through to the rear and eastern elevations for continuity.

The Honda Corporation specifies strict design elements required for new *car* dealerships. The originally proposed Honda car dealership was the universal corporate design, comprised of a boxy, white structure dominated by a large, blue Honda "cylinder" (a required corporate image element). This standard architectural design has been used for the majority of new Honda car dealerships throughout the United States. This design was rejected by staff based on the boxy, generic appearance. The revised design utilizes a curved facade, which echoes the property's curving Soquel Drive frontage. The corporate blue cylinder, which Honda requires all dealerships to have, is now broken into two smaller elements. The fenestration has been increased from the original design and modified to minimize the aluminum framing between the glass panels, providing a sleeker, more stylish image and minimizing the "white box" appearance.

## Riparian Issues

There is a grove of eucalyptus trees adjacent to and within the riparian buffer area of an ephemeral riparian corridor at the northeastern end of Parcel A. A Riparian Pre-site was completed in 2003 determining the extent of the corridor and the required riparian buffer setback. Environmental Planning staff determined that the riparian buffer setback is 20 feet to any improvements and the limits of grading with an additional 10-foot setback for any buildings. The proposed car dealership building is located over 100 feet from the riparian buffer setback. In addition, the proposed paving for parking and the masonry wall will meet the required riparian buffer setback. A number of residents within the mobile home park on the north side of the eucalyptus grove parcels have requested that these trees be removed. The residents have incurred damage from falling branches and fear future harm from these trees. An arborist has evaluated the eucalyptus trees and recommends their removal. The applicant has submitted a restoration plan for the removal of the eucalyptus grove, as well as all other non-native plants, and replanting the area with willows (*Salix* sp.), Redwood (*Sequoia sempervirens*) and Coastal live oaks (*Quercus agrifolia*), in conjunction with hydroseeding using native bunch grasses. A Riparian Exception to Chaptex 16.30 (Riparian Protection ordinance) is required to remove the eucalyptus and other non-native plant species from within the riparian buffer and corridor. These trees are a non-native, invasive species with minimal to no habitat value to native wildlife and plant species. Thus, the proposed restoration will result in a net increase in native riparian habitat. Additionally, residents of the adjacent Rodeo Mobile Estates have requested that the trees be removed due to concerns about safety and property damage. A copy of a letter from the residents to your commission is included in Exhibit H.

## Drainage

The project will result in approximately 200,000 square feet of impervious surface (buildings and paving) on the site. An engineered drainage plan has been submitted to and accepted by the Department of Public Works staff for the proposed development. The proposed project will not alter the existing overall drainage pattern of the site. Specifically, the distribution of runoff, in which two-thirds flows into the drainage tributary to the north, will be preserved. The applicant is proposing to use pervious pavement in the sales display area at the front of the car dealership and for the inventory parking at the back of the site to reduce the amount of impervious surfacing for the project. A total of 39,505 square feet of pervious pavement is proposed. This site is not within a mapped groundwater recharge area and the soil has poor percolation capabilities. Consequently, the pervious concrete in the inventory parking area will be underlain by a gravel detention system, thus rainwater will be able to percolate through the pervious pavement into the gravel system. Conditions of approval have been included to require that the pervious pavement be maintained per manufacturers specifications, such that porosity is assured. The proposed on site detention systems will control the runoff rate from the subject property. The calculations show that the development will maintain pre-development drainage characteristics including peak runoff rates and final discharge locations. DPW staff has determined that existing off-site storm water facilities are adequate to handle the increase in drainage associated with the project.

## Grading

The geotechnical investigation for the project found fill soils in several locations. Most areas contain fill ranging in depth from 2.5 to 3 feet below existing grades, but one area in the western central

portion of the site contained a buried concrete pit with 6 feet of fill material and the area in the northeastern corner of the property contains approximately 10 feet of fill with historical fill slopes along the drainage channel banks. In addition, the report identified native clays and silty sands at the project site in addition to the fill, which does not have adequate bearing capacity. Consequently, the report recommends that foundations be supported on a minimum of 24 inches of engineered fills below the foundation or that the soil be excavated and recompacted as engineered fill to a minimum depth of 36 inches below final grades, to minimize potential soil displacement, settlement and liquefaction. The unsuitable fill and native materials, the extent of excavation and recompaction required at this site, the size of the buildings and paving and construction of the drainage detention systems will generate about 16,000 cubic yards of grading over approximately six acres. This volume is not considered excessive, in light of the acreage involved, the unfavorable soils conditions and the type and scope of commercial development.

Additional sediment control measures such as silt fencing will be required between the project area and the ephemeral drainage channel to minimize the potential for sediment or turbid runoff from entering the watercourse. Although the site is nearly level with at most 2-5% gradients, the scope of the earthwork does involve almost 6 acres of area. One key component of erosion control will be the inclusion of an engineered sediment detention basin to intercept site runoff, control its release and reduce turbidity and sediments leaving the site. The second important condition is that the grading and/or land clearing within the riparian corridor and riparian buffer setback (for the restoration component of the project) must start after April 15 (conditions allowing) and no later than August 1 to ensure completion prior to the onset of the rainy season. For earthwork located outside of the riparian setbacks, the continuation of grading into the winter rain season (October 15 through April 15) will require a separate winter grading permit, which, depending on the timing, existing site conditions, and the quality of the winter erosion plan, may or may not be approved by the Planning Director.

## **Traffic**

The applicant submitted a traffic study for the project, which has been reviewed and accepted by the Department of Public Works Traffic Engineering staff. According to the Traffic Impact Analysis (TIA), the mini-storage and car dealership together are expected to generate 580 daily trips with 32 trips at the AM peak hour and 66 trips during the PM peak hour. The TIA analyzed seven intersections (Rodeo Gulch/Soquel Drive, 41<sup>st</sup> Avenue/Soquel Drive, Robertson Street/Soquel Drive, Porter Street/Soquel Drive, 41<sup>st</sup> Avenue/Northbound Highway 1 Off-Ramp, 41<sup>st</sup> Avenue/Southbound Highway 1 Off-Ramp, 41<sup>st</sup> Avenue/Gross Road). Presently, three of the studied intersections operate unacceptably - Robertson Street/ Soquel Drive, Porter Street/Soquel Drive, and the Southbound Highway 1 Off-Ramp at 41<sup>st</sup> Avenue/Gross Road (this last intersection shares the same signal controller and acts as one intersection). The analysis included traffic contributions by approved, but not yet built or complete projects (Safeway and Home Depot on 41<sup>st</sup> Avenue) in the background conditions. These same intersections will continue to operate unacceptably with the increase in traffic generated by the project. However, according to the traffic analysis, the project will not contribute more than 1% to the volume/capacity ratio to any of these three intersections, which is the threshold that must be exceeded to identify a significant impact pursuant to the 1994 General Plan (Policy 3.12.1). Additionally, street improvements on 41<sup>st</sup> Avenue associated with the Safeway/Home Depot project are currently under way, and the County Board of Supervisors has designated funding and staff resources for improvements to the Highway 1 overpass on 41<sup>st</sup> Avenue to mitigate existing traffic congestion.

The increase in peak hour traffic volumes resulting from the project will not reduce the Level of Service of any of the other study intersections below Level of Service D. Traffic improvement fees based on the number of new trips will be required prior to building permit issuance. These fees will contribute to funding future capital road and roadside improvements in the Soquel planning area.

Project related traffic expected to utilize the Highway 1 corridor does not exceed the 1% threshold. A project condition will require trucks to access and leave the site via 41<sup>st</sup> Avenue only or via westbound Soquel Drive. Truck traffic will be prohibited from proceeding east along Soquel Drive into Soquel Village.

## Noise

An acoustic study was completed for this project, since there are residential units in the vicinity of the project. Specifically, a mobile home park located at the northwestern and northern property boundaries and 3-4 nonconforming dwellings (dwellings in a commercial zone district) located along the western property line of Parcel B (mini-storage). Acoustic studies for nearby projects have shown that traffic noise along Soquel Drive can exceed these standards. A sound wall is proposed on or near (in the riparian area) the northern property line and along the western property line of Parcel B. Noise-generating equipment such as compressors and vacuums are widely used at car dealerships. Since the preparation and service areas for the proposed Honda dealership will be located over 100 feet from the nearest residence, the acoustic study found that the noise levels are expected to be within the limits of the General Plan Noise Element. The non-conforming dwellings on the east side of Carriker Lane, however, could potentially be exposed to excessive noise from the mini-storage facility by large truck activity if trucks are allowed to idle, or by excessively loud car sound systems. To minimize potential noise impacts to the current residents, a 6-foot masonry wall is proposed on the western property line. Additional conditions are included which limit the business hours and days, require gates at the mini-storage that block after hours access, prohibit the use of P.A. systems, and require an on-site manager for the mini-storage, who can aid in the control of noise from excessively loud music or idling trucks, to minimize potential noise impacts. Overall, the noise levels associated with the project will not be significant.

## Environmental Review

Environmental review has been required for the proposed project per the requirements of the California Environmental Quality Act (CEQA). The project was reviewed by the County's Environmental Coordinator on February 13, 2006. A preliminary determination to issue a Negative Declaration with Mitigations (Exhibit D) was made on March 3, 2006. The mandatory public comment period expired on April 5, 2006.

Regarding the County's intent to issue a Mitigated Negative Declaration for the project, comments were received from the following agencies: Monterey Bay Unified Air Pollution Control District (MBUAPCD) and CALTRANS. These comments are included as additional attachments to Exhibit D. Specifically, the comments received by agencies and how they have been addressed are indicated below:

Monterey Bay Unified Air Pollution Control District (MBUAPCD): J. Getchell of the MBUAPCD contacted Planning staff during the review period. An

air quality impact analysis for the grading and construction phase of the project was prepared by Donald Ballanti, Certified Consulting Meteorologist and submitted to the MBUAPCD. This report was accepted and a letter was received from the MBUAPCD requesting additional measures to minimize potential air pollution be incorporated into the project. These comments have been incorporated into the conditions of approval.

California Department of Transportation (CalTrans): CalTrans states that it does not support the County's General Plan policy of a 1% level of significance for requiring traffic impact mitigation and cites two court cases to support this position. CalTrans has raised this matter previously with the Home Depot project (Application 04-0440). In the review of 04-0440, planning staff consulted with County Counsel regarding the cases cited by CalTrans. CalTrans alleges that these cases invalidate the County's use of a 1% increase in the intersection volume/capacity ratio as a threshold of significance for CEQA purposes. Contrary to CalTrans' assertion, Public Resources Code section **21082** and CEQA Guidelines section 15064.7 encourage local agencies to adopt their own criteria and thresholds for analyzing projects. Thus, the County is within its authority to adopt a threshold of significance relating to traffic as part of its General Plan. As noted above, the County properly applied this threshold to conclude that the project's impacts were not cumulatively considerable in relation to the overall baseline traffic situation.

The cases cited by CalTrans involved situations where local agencies found cumulative impacts of projects not significant because projects complied with existing regulatory standards or because the impacts of the projects were small compared to the overall impacts of other projects in the vicinity of the projects. For example, in the Kings County case, the County considered a project's air quality impacts insignificant based upon the overall high level of emissions within the basin. In the Los Angeles Unified School District case the City concluded that a minor increase in noise level associated with a project was insignificant because the baseline noise level already exceeded the regulatory recommended maximum of 70 dba. As explained by the court in the Kings County case, the relevant question for CEQA purposes is not the relative amount of impacts of a project when compared with preexisting impacts, i.e. the "ratio theory," but whether any additional amount of impacts should be considered significant in light of the serious nature of existing impacts. The County's cumulative impact analysis of the revised project complies with CEQA as noted above.

CalTrans states that the traffic study did not provide an analysis of mainline highway operations. The mainline highway operations have been analyzed in recent studies, and the project report addressed Highway 1 (Exhibit I) and referenced the previous analysis. County staff concurs that Highway 1 functions poorly in the peak hours, nevertheless, the new trips added by this project do not reach the 1% threshold set forth in the County's General Plan Objective **3.12** that require a project to mitigate its impacts. Moreover, the mitigation necessary to improve the level of service for Highway 1 is out of proportion to the traffic associated with this project (580 daily trips with **32** trips at the **AM** peak hour and 66 trips during the PM peak hour). CalTrans is probably not aware that the Honda dealership, which generates the majority of the trips in the traffic study, is currently located off Gross Road and 41<sup>st</sup> Avenue in the City of Capitola's Auto Mall. **Thus**, most of the "new" trips in the traffic study are actually existing trips with respect to the Highway 1 corridor.

CalTrans references the traffic improvements fees that the County requires and raises questions on how they are collected. As your Commission is aware, the County has traffic improvement areas and the traffic impact fees are allocated and spent in accordance with the County's adopted Capital



Improvements Plan (CIP). Nevertheless, a project-level funding mechanism does not exist for improving Highway 1 (which is within the jurisdiction of CalTrans), and there is no method to assure that these funds, if collected, would be used to upgrade Highway 1 and/or the 41" Avenue ramps and overpass, or for any other project within Santa Cruz County.

## Conclusion

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


## Recommendation

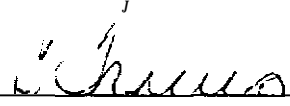
~~Staff~~ recommends that the Commission take the following actions:

- RECOMMEND that the Board of Supervisors certify the Mitigated Negative Declaration as complying with the requirements of the California Environmental Quality Act; and
- ADOPT the Resolution sending a recommendation to the Board of Supervisors to approve a General Plan land use designation amendment and zone district amendment for Assessor's Parcel Numbers 030-061-18, 19 and 20, and
- RECOMMEND that the Board of Supervisors approve the Commercial Development Permit, Lot Line Adjustment, Riparian Exception, Sign Variance and Preliminary Grading Approval proposed under Application Number **05-0252**, pending Board approval of the General Plan Amendment and Rezoning.

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

**The County Code and General Plan, as well as hearing agendas and additional information are available online at: [www.co.santa-cruz.ca.us](http://www.co.santa-cruz.ca.us)**

Report Prepared By:   
Cathleen Carr  
Santa Cruz County Planning Department  
701 Ocean Street, 4th Floor  
Santa Cruz CA 95060  
Phone Number: (831) 454-3225  
E-mail: [cathleen.carr@co.santa-cruz.ca.us](mailto:cathleen.carr@co.santa-cruz.ca.us)

Report Reviewed By:   
Cathy Graves  
Principal Planner  
Development Review

## STATEMENT OF LANDSCAPE DESIGN INTENT

Project: Store More America / Ocean Honda

Address: Soquel Drive, Soquel

### 1. Statement of Aesthetic and Functional Vision and Description of Landscape at Maturity.

The Ocean Honda / Store More America Soquel project is a planned retail automobile dealership and self-storage facility. The site is largely void of vegetation, and the existing vegetation, primarily non-native, is not suitable for projected use and development.

At the approximate northeast corner of the property is a grove of non-native, invasive eucalyptus trees (*Eucalyptus globulus*) that is recommended for removal and replacement by native habitat species as part of the Plans. No rare or endangered plant species were found during the botanical survey.

The goal of the landscape program is to carefully integrate the proposed buildings and paving with the aesthetic and utilitarian goals of the proposed planting areas as shown on the overall Site Plans. The landscape will consist of both northern California native plants that are found naturally in oak woodland and riparian habitat types, both of which are adjacent to the site, and non-invasive, exotic plant materials, all of which have low-maintenance and low water-use characteristics. Trees will be a mix of deciduous and evergreen types. The aesthetic aspects of the landscape will be achieved through seasonal leaf color, seasonal flowering, and variegated leaf forms and supported by a diminished landscape maintenance program. Two small mixed annual and perennial color plantings will be used in a high-visibility area in front of the showroom.

### 2. Statement Related to Planting and Irrigation Systems.

Exotic plant areas will be created during the construction process and specification for drainage and soil work will be prepared during the construction document phase.

Future native plantings will replace the current eucalyptus trees and exotic weed species. Once the trees are cut, stumps will be ground to minimally twelve inches (12") and vegetative debris will be removed to the soil level to diminish the effect of esters in the eucalyptus tree debris. Acknowledging

some soil disturbance from tree removal equipment, no purposeful grading will be needed for the installation of native plant species.

Because of number of negative factors in the existing site soils (high presence of gravel and asphalt pieces with a compacted, poorly-draining sub-layer of clay, an import soil specification has been written by the soil laboratory used during the site analysis phase. With the laboratory fertility tests completed the plant materials to be used have been chosen for soils compatibility, water-conserving and reduced-maintenance characteristics. Plantings will be done from container sizes that are commonly available through nurseries that are optimum for future plant growth, and trees will be installed as per the guidelines established by the County Redevelopment Agency and / or Public Works. Nursery container sizes will vary from one-gallon to 48" box sizes. Exceptions are the Hard Fescue groundcover and native perennial bunchgrass mix that will be installed by hydroseeding, and restoration-size containers in the native plantings areas. All ground cover areas will receive a fiber mulch component as part of the hydroseed slurry. Tree and shrub areas will receive two inches (2") of one-half inch (1/2") size fir bark mulch.

The irrigation system for the project will be automated through the use of a series of electronic irrigation controllers. Irrigation valve circuits will provide low-gallonage, subsurface drip irrigation for all plantings, including turf. In native revegetation areas, a temporary system of drip irrigation and low-precipitation, long-radius rotor heads will be used as needed for about three years, until successful establishment is determined. Selection of specific irrigation equipment will ensure pressure compensation where needed and in-line or in-head check valves to prevent low-head drainage.

### 3. Projected Long-Range Maintenance

The landscaped areas are designed to have a 'natural' appearance at maturity. Because materials were selected for their water conserving and minimal maintenance qualities, the primary goal of diminished maintenance at maturity can be achieved. Planting notes and subsequent Maintenance Guidelines to be included in the Construction Document phase will also direct the landscape maintenance contractor in continuing the desired work. Turf along Soquel Drive, watered by subsurface drip irrigation, will need to be mowed. Some of the proposed trees adjacent to circulation areas will need to be pruned so that lower branches will not impede pedestrian or automobile movement. Shrubs will be planted at spacings that will allow them to grow into their natural forms without needing to be pruned or sheared.

Plant materials have been mixed to create a '*polycultural*' rather than '*monocultural*' landscape. Materials resistant to oak root fungus (*Armillaria spp.*) will be used, and, because plant selection by maintenance needs, it is anticipated that spraying of insects or diseases will not be required.

**All** control of exotic weed species in exotic species landscapes will be done mechanically on an as-needed basis as part of the contracted landscape maintenance program. In the native plant areas, exotic weed species will be removed mechanically and minimally three (3) times a year, as determined during the Monitoring and Maintenance Program established to support related success criteria. The following are the primary invasive, exotic plant species to be controlled:

- ❑ Cape ivy (*Delairea odorata* / *Senecio mikanioides*)
- ❑ Scotch broom (*Cytisus scoparius*)
- ❑ Bull thistle (*Cirsium vulgare*)

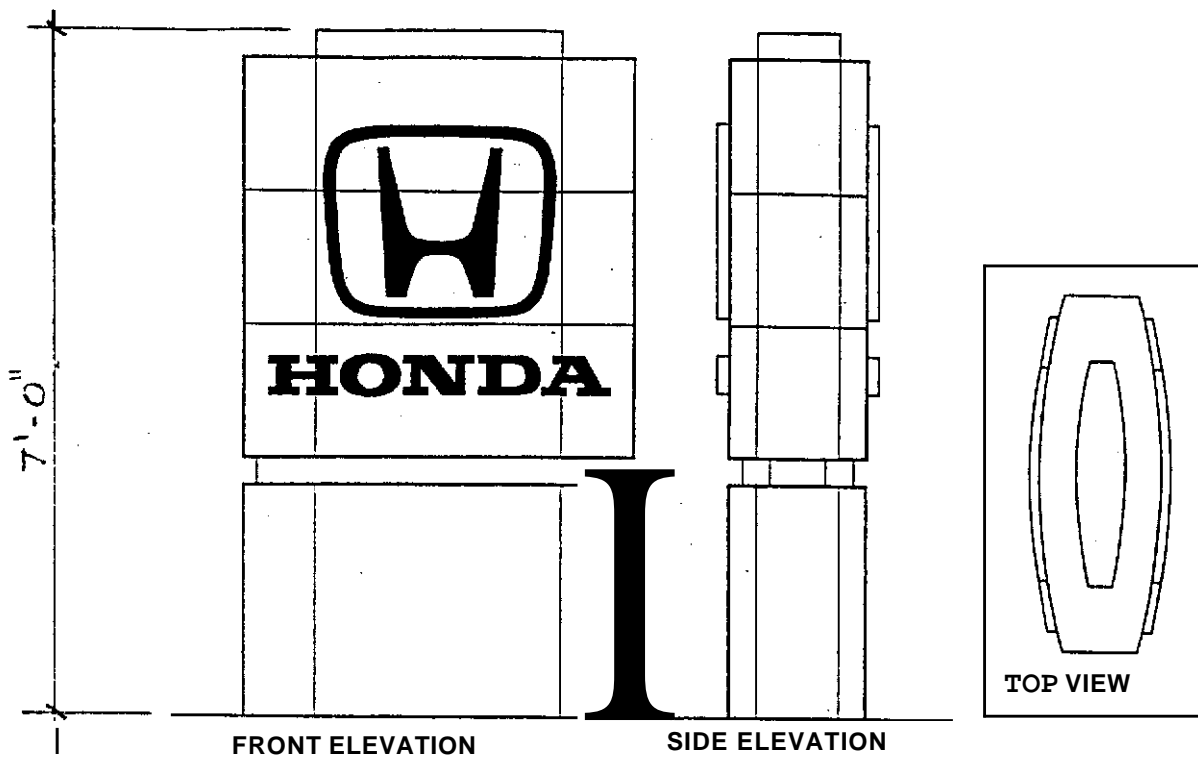
The use of herbicides is prohibited on the site.

## Maintenance and Monitoring Program

The success criteria for the native landscape areas are that eighty percent (80%) of the original planting shall be alive at the end of a five (5) year Maintenance and Monitoring period. Plantings will have temporary irrigation for the first three (3) years, but none the last two. Annual monitoring will also determine possible needs for exotic species control, replanting of native materials and/or other maintenance processes.

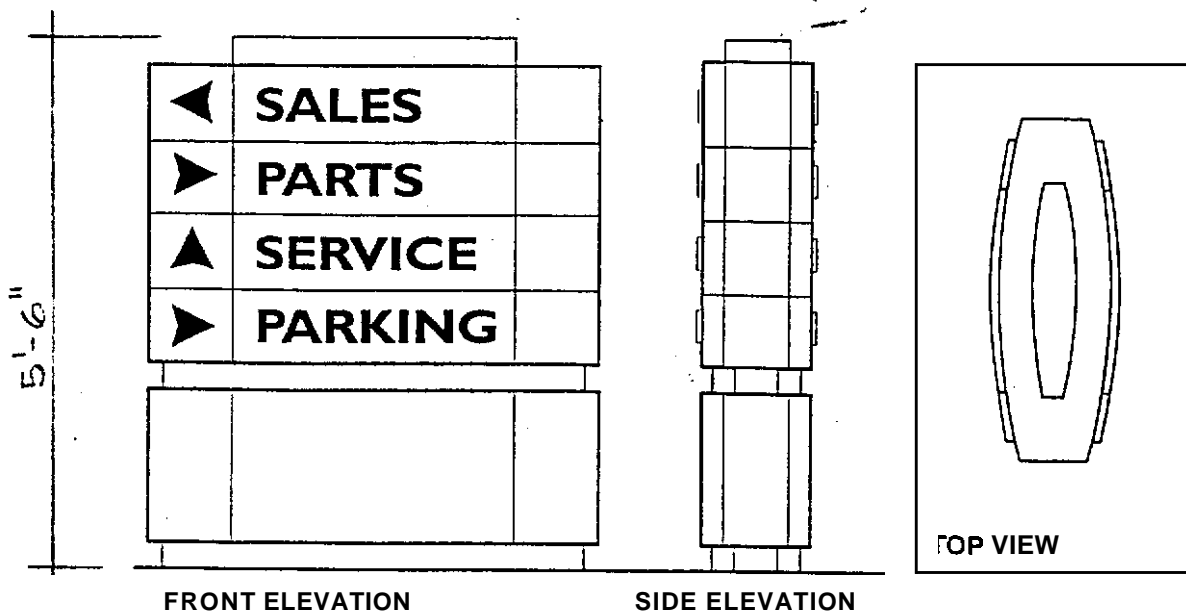
In general, it is predicted that the mature landscape will need very little petro-chemical support. Also, most of the work to be done on the site can be done with hand tools rather than mechanical tools, which will eliminate the disturbing side effects of power equipment noise.

-END-



### Monument Sign

- Internally illuminated top sign is PMS 285 C (blue) and logo type are white. Sides to be illuminated. Base to be White.
- Sign to be double sided.



### Directional Sign

- Main sign face is PMS 285 C (blue). Letters and arrows are white. Base to be White.
- Sign to be double sided.

## Rezoning Findings

1. The proposed zone district will allow a density of development and types of uses which are consistent with the objectives and land-use designations of the adopted General Plan.

Upon adoption of the proposed General Plan land use designation change to Service Commercial/Light Industry, changing the zoning of the subject parcels to the C-4 (Service Commercial) zone district from the C-2 (Community Commercial) zone district will provide for the type of uses that are consistent with the proposed land use designation and the existing commercial uses nearby.

2. The proposed zone district is appropriate to the level of utilities and community services available to the land.

The subject parcels lie on an arterial street completely within the Urban Services Line and the full range of utilities and community services including water, sewer, gas, electricity, telephone, etc. are available to serve them.

3. One or more of the following findings must be made.
  - a) The character of development in the area where the land is located has changed or is changing to such a degree that the public interest will be better served by a different zone district; or
  - b) The proposed rezoning is necessary to provide for a community-related use which was not anticipated when the Zoning Plan was adopted; or
  - c) The present zoning is the result of an error; or
  - d) The present zoning is inconsistent with the designation shown on the General Plan.

The zoning and General Plan land use designation of the subject parcels were changed to C-2 and C-C respectively from C-4 and C-S in the 1994 General Plan with the assumption that retail commercial uses would be developed there. That scenario has not materialized. Instead, the area is characterized by uses associated with the C-S land use designation and C-4 zoning. The proposed automobile dealership and mini storage are also C-4 uses. Therefore rezoning back to the prior land use designation and zoning is appropriate.

## **Commercial Development Permit Findings**

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

The location of the proposed commercial buildings and the conditions under which they would be operated or maintained will not be detrimental to the health, safety, or welfare of persons residing or working in the neighborhood or the general public, and will not result in inefficient or wasteful use of energy, and will not be materially injurious to properties or improvements in the vicinity in that the project is located in an area designated for commercial uses and is not encumbered by physical constraints to development. Construction will comply with prevailing building technology, the Uniform Building Code, and the County Building ordinance to insure the optimum in safety and the conservation of energy and resources. A construction level soils engineering report is required prior to building permit issuance to ensure that the foundations of all structures are properly designed for the site conditions. The proposed commercial buildings will not deprive adjacent properties or the neighborhood of light, air, or open space, in that the structure meets all current setbacks that ensure access to light, air, and open space in the neighborhood.

The project will construct frontage improvements to Soquel Drive consistent with the approved plan line improving safety for pedestrians and bicycles by providing new sidewalks and a bicycle path. This will require an additional 5 feet of dedication from the applicant along Soquel Drive. The plan will insure that a 5-foot bike lane, 4.5-foot planting strip and a 6-foot sidewalk are constructed.

A sound wall will be constructed at or near the rear property (mini-storage and car dealership lots) and the western property (mini-storage lot) between the commercial development and the adjacent residential uses. In addition, business hours will be restricted to further reduce noise impacts.

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

The subject parcels are proposed for rezoning to the **C-4** (Service Commercial) zone district in conjunction with a General Plan amendment to the C-S (Service Commercial) land use designation. The proposed location of the commercial buildings and the conditions under which they would be operated or maintained with concurrent approval of the requested sign Variance will be consistent with all pertinent County ordinances and the purpose of the C-4 zone district in that the primary use of the property will continue to be a service commercial (car dealership, mini-storage and ancillary business office) that meets all current site standards for the zone district.

- 3. That the proposed use is consistent with all elements of the county general plan and with any specific plan which has been adopted for the area.**



A General Plan Amendment is proposed for the subject parcels changing the land use designation from C-C (Community Commercial) back to the C-S (Service Commercial) land use designation, that they were prior to 1994. The proposed commercial uses are consistent with the proposed General Plan amendment in that site has adequate access and services and is located where the impacts of noise, traffic and other nuisances will not adversely affect other land uses.

The proposed commercial buildings will not adversely impact the light, solar opportunities, air, and/or open space available to other structures or properties, and with approval of the requested sign Variance, meets all current site and development standards for the proposed C-4 zone district (including setbacks, height, parking, and landscaping) and will result in an upgrade to an under-developed commercial area.

The applicant submitted a traffic study for the project, which has been reviewed and accepted by the Department of Public Works Traffic Engineering staff. According to the Traffic Impact Analysis (TIA), the mini-storage and car dealership together are expected to generate 580 daily trips with 32 trips at the AM peak hour and 66 trips during the PM peak hour. The Level of Service policy (3.12.1) establishes LOS D as the minimum acceptable LOS and requires that projects provide mitigation for traffic generation which results in service levels falling below D, or which results in a 1 percent or greater increase in volume for critical movements where LOS is already below D. There are three intersections already operating below LOS D - Robertson Street/ Soquel Drive, Porter Street/Soquel Drive, and the Southbound Highway 1 Off-Ramp at 41<sup>st</sup> Avenue/Gross Road (this last intersection shares the same signal controller and acts as one intersection). The traffic generated by this project does not meet the 1 percent criteria. The project will not reduce the level of service for the other four intersections in the immediate area to or below LOS D. The project is therefore in conformance with the General Plan regarding traffic and circulation.

The project is in conformance with the Land Use Compatibility Policy (6.9.1) in that an acoustic study was prepared for this site that found that the project will create an incremental increase in the existing noise environment, however, the noise levels are generally expected to be within the limits of the General Plan Noise Element. Additionally the project is conditioned to include a 6-foot acoustical wall adjacent to residential uses, to limit hours of operation and to provide around-the-clock onsite management to provide oversight and minimize problems related to the use of the storage facility.

The project is consistent with the General Plan Riparian Corridors and Wetlands policy (Policy 5.2.2) in that the proposed development will be located outside of the proscribed buffer setbacks. Additionally, the project includes a component to restore the adjacent riparian corridor through the removal of invasive exotic plant species and the revegetation using native riparian plants.

A specific plan has not been adopted for this portion of the County; however, the proposed improvements are consistent with the adopted plan line for Soquel Drive.

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

According to the traffic analysis that has been accepted by the Department of Public Works, the project is expected to increase the weekday daily trips by 580 daily trips with 32 trips at the AM peak hour and 66 trips during the PM peak hour. As discussed in Commercial Development Finding #3, the project will not result in a 1 percent or greater increase in volume for critical movements in the

intersections already operating below LOS D (Robertson Street/ Soquel Drive, Porter Street/Soquel Drive, and the Southbound Highway 1 Off-Ramp at 41<sup>st</sup> Avenue/Gross Road) and will not reduce any of the other intersections to a LOS of D or lower. Will serve letters are on file from the Santa Cruz County Sanitation District and the City of Santa Cruz Water Department. Therefore, the proposed use will not overload utilities or generate more than the acceptable level of traffic on the streets in the vicinity. The expected level of traffic generated by the proposed project is anticipated to be 580 trips per day. As a result of this projected increase in traffic, the applicant is required to pay \$232,000 in traffic impact fees to the County, to be utilized for future road improvements within this road planning area (Soquel). Additionally, street improvements on 41<sup>st</sup> Avenue associated with the Safeway/Home Depot project are currently under way, and the County Board of Supervisors has designated funding and staff resources for improvements to the Highway 1 overpass on 41<sup>st</sup> Avenue to mitigate existing traffic congestion.

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

The proposed commercial buildings will complement and harmonize with the existing and proposed land uses in the vicinity and will be compatible with the physical design aspects, land use intensities of the Soquel Drive near 41<sup>st</sup> Avenue area in that the proposed structures will be consistent with the purpose and function of the Soquel Drive commercial district. The development of these lots will be an improvement to an area of generally underdeveloped commercial parcels. Soquel Drive is an arterial street that lacks sidewalks and is underdeveloped through this section. The proposed design of the car dealership will be integrated with the Soquel Drive commercial corridor. The mini-storage facility has been oriented to keep massing from the street frontage and provides a commercial business space and outdoor area that provides a pleasing commercial frontage. The project will construct separated sidewalks, plant street trees and provide landscaping on a site previously lacking these amenities.

**6. The proposed development project is consistent with the design standards and guidelines (sections 13.11.070 through 13.11.076), and any other applicable requirements of this chapter.**

The proposed development is consistent with the Design Standards and Guidelines of the County Code in that the proposed commercial building will be of an appropriate scale and type of design that will enhance the aesthetic qualities of the surrounding properties and will not reduce or visually impact available open space in the surrounding area. The proposed mini-storage and car dealership development generally complies with the requirements of the County Design Review Ordinance. Specifically, the proposed project will incorporate site and architectural design features such as increased front setbacks, articulated front facades and landscaping to reduce the visual impact of the proposed development on surrounding land uses. The applicant will utilize a larger size street tree in order to achieve a higher canopy to avoid blocking a view of the car display and meet the County's street tree requirements. A combination of Crape myrtle, a smaller tree with showy flowers, and London plane tree, a larger scale deciduous tree are proposed along Soquel Drive.

## Variance Findings

1. **That because of special circumstances applicable to the property, including size, shape, topography, location, and surrounding existing structures, the strict application of the zoning ordinance deprives such property of privileges enjoyed by other property in the vicinity and under identical zoning classification.**

The size of this development (6 acres) and the location of buildings present obvious special circumstances given the County sign regulations, and a 50 square foot limitation on a large commercial development was not intended to meet the needs of a commercial development of this size. Signage that is adequate to assist the public in quickly identifying entry points and business locations will reduce confusion and unnecessary driving in and around areas populated by large numbers of pedestrians and vehicles and where opportunities to turn around should the driveways be missed are extremely limited. Similarly sized and situated properties have been granted sign variances, including the Safeway/Home Depot project at the intersection of 41<sup>st</sup> Avenue and Soquel Drive, the Toys "R" Us/Circuit City project at the intersection of Commercial Way and Commercial Crossing, and the Live Oak Business Park at the intersection of Chanticleer Avenue and Soquel Avenue.

2. **That the granting of the variance will be in harmony with the general intent and purpose of zoning objectives and will not be materially detrimental to public health, safety, or welfare or injurious to property or improvements in the vicinity.**

The granting of the variance will be in harmony with the general intent and purpose of zoning objectives and will not be materially detrimental to public health, safety, or welfare or injurious to property or improvements in the vicinity in that the monument and directional signs at the entrance to the ~~car~~ dealership will be readily visible to motorists but will also be small enough to avoid line of sight issues with the driveways, this will assist in the protection of public health and safety. Further, signs that are adequate to allow quick identification of business and entry points will simplify internal vehicular circulation and therefore assist in limiting confusion and unnecessary driving in areas where there are potential conflicts between drivers and pedestrians.

3. **That the granting of such variances shall not constitute a grant of special privileges inconsistent with the limitations upon other properties in the vicinity and zone in which such is situated.**

The granting of the variance to increase the number and aggregate size of this large commercial development's signs will not constitute a grant of special privileges inconsistent with the limitations upon other properties in the vicinity and zone in which such is situated in that commercial projects of similar or smaller sizes and scope have been granted similar variances for commercial developments, citing the need for adequate signage to insure public safety.

## Lot Line Adjustment Findings

1. The lot line adjustment will not result in a greater number of parcels than originally existed.

This finding can be made, in that there were three parcels prior to the adjustment and there will be two parcels subsequent to the adjustment.

2. The lot line adjustment conforms with the county zoning ordinance (including, without limitation, County Code section **13.10.673**), and the county building ordinance (including, without limitation, County Code section **12.01.070**).

This finding can be made. The proposed lots will meet the frontage and area requirements of the existing and proposed zone districts (C-2/C-4). There are no structures on these properties at this time.

3. **No** affected parcel may be reduced or further reduced below the minimum parcel size required by the zoning designation, absent the grant of a variance pursuant to County Code section **13.10.230**.

This finding can be made, in that none of the parcels included in the proposal will be reduced below the minimum parcel size required by the zone district as a result of this lot line adjustment. While the parcels are currently zoned C-2 and are proposed for rezoning to the C-4 zone district, the minimum parcel size for either zone district is 10,000 square feet. All three parcels exceed this size minimum; therefore, the two resultant parcels will exceed the minimum parcel size for the commercial (C-2/C-4) zone district.

## Riparian Exception Findings

1. That there are special circumstances or conditions affecting the property.

There are special circumstances affecting the property, in that the corridor has been historically disturbed by the placement of fill materials and the habitat value of the riparian corridor has been compromised by the colonization with eucalyptus, Himalayan blackberry, broom and other invasive exotic species. In addition, the slopes and drainage patterns of the property are such that 2/3 of the parcel drains toward this channel. The addition of a substantial amount of paving and structures associated with this commercial development will necessitate the construction of energy dissipaters at the drainage outlets within the riparian buffer setback to avoid potential erosion within the banks and channel.

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

The exception is necessary for the proper design and function of the drainage system for the proposed commercial development an allowed use on this property (in conjunction with the proposed rezoning and General Plan Amendment –see Rezoning and General Plan Amendment Findings

above). There are topographic and drainage pattern constraints on the parcel requiring the location of drainage outlets in the riparian buffer to achieve proper drainage control. In addition, diversion of this drainage to the street storm drain system will both change the existing drainage pattern and could potentially compromise the viability of the good quality riparian habitat further downstream due to inadequate water supply. The proposed removal of the eucalyptus grove and the other invasive exotic species and the restoration of the corridor with native riparian species requires a riparian exception. This work will restore the habitat value of the corridor where minimal habitat value currently exists.

**3. 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 granting of the exception will not be detrimental to the public welfare or injurious to other property downstream. The proposed drainage facilities will retain most of the proposed runoff and will use adequately designed gabion mattresses to dissipate excess runoff to minimize potential erosion. The disturbance to the riparian habitat is minimal as it is well above the stream channel and the area surrounding the rock mattresses will be revegetated.

**4. 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.**

The project is not located within the Coastal Zone.

**5. 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 granting of the exception is in accordance with the purpose of the Riparian Protection Ordinance and the objectives of the General Plan, in that the location of the proposed drainage outlets and velocity dissipaters will control the runoff generated by the project and will minimize potential erosion from the runoff. The currently degraded habitat will be restored after construction, replacing the invasive exotic species with native riparian species. As a result, the overall functioning of the riparian corridor and stream channel will be enhanced.

## Conditions of Approval 05-0252

Exhibit A: Site Plan, Lot Line Adjustment, Grading, Drainage and Site Improvement Plans by Bowman and Williams Engineers  
Architectural Plans for Store More (mini-storage) by The Streeter Group  
Architectural Plan for Ocean Honda (car dealership) by Avanessian Associates Architects  
Landscape and Restoration Plans by Steve McGuirk, Madrone Landscape Group  
Photo-simulation by The Streeter Group  
Photo-simulation by Avanessian Associates Architects

- I. This permit authorizes the combination of Assessor's Parcel Numbers 030-061-18 and 030-061-20, to transfer about 28,102 square feet from APNs 030-061-18 and 20 to APN 030-061-19 the construction of a mini-storage complex comprised of two structures of 80,753 square feet (3 stones and a basement) and 20,832 square feet, a car dealership building of 38,800 square feet, to remove a grove of eucalyptus trees and invasive plants from a riparian corridor, to construct velocity dissipators for drainage outlets within the riparian buffer and restore the corridor using native species to grade about 16,000 cubic yards, and to install parking and access driveways, drainage improvements, curb, gutters and separated sidewalks and landscaping and to install more than one sign per parcel and exceed the aggregate allowable area of signs. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant/owner shall:
- A. Sign, date, and return to the Planning Department one copy of the approval to indicate acceptance and agreement with the conditions thereof.
  - B. Obtain a Building Permit from the Santa Cruz County Building Official.
  - C. Obtain a Grading Permit from the Santa Cruz County Building Official.
  - D. Obtain an Encroachment Permit from the Department of Public Works for all off-site work performed in the County road right-of-way.
  - E. Submit proof that these conditions have been recorded in the official records of the County of Santa Cruz (Office of the County Recorder).
  - F. Pay a Negative Declaration De Minimis fee of \$25 to the Clerk of the Board of the County of Santa Cruz as required by the California Department of Fish and Game mitigation fees program, and file the Notice of Determination.
  - G. Obtain the Construction Activities Storm Water General NPDES Permit from the State Water Resources Control Board for the site land clearing and grading.
  - H. Complete the Lot Line Adjustment. No parcel map is required. File the deeds of

conveyance with the County Recorder to exercise this approval. Parcels or portions of parcels to be combined must be in identical ownership.

1. The deed of conveyance from APN 030-061-20 to APN 030-061-18 must contain the following statement after the property description:

*“The purpose of the deed is to combine the above described portion of Assessors Parcel No. 030-061-20 with Assessors Parcel No. 030-061-18 as approved by the County of Santa Cruz under Application No. 05-0252. This conveyance shall not create a separate parcel, and is null and void unless the parcel is combined as stated.”*

2. The deed of conveyance from APN 030-061-18 and 20 to APN 030-061-19 must contain the following statement after the property description:

*“The purpose of the deed is to combine the above described portion of Assessors Parcel No. 030-061-18 and 20 with Assessors Parcel No. 030-061-19 as approved by the County of Santa Cruz under Application No. 05-0252. This conveyance shall not create a separate parcel, and is null and void unless the parcel is combined as stated.”*

3. The boundary adjustment and related reconveyance of the three subject parcels (APNs 030-061-18, 19 and 20) shall result in no more than two parcels of record.

II. Prior to issuance of a Building Permit the applicant/owner shall:

- A. Submit final architectural plans for review and approval by the Planning Department. The final plans shall be in substantial compliance with the plans marked Exhibit “A” on file with the Planning Department. Any changes from the approved Exhibit “A” for this development permit on the plans submitted for the Building Permit must be clearly called out and labeled by standard architectural methods to indicate such changes. Any changes that are not properly called out and labeled will not be authorized by any Building Permit that is issued for the proposed development. The final plans shall include the following additional information:

1. Identify finish of exterior materials and color of roof covering for each building Planning Department approval. Any color boards must be in 8.5” x 11” format – two copies of each color board are required.
2. The final plans shall show the square footage for each story and the total square footage of each structure. The maximum allowed building area for each building is the following: mini-storage building 1 - 80,753 square feet total (3 stories and a basement including one 1,850 square foot office), Building 2 - 20,832 square feet (2 stories) and a car dealership building of 38,800 square feet (2 stories).

3. Final grading, drainage, and erosion control plans.
  4. For any structure proposed to be within 2 feet of the maximum height limit for the zone district, 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.
  5. Provide construction details for the masonry sound wall.
- B. Submit four copies of the approved Discretionary Permit. The final plans shall include the Conditions of Approval. The Conditions of Approval shall be recorded on the property deeds prior to submittal.
- C. Submit 4 copies of a soils report prepared and stamped by a licensed Geotechnical Engineer, and pay any applicable review fees.
1. The soils report that includes detailed foundation preparation and design and site grading.
  2. The final plans shall incorporate the soils engineer's recommendations and shall reference the project soils report.
  3. The project soils engineer shall review the final building grading and erosion control plans and shall approve the plans in writing. The soil engineer's review and approval letter shall reference the specific plans (dates and pages) reviewed. Submit 4 copies of the plan review and approval letter.
- D. Submit a final Grading and Erosion Control Plan. The final grading and erosion control plans **shall** include, but is not limited to, the following:
1. A schedule for accomplishing the earthwork and for complying with any Regional Water Quality Control Board and/or Monterey Bay Air Pollution Control District requirements that limit the amount of area that is open for grading at any one time, specifically all land clearing, grading (except excavation work) and leveling is limited to 8.1 acres per day, and excavation work is limited to 2.2 acres per day.
  2. A temporary sediment basin shall be constructed where the northern section of permeable pavement is planned to go, and shall remain until the permeable pavement is ready to be installed.



3. Notes indicating that the gravel bed and permeable pavement material at the north and south ends of the Honda property shall not be placed until other earthwork is completed and most of the site has vegetative or other cover. Pipes that lead to the permeable pavement areas shall remain capped until the filter material is installed.
  4. Temporary chain link fence demarcating the riparian setback boundary.
  5. Details of the destination for all exported material. Material may only go to a municipal landfill or other permitted receiving site. The plan shall include submittal of landfill tickets and grading permits that together account for all exported material.
  6. The final grading and erosion control plans shall specify that the land clearing and restoration of area "D" (the riparian corridor and buffer area) must start after April 15 (conditions allowing) and no later than August 1 to ensure completion prior to the onset of the rainy season.
  7. Earthwork is prohibited during the winter rain season (October 15 **through** April 15), unless a separate winter grading permit is approved by the Planning Director. Only earthwork located outside of the riparian setbacks may be considered for winter grading.
- E. Submit a final detailed riparian restoration plan for review and approval by Environmental Planning staff. The final restoration plan shall include, but is not limited to, the following:
1. The final plan shall include more diverse and more numerous native riparian understory plantings in Area "D".
  2. The plan shall include a specific maintenance plan to achieve long term control of non native invasive plants in the riparian areas, the timing of installation, chemical treatment of Eucalyptus stumps or complete removal of same, and an attempt to receive permission to remove any Eucalyptus close enough to influence the restoration area even if they occur on the adjacent property.
  3. Six (**6**) redwood trees shall be a minimum 48-inch box size, four (4) Coast Live *oak* trees shall be a minimum 24-inch box size and five (5) Coast Live *oak* trees shall be a minimum 15-gallon size.
- F. Submit a final Landscape Plan for the entire site specifying the species, their size, and irrigation plans, meeting the following criteria and conforming to all water conservation requirements of the Santa Cruz City Water Department water conservation regulations. The final landscape plan shall be consistent with the landscape plan in Exhibit A, with modifications to be consistent with the

increased front setback and the patio design for the mini-storage parcel:

- a. Turf Limitation. Turf area shall not exceed 25 percent of the total landscaped area. Turf area shall be of low to moderate water-using varieties, such as tall or dwarf fescue.
- b. Plant Selection. At least 80 percent of the plant materials selected for non-turf areas (equivalent to 60 percent of the total landscaped area) shall be well-suited to the climate of the region and require minimal water once established (drought tolerant). Native plants are encouraged. Up to 20 percent of the plant materials in non-turf areas (equivalent to 15 percent of the total landscaped area), need not be drought tolerant, provided they are grouped together and can be irrigated separately.
- c. The street trees shall be a minimum size of 24-inch box trees of the species specified in Exhibit A, except that at least six (6) trees shall be 48-inch box size. The street trees shall be planted at 20-foot intervals within the landscape strip. Substitute species must be reviewed and approved by the project planner and Urban Designer.
- d. Soil Conditioning. In new planting areas, soil shall be tilled to a depth of 6 inches and amended with six cubic yards of organic material per 1,000 square feet to promote infiltration and water retention. After planting, a minimum of 2 inches of mulch shall be applied to all non-turf areas to retain moisture, reduce evaporation and inhibit weed growth.
- e. Irrigation Management. All required landscaping shall be provided with an adequate, permanent and nearby source of water which shall be applied by an installed irrigation, or where feasible, a drip irrigation system. Irrigation systems shall be designed to avoid runoff, overspray, low head drainage, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways or structures.
  - i. The irrigation plan and an irrigation schedule for the established landscape shall be submitted with the building permit applications. The irrigation plan shall show the location, size and type of components of the irrigation system, the point of connection to the public water supply and designation of hydrozones. The irrigation schedule shall designate the timing and frequency of irrigation for each station and list the amount of water, in gallons or hundred cubic feet, recommended on a monthly and annual basis.

- ii. Irrigation within the critical root zones established in the Arborist's Report is prohibited. Irrigation outside of the critical root zone, but under the dripline of each existing oak shall be limited to very low flow drip-type emitters.
  - iii. Appropriate irrigation equipment, including the use of a separate landscape water meter, pressure regulators, automated controllers, low volume sprinkler heads, drip or bubbler irrigation systems, rain shutoff devices, and other equipment shall be used to maximize the efficiency of water applied to the landscape.
  - iv. Plants having similar water requirements shall be grouped together in distinct hydrozones and shall be irrigated separately.
  - v. Landscape irrigation should be scheduled between 6:00 p.m. and 11:00 a.m. to reduce evaporative water loss.
- f. All planting shall conform to the preliminary plan shown as **part** of Exhibit A. Twenty-five percent (25%) of all trees in the landscaped areas (not including the restoration area D) shall be a minimum of 24-inch box size. The larger sized **trees** shall be distributed throughout the landscaping, with the exception of the street trees, which must be 24 and 48-inch box sizes.
  - 1. All landscaping shall be permanently maintained by the property owner including any plantings within the County right of way along the frontage of the property.
  - ii. Any trees planted in the County right of way shall be approved by the Department of Public Works and shall be installed according to provisions of the County Design Criteria.
- G. Meet all requirements of and pay Zone **5** drainage fees to the County Department of Public Works, Drainage. Drainage fees will be assessed on the net increase in impervious area. The final Drainage Plans shall include, but is not limited to, the following:
  - 1. The final drainage plan must include silt and grease traps on all catch basins, and a monitoring and maintenance plan for these silt and grease traps.
  - 2. Provide notation on the plans for permanent bold markings at each inlet that read "NO DUMPING - DRAINS TO BAY".

3. The final plan shall show that through-curb drains are to be built. The plans shall conform with Figure ST-4B of the County Design Criteria.
  4. Final plans shall utilize a clearer display of H:V ratio of the section views on Sheet C6.
  5. Submit manufacturer's specifications for pervious pavement. A plan for maintenance of the pervious pavements shall be submitted with the drainage plan. The plan shall include periodic power washing and vacuuming, environmental remediation to encourage the breakdown of hydrocarbons (if recommended by the manufacturer), and any other periodic maintenance recommended by the manufacturer to assure the pavement remains pervious.
- H. The applicant shall submit two copies of a final letter from the Environmental Health Services Hazardous Materials staff indicating that the hazardous materials remediation is complete. These copies shall be sent with the Zoning and Environmental Planning plan sets.
- I. Meet all requirements of the Central Fire Protection District in their letter dated November 8, 2005 and pay any applicable plan check fee. The site plans shall show the following:
1. A public hydrant meeting the minimum 1,875 gallons **per minute fire flow** within 150 feet of any portion of any building.
  2. Additional fire hydrants shall be installed at the car dealership at the front of the building, the right side of the main driveway, the rear of the dealership at the northeast corner along the fence line, 20 feet from the trash enclosure.
  3. Additional fire hydrants shall be installed at the mini-storage facility on the island at the rear of the first building and at the rear of the second building.
- J. All outdoor areas, parking and circulation areas shall be lighted with low-rise lighting fixtures that do not exceed 15 feet in height. The construction plans must indicate the location, intensity, and variety of all exterior lighting fixtures.
1. All lighting must be consistent with Title 24, **Part 6**, California Code of Regulations, Energy Efficiency Standards for Non-Residential Buildings.
  2. All lighting shall be directed downward onto the site and shielded such that there is no overspill onto adjacent properties. The lighting plan shall show that all lights shall be directed away from the riparian corridor and any lights close enough to illuminate the corridor shall be shielded in that direction.

3. To minimize excess lighting and energy use a 2 or 3 tier light timing system is required. This system shall ~~turn~~ off a minimum of  $\frac{1}{2}$  and up to  $\frac{2}{3}$  of all parking lot lights after business hours to minimize energy use.
  4. Copies of the catalog sheet(s) depicting the proposed parking lot lights shall be submitted with the building plans.
- K. Submit a final signage program that reflects the following limitations, and is otherwise constant with the submitted preliminary sign program:
1. A maximum of two signs on the mini-storage parcel. The sign at the Soquel frontage shall advertise the business in the 1,800 square foot office space and shall not exceed 40-square feet total. The vertical dimension of this sign shall not exceed 3.5 feet. The proposed mini-storage sign on the eastern façade shall not exceed 50 square feet with maximum dimensions of 4 feet by 12.5 feet.
  2. Final designs, coloration and sample materials of the mini-storage signs shall be submitted for review and approval of the Urban Designer.
  3. The Honda car dealership signs shall meet the following criteria:
    - a. No more than two (2) Honda icon signs with a maximum of 30 square feet each (5'x 6' each, 60 square feet total).
    - b. One "Honda" sign at 36 square feet maximum (2'x18').
    - c. One Dealership name (Ocean) sign at 20 square feet maximum (~2'x10').
    - d. ~~Three~~ (3) service reception signs at 12 square feet maximum each (36 square feet total).
    - e. One Directional sign at 48 square feet maximum. The sign shall not exceed seven (7) feet in height and shall meet the 10-foot setback from the travel lane specified in the traffic report and a minimum setback of 5 feet from the right-of-way. The monument sign shall not obstruct vehicular sight distance or pedestrian circulation.
    - f. One Monument sign – Honda, 50 square feet maximum. The monument shall not exceed seven (7) feet in height and shall meet the 10-foot setback from the travel lane specified in the traffic report and a minimum setback of 5 feet from the right-of-way. The monument sign shall not obstruct vehicular sight distance or pedestrian circulation.

- L. Pay the current fees for Child Care mitigation. For the Honda dealership current fees are \$0.23 per square foot (38,800 square feet x \$0.23 is \$8,924). For the Store More facility these fees are \$0.12 per square foot for the mini-storage facilities and \$0.23 per square foot for the business office, respectively (99,785 x \$0.12 and 1,800 x \$0.23 is \$12,388.20)
  - M. Pay the current fees for Roadside and Transportation improvements for the project. Currently, the Soquel TIA fee is \$200 per trip end for transportation improvement fees and \$200 per trip end for roadside improvement fees (a total of \$400 per trip). The total anticipated Soquel TIA fees for Ocean Honda is \$174,000 (437 daily trips x \$400), and for Store More is \$57,200 (143 daily trips x \$400).
  - N. Provide all required off-street parking. Parking spaces shall meet County standards for the dimensions and numbers of compact, regular and ADA accessible parking set forth in County Code section 13.10.550. All parking must be located entirely outside vehicular rights-of way. Parking must be clearly designated and numbered on the plot plan. The plan must comply with all provisions of the ADA and State law regarding the number and size of accessible parking spaces. The number of required spaces are as follows:
    - 1. For the mini-storage and business office facility provide parking for 51 cars. Nine (9) of the 51 parking spaces shall be reserved for the business at the Soquel frontage.
    - 2. For the car dealership, 129 parking spaces are required for employees, customers and cars in for repair. An additional 92 parking spaces are permitted for additional stock and display. Bicycle parking for up to 39 bicycles shall be provided on site.
  - O. Final plans shall meet all requirements of the Santa Cruz County Sanitation District.
  - P. Submit a written statement signed by an authorized representative of the school district in which the project is located confirming payment in full of all applicable developer fees and other requirements lawfully imposed by the school district.
111. Prior to site disturbance and during construction:
- A. The applicant shall organize a pre-construction meeting prior to any site disturbance. The following parties shall attend this meeting: the applicant, grading contractor supervisor, Santa Cruz County Resource Planning and Grading staff, and the project geotechnical engineer. The temporary construction fencing demarcating the riparian setback boundary will be inspected at that time. A detailed list of properties that will receive exported fill will be collected and valid permits for each of the proposed sites will be inspected.

- B. To minimize noise, dust, and nuisance impacts on surrounding properties to insignificant levels during construction, the owner/applicant shall, or shall have the project contractor, comply with the following measures during all construction work
1. All land clearing, grading (except excavation work) and leveling is limited to 8.1 acres per day.
  2. Excavation work is limited to 2.2 acres per day.
  3. Grading activities are prohibited during periods of winds exceeding **15** mph.
  4. Each day it does not rain, wet all exposed soils frequently enough to prevent significant amounts of dust from leaving the site. The minimum watering schedule for graded/excavated areas shall be at least twice daily. Street sweeping on adjacent or nearby streets may be required to control the export of excess dust and dirt.
  5. The temporary access driveway(s) and road(s) shall be surfaced with rock and wheel washers shall be installed at the entrance for all trucks leaving the site to avoid dirt and dust leaving the site.
  6. Chemical soil stabilizers shall be applied on inactive construction areas (disturbed lands within the construction project that are unused for at least four consecutive days).
  7. Non-toxic binders shall be applied to exposed cut and fill areas or exposed slopes after construction and shall be hydroseeded.
  8. All inactive stockpiles shall be covered at all times.
  9. During grading and construction, a temporary barrier shall be placed along the perimeter western and northern property lines to minimize dust, noise and trespass issues onto the adjacent developed properties.
  10. Limit all construction-related activities to the time between **8:00 AM** and **5:00 PM** weekdays, unless a temporary exemption to this time restriction is approved in advance by the Planning Department to address an emergency situation. The owner/developer shall designate a disturbance coordinator to respond to citizen complaints and inquiries from area residents during construction. A 24-hour contact number shall be conspicuously posted on the job site; on a sign that shall be a minimum of two feet high and four feet wide. This shall be separate from any other signs on site, and shall include the language "for construction noise and dust problems call the 24-hour contact number." The disturbance

coordinator shall record the name, phone number, and nature of the disturbance. The disturbance coordinator shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry. Unresolved complaints received by the County staff from area residents may result in the inclusion of additional construction conditions, at the discretion of the Planning Director.

- C. The use of Soquel Drive between 41<sup>st</sup> Avenue and the Soquel Village by dump trucks, delivery trucks or heavy equipment is prohibited.
  - D. Saw cuts within the traveled roadway that cause temporary depressions in the surfacing prior to repair shall be leveled with temporary measures and signage shall be posted noting such.
  - 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 artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.100, shall be observed.
  - F. Erosion shall be controlled at all times. Erosion control measures shall be monitored, maintained and replaced as needed. No turbid runoff shall be allowed to leave the immediate construction site or enter the riparian corridor.
  - G. All foundation excavations shall be observed and approved in writing by the project soils engineer prior to foundation pour. A copy of the letter shall be kept on file with the Planning Department.
- IV. All construction shall be performed according to the approved plans for the Building Permit. Prior to final building inspection, the applicant/owner must meet the following conditions:
- A. All site improvements shown on the final approved Building and Grading Permit plans shall be installed.
  - B. All inspections required by the building and grading permit shall be completed to the satisfaction of the County Building Official.
  - C. The project must comply with all recommendations of the approved soils reports.
  - D. All riparian restoration shall be completed, inspected and approved by Environmental Planning staff.
- V. Operational Conditions



- A. To minimize excess lighting and energy use a 2 or 3 tier light timing system is required. This system shall turn off a minimum of 1/2 and up to 2/3 of all parking lot lights after business hours to minimize energy use.
- B. Outdoor supplemental advertising such as banners, streamers, temporary signs, flagging strung from the light standards, inflatable figures or other inflatable devices, large advertising balloons or the like (small helium balloons are excluded) is prohibited.
- C. The hours of business for the car dealership, mini-storage and the business office shall be between the hours of 7 am to 7 pm. Auto repair and service operations are limited to Monday through Friday. Weekend repair and service is prohibited.
- D. The use of public address systems or other loudspeakers are prohibited on both the mini-storage and car dealership sites.
- E. Signs shall be posted and maintained at the mini-storage site stating that engines be turned off during loading and unloading and that loud music/radios are prohibited at all times.
- F. A manager shall be on-site at the mini-storage facility during business hours.
- G. The use of Soquel Drive between 41<sup>st</sup> Avenue and the Soquel Village by delivery trucks is prohibited.
- H. The following uses are allowed on the mini-storage parcel:
  - 1. Storage of commercial goods or self storage of personal goods.
  - 2. Storage of items for sale via internet auctions.
  - 3. On-site and/or live auctions are prohibited in the mini-storage and the business office areas.
  - 4. A 1,800 square foot “business office” in the first mini-storage building. The initial use and future changes in use for this portion of the structure shall be processed at Level 1 review provided that:
    - a. The area does not exceed 1,800 square feet in size, and
    - b. The use is parcel shipping and private mailing/post office services, or
    - c. The use is an allowed use in the C-4 zone district under “Commercial Services, Neighborhood” in County Code Section 13.10.332, or

- d. The use is an allowed use in the C-4 zone district under “Commercial Services, General” in County Code Section 13.10.332. or
- e. The use is allowed ancillary in the C-4 zone district under “Offices” in County Code Section 13.10.332 except that medical, veterinary and dental **offices** are prohibited.
- I. Community retail sales uses that are allowed as ancillary uses in the C-4 zone district under “Retail Sales, Community” in County Code Section 13.10.332 shall require a Level 3 Use Approval.
- J. The uses allowed on the car dealership parcel are a Honda car dealership with related sales and service. Change of use to a different car manufacturer requires a Level 3 Use Approval.
- K. All runoff shall be filtered through silt and grease traps prior to leaving the site. The traps shall be maintained according to the following monitoring and maintenance procedures:
  - 1. The traps shall be inspected to determine if they need cleaning or repair prior to October 15 of each year at a minimum.
  - 2. A brief annual report shall be prepared by the trap inspector at the conclusion of each October inspection and submitted to the Drainage Section of the Department of Public Works within **5 days** of inspection. This monitoring report shall specify any repairs that have been done or that are needed to allow the trap to function adequately.
- L. Pervious pavement shall be maintained per the plans submitted with the original drainage plan (reference Condition II.G.5). Manufacturer’s specifications for power washing, vacuuming or other remediation shall be followed. **A** brief annual report shall be submitted to the Planning Department prior to October **15** of each year describing the maintenance that was completed in the previous year.
- M. All landscaped areas and related irrigation systems shall be permanently maintained. All irrigation shall conform to the required water conservation measures as regulated by the City of Santa Cruz Water Department. Dead plant material shall be removed and replaced consistent with the approved Exhibit A. The property owner(s) is responsible for the ongoing health and care of all landscaping on the site. Any dead or dying street trees shall be promptly removed and replaced with a minimum 24-inch box tree. Substitute species must be approved in advance by the Planning Director.
- N. Any dead or dying street trees within the riparian restoration area shall be promptly removed and replaced with a like-sized tree (minimum 15-gallon size).

- O. In the event that future County inspections of the subject property disclose noncompliance with any Conditions of this approval or any violation of the County Code, the owner shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including permit revocation.
- VI. As a condition of this development approval, the holder of this development approval ("Development Approval Holder"), is required to defend, indemnify, and hold harmless the COUNTY, its officers, employees, and agents, from and against any claim (including attorneys' fees), against the COUNTY, its officers, employees, and agents to attack, set aside, void, or annul this development approval of the COUNTY or any subsequent amendment of this development approval which is requested by the Development Approval Holder.
- A. COUNTY shall promptly notify the Development Approval Holder of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. COUNTY shall cooperate fully in such defense. If COUNTY fails to notify the Development Approval Holder within sixty (60) days of any such claim, action, or proceeding, or fails to cooperate fully in the defense thereof, the Development Approval Holder shall not thereafter be responsible to defend, indemnify, or hold harmless the COUNTY if such failure to notify or cooperate was significantly prejudicial to the Development Approval Holder.
- B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:
1. COUNTY bears its own attorney's fees and costs; and
  2. COUNTY defends the action in good faith.
- C. Settlement. The Development Approval Holder shall not be required to pay or perform any settlement unless such Development Approval Holder has approved the settlement. When representing the County, the Development Approval Holder shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the County.
- D. Successors Bound. "Development Approval Holder" shall include the applicant and the successor(s) in interest, transferee(s), and assign(s) of the applicant.
- VII. Mitigation Monitoring. The mitigation measures listed under this heading have been incorporated in the conditions of approval for this project in order to mitigate or avoid significant effect on the environment. As required by Section 21081.6 of the California Public Resource Code, a monitoring and reporting program for the above mitigation is hereby adopted as a condition of approval for this project. This program is specifically

described following each mitigation measure listed below. The purpose of this monitoring is to ensure compliance with the environmental mitigations during project implementation and operation. Failure to comply with the conditions of approval, including the terms of the adopted monitoring program, may result in permit revocation pursuant to Section **18.10.462** of the Santa Cruz county Code.

A. Mitigation Measure: Pre-Construction Meeting (Condition **III.A**)

Monitoring Program: Prior to the commencement of construction, an on-site pre-construction meeting will be held to discuss the required mitigation measures as listed below (C and E) and the dust and sediment control requirements. The Environmental Planning Section of the Planning Department will be responsible for conducting the meeting.

B. Mitigation Measure: Supplemental Soils Report (Condition II.C)

Monitoring Program: Prior to approval of the building permit, Environmental Planning staff will be responsible to verify that a supplemental construction-specific soils report has been submitted with the building permit application, and that the project soils engineer has reviewed and provided written verification that the plans conform to the report's recommendations. In addition, the Environmental Planning Civil Engineer will review and determine if the soils report can be accepted as meeting the County's requirements for Soils Reports prior to approving the building plans.

C. Mitigation Measure: Erosion and Sediment Control (Conditions II.D.1-7, III.B.1-10 and III.F.)

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

D. Mitigation Measure: Water Quality (Conditions II.G.1 and V.K.1-2)

Monitoring Program: The Department of Public Works will review the final drainage plans prior to building permit issuance. Prior to occupancy of the new car dealership and the mini-storage facility, the Department of Public works shall inspect and approve the installation of the required silt and grease traps. Correction notices will be issued for non-compliance with the approved construction plans.

E. Mitigation Measure: Riparian Protection and Restoration (Conditions II.J.2 and II.E.1-3)

Monitoring Program: Prior to issuance of the Building Permit, the project planner and Urban Designer will review the lighting plan to verify that shielding is proposed. If the lights are not properly shielded after operations, correction notices will be issued for non-compliance with the approved permit conditions. Prior to Building and Grading Permit approval and issuance, the revised restoration plans must be reviewed and accepted by the Environmental Planning Section of the Planning Department. Inspections will be conducted to verify all required plantings have been completed and that all invasive species have been eradicated prior to finaling the building permit and allowing occupancy of the car dealership building by the Environmental Planning Section staff.

F. Mitigation Measure: Hazardous Materials (Condition II.H.)

Monitoring Program: Prior to approval and issuance **of** the Building Permit, the project planner will verify that a final letter from the Environmental Health Services Hazardous Materials staff indicating that the hazardous materials remediation is complete has been received.

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Minor variations to this permit which do not affect the overall concept or density may be approved by the Planning Director at the request of the applicant or staff in accordance with Chapter 18.10 of the County Code.

**Please note: This permit expires two years from the effective date unless you obtain the required permits and commence construction.**

Approval Date: \_\_\_\_\_

Effective Date: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

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Cathy Graves  
Principal Planner

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Cathleen Carr  
Project Planner

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

**APPLICATION NO. 05-0252**

**STAFF REPORT TO THE PLANNING COMMISSION**

**EXHIBIT D**



# COUNTY OF SANTA CRUZ

## PLANNING DEPARTMENT

701 OCEAN STREET, 4<sup>TH</sup> FLOOR, SANTA CRUZ, CA 95060  
(831) 454-2580 FAX (831) 454-2131 TDD (831) 454-2123  
TOM BURNS, PLANNING DIRECTOR

### NEGATIVE DECLARATION AND NOTICE OF DETERMINATION

**Application Number: 05-0252 John Swift of Hamilton-Swift, for Rob Marani/Store More; Steven & Lesa John**  
Proposal to combine Assessor's Parcel Numbers 030-061-18 and 030-061-20, to transfer about 28,102 square feet from APNs 030-061-18 and 20 to APN 030-061-19, to construct two self storage buildings on APN 030-061-18, 20, to construct a car dealership on APN 030-061-19, to grade approximately 16,000 cubic yards, to rezone the properties from the C-2 zone district to the C-4 zone district and amend the General Plan from C-C (Community Commercial) to C-S (Service Commercial). Requires a Commercial Development Permit, Lot Line Adjustment, Preliminary Grading Approval, a Rezoning and a General Plan Amendment. Property is located on the north side of Soquel Drive, about 400 feet west from 41<sup>st</sup> Avenue, at 3711, 3715, and 3801 Soquel Drive in Soquel, California.

**APN 030-061-18, 19, 20**

**Cathleen Carr, Staff Planner**

**Zone District: C-2**

**ACTION: Negative Declaration with Mitigations**

**REVIEW PERIOD ENDS: April 5, 2006**

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

#### Findings:

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

#### Required Mitigation Measures or Conditions:

☐ None  
☒ Are Attached

Review Period Ends April 5, 2006

Date Approved By Environmental Coordinator April 6, 2006

*Paula Lixie for Ken Hart*  
KEN HART  
Environmental Coordinator  
(831) 454-3127

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

#### NOTICE OF DETERMINATION

The Final Approval of This Project was Granted by \_\_\_\_\_

on \_\_\_\_\_. No EIR was prepared under CEQA.

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

Date completed notice filed with Clerk of the Board: \_\_\_\_\_

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EXHIBIT D

**CALIFORNIA DEPARTMENT OF FISH AND GAME**

**CERTIFICATE OF FEE EXEMPTION**

**De minimis Impact Finding**

**Project Title/Location (Santa Cruz County):**

**Application Number: 05-0252**

**John Swift of Hamilton-Swift, for  
Rob Marani/Store More; Steven & Lesa John**

Proposal to combine Assessor's Parcel Numbers 030-061-18 and 030-061-20, to transfer about 28,102 square feet from APNs 030-061-18 and 20 to APN 030-061-19, to construct two self storage buildings on APN 030-061-18, 20, to construct a car dealership on APN 030-061-19, to grade approximately 16,000 cubic yards, to rezone the properties from the C-2 zone district to the C-4 zone district and amend the General Plan from C-C (Community Commercial) to C-S (Service Commercial). Requires a Commercial Development Permit, Lot Line Adjustment, Preliminary Grading Approval, a Rezoning and a General Plan Amendment. Property is located on the north side of Soquel Drive, about 400 feet west from 41<sup>st</sup> Avenue, at 3711, 3715, and 3801 Soquel Drive in Soquel, California.

**APN: 030-061-18, 19, 20**

**Cathleen Carr, Staff Planner**

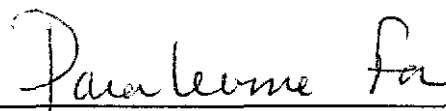
**Zone District: C-2**

**Findings of Exemption (attach as necessary):**

An Initial Study has been prepared for this project by the County Planning Department according to the provisions of CEQA. This analysis shows that the project will not create any potential for adverse environmental effects on wildlife resources.

**Certification:**

I hereby certify that the public agency has made the above finding and that the project will not individually or cumulatively have an adverse effect on wildlife resources, as defined in Section 711.2 of the Fish and Game Code.

  
\_\_\_\_\_  
**KEN HART**  
Environmental Coordinator for  
Tom Burns, Planning Director  
County of Santa Cruz

Date: 4-7-06



NAME: Hamilton Swift for Store More/Marani and S. and L. John  
APPLICATION: 05-0252  
A.P.N: 30-061-18,19,20

**NEGATIVE DECLARATION MITIGATIONS**

1. In order to ensure that the mitigation measures 2 - 7 (below) 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, Santa Cruz County Resource Planning and Grading staff, and project geotechnical engineer. The temporary construction fencing demarcating the riparian setback boundary will be inspected at that time. A detailed list of properties that will receive exported fill will be collected and valid permits for each of the proposed sites will be inspected.
2. In order to reduce potential impacts from poor geotechnical conditions to a less than significant level, prior to issuance of the grading permit the applicant shall submit a follow up geotechnical report that includes detailed foundation preparation and design information for review and approval. Grading, building, erosion control and drainage plans shall be refined as necessary to implement all the recommendations of the approved geotechnical report.
3. In order to reduce the potential for sediment to enter the riparian area or the storm drain system to a less than significant level, prior to issuance of the grading permit and prior to any ground disturbance on the site the applicant shall submit a detailed erosion control plan for review and approval. The plan shall include:
  - a. A schedule for accomplishing the earthwork and for complying with any Regional Water Quality Control Board and/or Monterey Bay Air Pollution Control District requirements that limit the amount of area that is open for grading at any one time;
  - b. A temporary sediment basin shall be constructed where the northern section of permeable pavement is planned to go, and shall remain until the permeable pavement is ready to be installed (see 3.c);
  - c. Notes indicating that the gravel bed and permeable pavement material at the north and south ends of the Honda property shall not be placed until other earthwork is completed and most of the site has vegetative or other cover. Pipes that lead to the permeable pavement areas shall remain capped until the filter material is installed;
  - d. Temporary chain link fence demarcating the riparian setback boundary;
  - e. Details of the destination for all exported material. Material may only go to a municipal landfill or other permitted receiving site. The plan shall include submittal of landfill tickets and grading permits that together account for all exported material.
4. To protect surface water from silt, grease, and other urban contaminants the drainage plan must be modified to include silt and grease traps on catch basins. The traps shall be maintained according to the following monitoring and maintenance procedures:
  - a. The traps shall be inspected to determine if they need cleaning or repair prior to October 15 each year at a minimum;
  - b. A brief annual report shall be prepared by the trap inspector at the



# COUNTY OF SANTA CRUZ

## PLANNING DEPARTMENT

701 OCEAN STREET, 4<sup>TH</sup> 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: John ~~Swift of~~ Hamilton-Swift, for Rob Marani Store More: Steven & Lesa John

APPLICATION NO.: 05-0252

APN: 030-061-18, -19 & -20

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

XX Negative Declaration

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

XX Mitigations will be attached to the Negative Declaration.

       No mitigations will be attached.

       Environmental Impact Report

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

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

Review Period Ends: April 5, 2006

Cathleen Carr  
Staff Planner

Phone: 454-3225

Date: March 3, 2006



# Environmental Review Initial Study

Application Number: **05-0252**

Date: March 3, 2006  
Staff Planner: Cathleen Carr

## 1. OVERVIEW AND ENVIRONMENTAL DETERMINATION

APPLICANT: Hamilton-Swift,  
Attn: John Swift

APN: 030-061-18, 19, 20

OWNER: Rob Marani/Store More;  
Steven & Lesa John;

SUPERVISORAL DISTRICT First

LOCATION: Property located on the north side of Soquel Drive, about 400 feet west from 41st Avenue, at 3711, 3715 and 3801 Soquel Drive in Soquel.

SUMMARY PROJECT DESCRIPTION: Proposal to combine Assessor's Parcel Numbers 030-061-18 and 030-061-20, to transfer about 28,102 square feet from APNs 030-061-18 and 20 to APN 030-061-19, to construct two self-storage buildings on APN 030-061-18, 20, to construct a car dealership on APN 030-061-19, to grade about 16,000 cubic yards, to rezone the properties from the C-2 zone district to the C-4 zone district, and to amend the General Plan to change the General Plan land use designation from C-C (Community Commercial) to C-S (Service Commercial). Requires a Commercial Development Permit, Lot Line Adjustment, Preliminary Grading Approval, Riparian Exception, a Rezoning and a General Plan Amendment.

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

|   |                            |               |                     |
|---|----------------------------|---------------|---------------------|
| X | General Plan Amendment     | <u>X</u>      | Grading Permit      |
|   | Land Division              | <u>X</u>      | Riparian Exception  |
| X | Rezoning                   | <u>X</u>      | Lot Line Adjustment |
| X | Development Permit         | <u>X</u>      | Sign Variances      |
|   | Coastal Development Permit | <u>      </u> |                     |

Other agencies that must issue permits or authorizations: Monterey Bay Regional Air Quality Control Board, and possibly the Regional Water Quality Control Board and California Department of Fish and Game

On the basis of this Initial Study and supporting documents:

✓ 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.

Paia Levine

3306

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Date

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## II. BACKGROUND INFORMATION

### EXISTING SITE CONDITIONS

Parcel Size: APN 030-061-18, 19, 20

Existing Land Use: Vacant lot (recently demolished commercial structures)

Vegetation: minimal due to recent demolition, eucalyptus grove in and around arroyo

Slope in area affected by project: 6.06 0 - 30% 0.1 31 - 100%

Nearby Watercourse: Unnamed ephemeral tributary to Soquel Creek

Distance To: Headwater of tributary is at the back of the subject parcel. Soquel Creek is over 0.5 miles away

### ENVIRONMENTAL RESOURCES AND CONSTRAINTS

Groundwater Supply: no

Liquefaction: low

Water Supply Watershed: no

Fault Zone: none

Groundwater Recharge: none

Scenic Corridor: no

Timber or Mineral: none

Historic: none

Agricultural Resource: none

Archaeology: none

Biologically Sensitive Habitat: urban arroyo

Noise Constraint: no

Fire Hazard: none

Electric Power Lines: no

Floodplain: no

Solar Access: Adequate

Erosion: low potential

Solar Orientation: south

Landslide: none

Hazardous Materials: possible

### SERVICES

Fire Protection: Central Fire

Drainage District: Zone 5

School District: Soquel Elementary

Project Access: Soquel Drive

Sewage Disposal: Santa Cruz County  
Sanitation District

Water Supply: Santa Cruz Water Dept.

### PLANNING POLICIES

Zone District: C-2

Special Designation: none

General Plan: C-C (Community  
Commercial)

Urban Services Line: XXX Inside

    Outside

Coastal Zone:     Inside

XX Outside

### PROJECT SETTING AND BACKGROUND:

The project site is located within the Soquel planning area fronting onto Soquel Drive, an arterial road. The project site is generally level with a slight slope to the north (rear of the parcel) and to the east. There is an ephemeral drainage at the northeast end of APN 030-061-19. A Riparian Presite was completed under application 03-0410 in October 2003 to evaluate the arroyo located at the rear of APN 030-061-19 and to determine the extent of the arroyo and the appropriate development setbacks. A dense grove of eucalyptus trees is located at the northeast end of the parcel, in and around the

ephemeral drainage. There is a mobile home park bordering the northern and northwestern boundaries of the 'subject property. There are several non-conforming single family dwellings (dwellings on parcels with commercial zoning and General Plan) on the west side of the subject parcels with commercial structures (mattress store, warehouse) to the west along Soquel Drive. East of the subject parcels are several car repair shops and miscellaneous commercial buildings. The properties across Soquel Drive from the subject parcels are a mixture of retail commercial, light industrial and office uses.

The subject parcels were formerly developed with a warehouse building and attached residential unit, a group of 11 non-conforming cottages and main building and a kennel facility. Demolition permits were obtained for these structures in March 2005, and the parcels are currently vacant. During the demolition, several trees including a large redwood were removed. Currently, there is minimal vegetation, with the exception of the eucalyptus grove, on the property.

Prior to 1994, the subject parcels were zoned C-4 with a C-S (Service Commercial) General Plan designation. The General Plan designation for a large group of parcels on the north side of Soquel Drive near 41<sup>st</sup> Avenue was changed from C-S to C-C (Community Commercial) as part of the 1994 General Plan update. The parcels were subsequently rezoned to C-2 in conformance with their new General Plan designation. This change in the General Plan and zoning resulted in a number of established commercial businesses becoming non-conforming with respect to the zone district and General Plan. The General Plan designations were changed in this area in order to revitalize this commercial area and encourage retail oriented development. This redevelopment largely has not happened in this stretch of Soquel Drive. Barriers to this change appear to be the shapes of these parcels (deep and narrow parcels with limited road frontage), the number of smaller parcels which cannot meet on-site parking requirements for most C-2 uses and the large number of parcels in different ownership. In addition, the zoning and General Plan changes have created a shortage of C-4 zoned parcels. For these reasons, the zoning is proposed to return to C4 and the General Plan designation to return to C-S.

#### **DETAILED PROJECT DESCRIPTION:**

The applicant proposes to adjust the boundaries between three existing commercial properties to result in two parcels of 4.07 acres (Parcel A) and 2.05 acres (Parcel B) each. The applicant has requested a General Plan amendment and a Rezoning to return the resultant parcels to the C-S (Service Commercial) and C-4 zoning they had prior to the adoption of the 1994 General Plan. The applicant proposes to construct an approximately 38,800 square foot car dealership building with 221 parking spaces for customers, employees and inventory on Parcel A and to construct a 78,903 square foot mini-storage structure (three stories and a basement) with an attached office building, a 20,832 square foot, two story mini-storage structure and parking for 51 cars on Parcel B.

The site improvements associated with the proposed development include an engineered drainage system with on-site detention, parking and access driveways, landscaping plans and frontage improvements and street trees along Soquel Drive. Because of poor quality fill and soil on the property, even though the slope is relatively flat the proposed improvements require approximately 15,730 cubic yards of excavation on this six acre site, about 13,000 cubic yards of this material will be exported off site. About 11,800 cubic yards of imported fill is proposed. This volume includes the volume of gravel needed for the underground drainage detention system. The applicant also proposes to remove the eucalyptus grove at the northeast end of the property adjacent to the ephemeral channel- and restore this area with native species.

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| significant<br>Or<br>Potentially<br>Significant<br>Impact | Less than<br>Significant<br>with<br>Mitigation<br>Incorporation | Less than<br>Significant<br>Or<br>No Impact | Not<br>Applicable |
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### III. ENVIRONMENTAL REVIEW CHECKLIST

#### A. Geology and Soils

Does the project have the potential to:

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

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

X

- B. Seismic ground shaking?

X

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

X

- D. Landslides?

X

All of Santa Cruz County is subject to some hazard from earthquakes. However, the project site is not located within or adjacent to a county or State mapped fault zone. Nevertheless, the project will likely be subject to some seismic shaking during the life of the structures. The structures shall be designed in accordance with the Uniform Building Code and the project soils engineering report such that the hazard presented by seismic shaking is mitigated to a less than significant level.

A geotechnical investigation for the proposed project was performed by Twining Laboratories, Inc., dated April 25, 2005 (Attachment 7). This report was reviewed and accepted by the County (Attachment 6). The geotechnical investigation found fill soils in several locations. A few areas contain fill ranging in depth from 2.5 to 3 feet below existing grades. One area in the western central portion of the site contained a buried concrete pit with 6 feet of fill material and an area in the northeastern corner of the



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property contained approximately 10 feet of fill with historical fill slopes along the drainage channel banks. The investigation found native clays and silty sands at the project site in addition to the fill. The report recommends that foundations be supported on a minimum of 24 inches of engineered fills below the foundation or that the soil be excavated and recompact as engineered fill to a minimum depth of 36 inches below final grades, to minimize potential soil displacement, settlement and liquefaction. The project soils engineer recommends that additional soil exploration be performed to provide design level recommendations for the buildings. This report will be required to be submitted with the building permit applications for review and approval by the County's Senior Civil Engineer.

The site had old underground storage tanks, and as result, some of the subsurface soils were contaminated by hydrocarbons. As part of site remediation and cleanup, some of the fill materials found in the soils engineering report have been removed. See discussion under Section G (Hazardous Materials).

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

As discussed in A-1-C, the geotechnical report found fill soils and other surface soils with low bearing capacity. The proposed development is geotechnically feasible at this site. However, the soil engineer recommends that additional geotechnical investigation be completed to prepare a design specific soils engineering report and at a minimum engineered fill must be placed under the structures to mitigate for poor surface soils.

3. Develop land with a slope exceeding 30%?

X

There are slopes that exceed 30% on the property within the riparian channel. However, no improvements are proposed on slopes in excess of 30% and the setback from the riparian corridor ensures that construction will not be located in close proximity to the channel. The closest building (the car dealership) is over 50 feet away from the channel. The parking area for storing the car inventory will be a minimum of 20 feet away from the steeper slopes.

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

X

The Watsonville loam soils at this site have slight to moderate potential for erosion. The potential for erosion is greatest during site grading and construction when exposed soils could be subjected to rainfall and concentrated stormwater runoff. Prior to approval of a grading or building permit, the project must have an approved Erosion Control Plan, which will specify detailed erosion and sedimentation control measures. The plan will include provisions for disturbed areas to be planted with ground cover and to be maintained to minimize surface erosion.

Additional sediment control measures such as silt fencing will be required between the project area and the ephemeral drainage channel to minimize the potential for sediment or turbid runoff from entering the watercourse. Grading during any portion of the winter rain season (October 15 through April 15) requires a separate winter grading permit, which, depending on the timing, existing site conditions, and the quality of the winter erosion plan, may or may not be approved by the Planning Director. Although the site is nearly level with at most 2-5% gradients, the scope of the earthwork does involve almost 6 acres of area. One key component of erosion control will be the inclusion of an engineered sediment detention basin to intercept site runoff, control its release and reduce turbidity and sediments leaving the site. The second important condition is that the grading and/or land clearing associated within the riparian corridor and riparian buffer setback (for the restoration component of the project) must start after April 15 (conditions allowing) and no later than July 15.

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

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

6. Place sewage disposal systems in

X

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

No septic systems are proposed. The project will connect to the Santa Cruz County Sanitation District, and the applicant will be required to pay standard sewer connection and service fees that fund sanitation improvements within the district as a Condition of Approval for the project. An availability letter has been provided by the Sanitation District (Attachment 11).

7. Result in coastal cliff erosion? X

**B. Hydrology, Water Supply and Water Quality**

Does the project have the potential to:

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

According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated April 15, 1986, no portion of the project site lies within a 100-year flood hazard area.

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

According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated April 15, 1986, no portion of the project site lies within a 100-year flood hazard area.

3. Be inundated by a seiche or tsunami? X

4. Deplete groundwater supplies or X

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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?

The project will obtain water from City of Santa Cruz Water Department and will not rely on private well water. Although the project will incrementally increase water demand, the City of Santa Cruz Water Department has indicated that adequate supplies are available to serve the project (Attachment 10).

The project will result in approximately 200,000 square feet of impervious surface (buildings and paving) on the site. This site is not within a mapped groundwater recharge area, and the soils engineering report indicated that the soil has poor percolation capabilities. Nevertheless, the applicant is proposing to use pervious pavement in the sales display area at the front of the car dealership and for the inventory parking at the back of the site to reduce the amount of impervious surfacing for the project. A total of 39,505 square feet of pervious pavement is proposed. In addition, the inventory parking area will be underlain by the gravel detention system, thus rainwater will be able to percolate through the pervious pavement into the gravel system. There is the potential for some recharge with this design.

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

X

No commercial or industrial activities are proposed that would generate a significant amount of contaminants to a public or private water supply. The parking and driveway associated with the project could contribute urban pollutants to the environment; however, the contribution will be minimized by the proposed placement of silt and grease traps at all of the drainage inlets within the driveways and parking areas. A plan for maintaining these silt and grease traps will be required to reduce this impact to a less than significant level. In addition, approximately 2/3 of the site will be drained into a gravel detention system. The gravel bed will provide some minor additional filtration prior to discharging into the existing ephemeral riparian channel.

Potential siltation from the proposed project will be mitigated through implementation of erosion control measures (see response A4). In addition, a sediment detention basin

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will be required to control turbid runoff from leaving the site.

6. Degrade septic system functioning? X

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

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

The proposed project will not alter the existing overall drainage pattern of the site, in that the distribution of runoff, which is two-thirds to the north into the drainage tributary, will be preserved. Department of Public Works Drainage Section staff has reviewed and approved the proposed drainage plan (Attachment 9). The drainage system is designed such that the post-development runoff rates will not exceed the existing rates, thereby minimizing potential flooding and erosion off site.

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

Drainage Calculations prepared by Bowman and Williams, dated October 31, 2005 (Attachment 8), have been reviewed for potential drainage impacts and accepted by the Department of Public Works (DPW) Drainage Section staff (Attachment 9). The calculations show that the development will maintain pre-development drainage characteristics including peak runoff rates and final discharge locations. The runoff rate from the property will be controlled by on site detention. DPW staff has determined that existing storm water facilities are adequate to handle the increase in drainage associated with the project. Refer to response B-5 for discussion of urban contaminants and/or other polluting runoff.

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

As discussed in B.8., the proposed engineered drainage system will maintain peak runoff rates at pre-development levels, thus there will be no additional storm water runoff that could contribute to flooding or erosion. The existing drainage patterns will be retained post development with 2/3 of the site draining into the riparian channel and 1/3 entering the existing storm drain system on Soquel Drive.

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10. Otherwise substantially degrade water supply or quality?

X

Silt and grease traps, a plan for maintenance and detention in a gravel media will be required to minimize the effects of urban pollutants.

### **C. Bioiouicai 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 US. Fish and Wildlife Service?

X

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

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

X

There is an ephemeral channel at the northeast end of the property that forms a well-defined arroyo further downstream. This channel was evaluated by Environmental Planning staff in a Riparian Presite (Attachment 13) and was determined to be an ephemeral riparian corridor. This channel is a tributary to Soquel Creek. This area currently supports a grove a eucalyptus with some native vegetation (live oak, willow, poison oak) as well as non-native grasses and Himalayan blackberry. This grove of eucalyptus and the Himalayan blackberry would be removed as part of this project. A restoration plan is proposed, which would plant willows, (*Salix sp.*), Redwood (*Sequoia sempervirens*) and Coastal live oaks (*Quercus agrifolia*) in place of the removed eucalyptus with plantings of native bunch grasses through hydroseeding (See Restoration Area Plan sheet L-2 by Madrone Landscaping in Attachment 4).

The Riparian Exception is required to allow the removal of the eucalyptus and other non-native plant species from within the riparian corridor. The proposed improvements

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(parking lot and masonry wall) meet the required riparian setback established by the Riparian Presite. Buildings are required to meet an additional 10-foot setback from the riparian buffer. The distance between the proposed buildings and the riparian buffer is substantially greater than the ten feet required.

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 would not interfere with the movements or migrations of fish or wildlife, or impede use of a known wildlife nursery site, as none exist on the 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 residential development that currently generates nighttime lighting. Due to security reasons, the auto dealership is expected to have some lighting in the parking areas on a 24 hour a day, 7 day a week basis. The development area is adjacent to a riparian corridor (the headwaters of an ephemeral channel), however, there is currently minimal wildlife habitat that would be adversely affected by a new or additional source of light because of the degraded condition of the site. Nevertheless, a component of the project *is* to restore this portion of the riparian corridor to improve the habitat and the quality of the corridor's habitat increases substantially further downstream. Therefore, shielding to minimize direct lighting into the riparian corridor is recommended.

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

X

See C-1 and C-2 above.

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

X

The project proposes to remove a grove of about 40 Blue gum eucalyptus trees

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(*Eucalyptus globulus*) ranging in size from 6 inches dbh to 32 inches dbh. These trees are located in and around an ephemeral riparian corridor. The removal of the trees will require a Riparian Exception to Chapter 16.30 (Riparian Protection ordinance). These trees are a non-native, invasive species with minimal to no habitat value to native wildlife and plant species. The homeowners in the mobile home park on the north side of the grove have reported damage from falling branches and have requested that the trees be removed. An arborist has evaluated the eucalyptus trees and recommends removal (Attachment 12). The channel area will be restored using pole cuttings of Arroyo willow (*Salix lasiolepis*) and potted Red willow (*Salix laevigata*). The area immediately outside of the channel will be replanted using six 48-inch box sized redwood trees (*Sequoia sempervirens*), four 24-inch box sized Coast live oaks (*Quercus agrifolia*) and five 15-gallon sized Coast live oaks. The area between the tree plantings will be hydroseeded with a mixture of native perennial bunch grasses. There is the potential that invasive non-natives, such as eucalyptus, Himalayan blackberry, French broom and ivy, could become established in the corridor without an ongoing maintenance plan during the first several years. Therefore, an ongoing commitment to maintenance of the native plant landscape will be required.

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

## **0. Energy and Natural Resources**

Does the project have the potential to:

1. Affect or be affected by land designated as "Timber Resources" by the General Plan?

X

The project is located in a highly urbanized area.

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

X

The project is located in a highly urbanized area.

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



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The project proposes a car dealership at this location. This use is likely to generate higher water consumption than other types of commercial development due to car washing. The project will require that cars be washed in wash areas (which are shown on the plans – Attachment 4) equipped with an enclosed water recycling system in order to reduce water consumption. In addition, car dealerships tend to utilize large, brightly lit areas to display the cars. Electricity use can be wasteful, if bright lighting is maintained after hours. A 2 or 3 tier light timing system will be required to turn off up to 2/3 of the lights after hours to minimize energy use. The lights cannot be turned off entirely as some lighting is necessary to deter vandalism and theft.

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

X

#### **E. Visual Resources and Aesthetics**

Does the project have the potential to:

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

X

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

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

X

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

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

X

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The existing visual setting is in urbanized commercial area. The proposed project is designed and landscaped so as to improve and enhance this setting.

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

X

The project will contribute night lighting to the visual environment. However, the following project conditions will reduce this potential impact to a less than significant level: the use of non-glare lighting and shields to direct light to the parking lot below. As discussed in D.3, a timed lighting system will be required to reduce after hours lighting, this measure will also reduce nighttime glare and light. In conformance with the Santa Cruz County Code Chapter 13.11, the light standards will be required to not exceed 15 feet in height in order to reduce off site illumination. The light timing plan can also require that the light standards closest to the riparian corridor and residences be turned off first.

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

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

X

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

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

X

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

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

X

#### G. Hazards and Hazardous Materials

Does the project have the potential to:

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

X

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

X

The project site is included on the 01/06/2006 list of hazardous sites in Santa Cruz County compiled pursuant to the specified code. Old underground storage tanks were located on this site and the surrounding soils were contaminated with hydrocarbons. In addition, asbestos and lead contamination was found in the existing buildings during demolition and in the surrounding soil. A Remediation Plan detailing the treatment of the asbestos and lead contamination was reviewed and approved by the EHS staff

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(Attachment 16). The result was that final soil samples contained no measurable asbestos was detected and lead levels were found to be below EPA Preliminary Remediation Goals. A Remediation Plan for hydrocarbon contamination was submitted to Environmental Health Services (EHS) Hazardous Materials staff. EHS Hazardous Materials staff approved this work plan and authorized the work to proceed on August 19, 2005 (Attachment 17). Site remediation was conducted between August and September 2005 with the bulk of the contaminated soils removed to the Marina landfill. The applicant has submitted a final report for the completion of the site remediation to EHS (Attachments 17). Two abandoned wells were found on the site and the applicant has been authorized by EHS to proceed with the closure of these wells (Attachment 18). The consulting geologist will need to verify in writing that the site has been successfully remediated. Once the well closure is complete and EHS staff accepts the final reports, the site remediation will be complete. This final letter must be accepted in writing by EHS staff, and a copy of this letter submitted to the project planner prior to commencement of earthwork on the site.

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

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| 5. Create a potential fire hazard? | X |
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The project design incorporates all applicable fire safety code requirements and will include fire protection devices as required by the local fire agency.

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

Does the project have the potential to:

1. Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

\_\_\_\_\_ X \_\_\_\_\_

A Traffic Impact Analysis (dated October 27, 2005 and updated December 12, 2005) and addenda (dated December 9, 2005 and January 23, 2006) were prepared by Higgins Associates for the project (Attachment 14) and were reviewed and accepted by the Department of Public Works Traffic Engineering staff. According to the Traffic Impact Analysis (TIA), the mini-storage and car dealership are expected to generate 580 daily trips with 32 trips at the AM peak hour and 66 trips during the PM peak hour. The TIA analyzed seven intersections (Rodeo Gulch/Soquel Drive, 41<sup>st</sup> Avenue/Soquel Drive, Robertson Street/Soquel Drive, Porter Street/Soquel Drive, 41<sup>st</sup> Avenue/Northbound Highway 1 Off-Ramp, 41<sup>st</sup> Avenue/Southbound Highway 1 Off-Ramp, 41<sup>st</sup> Avenue/Gross Road). Presently, three of the studied intersections operate unacceptably - Robertson Street/Soquel Drive, Porter Street/Soquel Drive, and the Southbound Highway 1 Off-Ramp at 41<sup>st</sup> Avenue/Gross Road (this last intersection shares the same signal controller and acts as one intersection). This analysis includes traffic contributions by approved, but not yet built or complete projects. Specifically, Safeway and Home Depot on 41<sup>st</sup> Avenue are included in the background conditions. These same intersections will continue to operate unacceptably with the increase in traffic generated by the project. However, according to the traffic analysis, the project will not contribute more than 1% to the volume/capacity ratio to any of these three intersections, which is the threshold that must be exceeded to identify a significant impact pursuant to the 1994 General Plan (Policy 3.12.1).

The increase in peak hour traffic volumes resulting from the project will not reduce the Level of Service of any of the other study intersections to below Level of Service D. Traffic improvement fees based on the number of new trips will be required prior to building permit issuance. These fees will contribute to funding future capital road and roadside improvements in the Soquel planning area.

Project related traffic expected to utilize the Highway 1 corridor does not exceed the 1% threshold. A project condition will require trucks to access and leave the site via 41<sup>st</sup> Avenue only, with truck traffic prohibited from proceeding east along Soquel Drive into Soquel Village.

With respect to temporary traffic impacts caused by trucks associated with the

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earthwork on the site, the traffic impact of each truck is equivalent to 2.5 vehicles. Truck traffic leaving the site would have to exceed 60 truck trips per hour to create a significant impact (Jack Sohriakoff, Department of Public Works, Traffic Engineering, personal communication, 2006). Based on an anticipated grading volume of approximately 20,000 cubic yards roughly 1,000 truck trips will be generated over a 1 to 2 month period. Given the more conservative estimate of one month, the number of truck trips associated with grading activity on the site will be well below a level representing a significant impact.

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

X

The project meets the code requirements for the required number of parking spaces and therefore new parking demand will be accommodated on site.

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

X

The proposed project will comply with current road requirements to prevent potential hazards to motorists, bicyclists, and/or pedestrians. The project will provide road frontage improvements, which include separated sidewalks where currently no sidewalk exists. There is currently a full bike lane which will be preserved.

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

X

See H-1 above.

## I. Noise

Does the project have the potential to:

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

X

There are residential units in the vicinity of the project. Specifically, a mobile home park located at the northwestern and northern property boundaries. There are 3-4 nonconforming dwellings (dwellings in a commercial zone district) located along the

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western property line. The noise associated with the project was analyzed by Edward L. Pack Associates, Inc., dated July 14, 2005 (Attachment 15). While noise-generating equipment such as compressors and vacuums are widely used at car dealerships, the preparation and service areas are located over 100 feet from the nearest residence. The study found that the project will create an incremental increase in the existing noise environment, however, the noise levels are generally expected to be within the limits of the General Plan Noise Element. One exception may be that the houses on the east side of Carriker Lane could potentially be exposed to excessive noise from the mini-storage facility by large truck activity if trucks are allowed to idle, or by excessively loud car sound systems. While these dwellings are located on commercially zoned parcels with commercial General Plan land use designations and can be expected to eventually be replaced by commercial uses, the current residents could be adversely affected by increase noise levels. To minimize potential noise impacts, a 6-foot masonry wall is proposed on the north and western property lines. In addition, the business hours for the mini-storage will be limited to 7am to 7 pm. After hours access to the facilities will be prevented by the gate blocking access to the smaller structure and locked doors for the main storage structure. The use of P.A. systems will be prohibited at both businesses. Signage will be required at the mini-storage site stating that engines be turned off and prohibiting loud music/radios. Also, there will be an on-site manager for the mini-storage, who can aid in the control of noise from excessively loud music or idling trucks.

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

X

Per County policy, average hourly noise levels shall not exceed the General Plan threshold of 50 Leq during the day and 45 Leq during the nighttime. Impulsive noise levels shall not exceed 65 db during the day or 60 db at night. Acoustic studies for nearby projects have shown that traffic noise along Soquel Drive can exceed these standards. Therefore, relative to the noise attributable to existing traffic, noise levels associated with the project will not be significant. Additionally, an acoustic wall is proposed between the subject site and the residential use to the north.

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

X

Noise generated during construction will increase the ambient noise levels for adjoining areas. The site grading is anticipated to require 6 weeks to two months to complete. Hours of operation for heavy machinery will be limited to weekdays between 7am to 6 pm to minimize noise impacts to the adjacent residences. The time for the construction of the structures is unknown, but again the hours of construction will be

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limited to minimize impacts to 7am to 7 pm. Construction will be temporary, however, and given the limited duration of this impact it is considered to be less than significant. The applicant/contractor will be required to designate a disturbance coordinator and to post a 24-hour contact number conspicuously on the job site to respond to noise complaints and ensure that the contractors do not work outside of the allowed hours.

## 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 as a whole meets federal ozone standards, but does not meet State standards for ozone and particulate matter (PMIO). Therefore, the regional pollutants of concern that would be emitted by the project are ozone precursors (Volatile Organic Compounds [VOCs] and nitrogen oxides [NOx]), and dust.

The Monterey Bay Unified Air Pollution Control District (MBUAPCD) applies a significance threshold of 137 pounds per day for both VOCs and NOx and a threshold of 82 pounds per day for PMIO. Regional changes in emissions due to vehicular travel from the proposed project were estimated using the URBEMIS-2002 (Version 8.7) computer program and traffic inputs from the traffic engineer. The total project emissions shows in the attached Table 1 (Attachment 19) are well below the MBUAPCD thresholds of significance for all pollutants. Therefore there will not be a significant contribution to an existing air quality violation.

In calculating PMIO emissions, the MBUAPCD applies an emission rate of 10-38 pounds of PMIO per day per acre of grading, with the actual rate of depending on whether the activity involves minimal grading or earthmoving and excavation. If the entire 6-acre site were graded at one time, and assuming the highest rate of emission, the PM10 could exceed the significance threshold at 228 pounds per day. In order to reduce the potential particulate emission to a less than significant level, the applicant cannot excavate and or actively work (recompact) more than 2 acres at a time. In addition, a dust control plan must be submitted stipulating wind conditions in which grading operations shall desist and watering schedules to control dust. In addition, all trucks hauling fill to or from the site shall be covered to minimize the potential for releasing dust during transport. Thus, the project construction may result in a short-term, localized decrease in air quality due to generation of dust. Dust control best management practices, including periodic watering, limitations to the extent of the site being actively graded, requiring all fill materials be covered while hauled to or from the site, must be implemented during construction to reduce impacts to a less than



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significant level. The project will be required to obtain a permit from the Monterey Bay Air Pollution Control District, since the area of earthwork exceeds one acre (6 acres total).

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

X

To ensure that the project will not conflict with or obstruct implementation of the regional air quality plan, all trucks carrying soils to or from the site shall be covered, all grading operations shall cease during high winds and a dust control plan shall be required and implemented. See J-1 above.

3. Expose sensitive receptors to substantial pollutant concentrations?

X

Dust generation may occur during project site grading and construction. Final grading and erosion control plans will include methods to control dust. These plans must be reviewed and approved by the Environmental Planning section of the Planning Department.

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

X

#### **K. Public Services and Utilities**

Does the project have the potential to:

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

- a. Fire protection?

X

While the project represents an incremental contribution to the need for services, this project meets all the standards and requirements of the Central Fire Protection District. The fire station that serves this site is located about 1,800 feet to the east. The project will include all fire safety features required by the Central Fire Protection District

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including hydrants and sprinklers.

b. Police protection? X

Again, the project represents an incremental contribution to the need for services, the project will not create a significant demand for new services, nor require additional personnel.

c. Schools? X

This project does not contain a residential component. The project will be required to pay any applicable developer's fees required by the local school district prior to building permit issuance.

d. Parks or other recreational activities? X

No residential use is proposed, therefore there will be no increase in demand for park/recreation facilities generated by this project.

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

The applicant will be responsible for frontage improvements along Soquel Drive and will pay for the improvements to an existing bus stop located to the east of the project site.

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

As discussed in ~~itme~~ **B-8**, according to the drainage analysis by Bowman and Williams (Attachment 8), the on-site storm water detention will maintain postdevelopment runoff at pre-development rates. The downstream capacity and storm facilities have been demonstrated to be adequate, and no off-site drainage improvements are needed. The Department of Public Works Drainage staff has reviewed the drainage calculation and plans and have determined that downstream are adequate to handle the increase in drainage associated with the project (Attachment 9).

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3. Result in the need for construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

\_\_\_\_\_ X \_\_\_\_\_

The project will connect to an existing municipal water supply. City of Santa Cruz Water Department has determined that adequate supplies are available to serve the project (Attachment 10). The City of Santa Cruz has a water efficient landscape ordinance and requires all car washes to either provide water recycling systems or to be regulated by automatic timers. Since the project is served by City water, the final landscape plan will be reviewed by City staff for compliance with the water efficient landscape requirements prior to approval of their water service.

Municipal sewer service is available to serve the project, as reflected in the attached letter from the Santa Cruz County Sanitation District (Attachment 11).

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

\_\_\_\_\_ X \_\_\_\_\_

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

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

\_\_\_\_\_ X \_\_\_\_\_

The water mains serving the project site provide adequate flows and pressure for fire suppression. Additionally, the Central Fire Department has reviewed and approved the project plans, assuring conformity with fire protection standards that include minimum requirements for water supply for fire protection (Attachment 9).

6. Result in inadequate access for fire protection?

\_\_\_\_\_ X \_\_\_\_\_

The project's access meets County standards and has been approved by the Central Fire Department.

7. Make a significant contribution to a

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cumulative reduction of landfill  
 capacity or ability to properly dispose  
 of refuse?

Excess soil material, approximately 13,000 cubic yards, will be removed and disposed of as part of this development. The need to export material is largely driven by the poor engineering qualities of the native material and is thus not able to be reduced in volume by a meaningful amount. It is expected that much of the exported material may be suitable as till material for other permitted projects, since the contaminated soils have already been removed from the site. One such identified location is within an area current; in the process of annexation by the City of Watsonville. Alternatively, the applicant has indicated that unsuitable fill materials and any fill that cannot be accommodated at a permitted site would be hauled to the Marina Landfill for disposal.

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

X

#### **L. Land Use, Population, and Housing**

Does the project have the potential to:

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

X

The proposed project was reviewed for conformance with the County of Santa Cruz General Plan. The policy areas that are germane to this project are noted below:

**Land Use Element** – The proposed mini-storage and car dealership are uses allowed in the Service Commercial (C-S) land use designation. The site is currently designated as Community Commercial (C-C), which does not allow these uses. Consequently, the applicant has applied for a General Plan amendment to change the land use designation to C-S. Prior to the adoption of the 1994 General Plan the subject parcels were designated as C-S properties with an implementing C-4 zoning. The land use designations were changed as part of the 1994 General Plan update to C-C to revitalize this commercial area and encourage retail oriented commercial development. This redevelopment largely has not happened in this stretch of Soquel Drive. Barriers to this change appears to be the shapes of these parcels (deep and narrow parcels with limited road frontage), the number of smaller parcel which cannot meet on-site parking requirements for most C-2 uses and the large number of parcels in different ownership. Changing the General Plan land use designation will return the parcels to

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| Significant<br>Or<br>Potentially<br>Significant<br>Impact | Less than<br>Significant<br>with<br>Mitigation<br>Incorporation | Less than<br>Significant<br>Or<br>No Impact | Not<br>Applicable |
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their designation prior to 1994 and in conjunction with a tandem General Plan amendment for several adjacent properties, will bring a number of existing commercial business from non-conforming to conforming status. The General Plan amendment will allow for future Service Commercial/C-4 uses on the parcels should the current project be replaced by a different development in the future, and such uses may result in greater intensity and possibly greater impacts to surrounding parcels than that represented by the current proposal. However, the County Code states that any future change of use that results in an intensification of use on the property is subject to a discretionary change of use permit as well as a public hearing. The potential environmental impacts of any proposed new project that increases the intensity of use will be thoroughly evaluated when a specific proposal is made.

Circulation Element – The Level of Service policy (3.12.1) establishes LOS D as the minimum acceptable LOS and requires that projects provide mitigation for traffic generation which results in service levels falling below D, or which results in a 1 percent or greater increase in volume for critical movements where LOS is already below D. As detailed in section H-1, there are three intersections already operating below LOS D. The traffic generated by this project does not meet the 1 percent criteria. The project will not reduce the level of service for the other four intersections in the immediate area to or below LOS D. The project is therefore in conformance with the General Plan regarding traffic and circulation.

Community Design Element – The development of these lots will be an improvement to the area. Soquel Drive is an arterial street that lacks sidewalks and is underdeveloped through this section. The proposed design of the car dealership will be integrated with the Soquel Drive commercial corridor. The mini-storage facility has been oriented to keep massing from the street frontage and provides a commercial business space and outdoor area that provides a pleasing commercial frontage. The project will construct separated sidewalks, plant street trees and provide landscaping on a site previously lacking these amenities.

Noise Element – The Land Use Compatibility Policy (6.9.1) requires new development to conform to the Land Use Compatibility Guidelines. The noise associated with the project was analyzed by Edward L. Pack Associates, Inc., dated July 14, 2005 (Attachment 15). The study found that the project will create an incremental increase in the existing noise environment, however, the noise levels are generally expected to be within the limits of the General Plan Noise Element. Additionally the project is conditioned to include a 6-foot acoustical wall adjacent to residential uses, to limit hours of operation and to provide around-the-clock onsite management to provide oversight and minimize problems related to the use of the storage facility.

Conservation and Open Space – Policy 5.2.2 provides for the protection of Riparian Corridors and Wetlands. The proposed development will be located outside of the proscribed buffer setbacks. Additionally, the project includes a component to restore the adjacent riparian corridor through the removal of invasive exotic plant species and

|   |   |   |                   |
|---|---|---|-------------------|
| Significant<br>Or<br>Potentially<br>Significant<br>Impact | Less than<br>Significant<br>with<br>Mitigation<br>Incorporation | Less than<br>Significant<br>Or<br>No Impact | Not<br>Applicable |
|---|---|---|-------------------|

the revegetation of native riparian plants.

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

X

As discussed in L-1 above, the subject parcels' zoning and General Plan land use designation was changed as part of the 1994 General Plan update from C-4 and C-S to C-2 and C-C. The proposed commercial uses are not allowed in the C-2 zone district. Therefore, the project requires a rezoning back to the C-4 zone district, which does allow car dealerships and mini-storage facilities. This rezoning in conjunction with a concurrent rezoning for a group of neighboring parcels will re-establish the previous zoning to these parcels. Although the rezoning may allow additional future development that represent intensification in use, such development will be subject to discretionary review and public hearing and appropriate mitigation measures will be established for any potentially significant impacts that may result.

The proposed improvements meet the riparian setbacks established through a Riparian Presite (application 03-0410 Attachment 13) consistent with Chapter 16.30 of the County Code (Riparian Protection Ordinance).

3. Physically divide an established community?

X

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

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

X

The project does not involve extensions of utilities (e.g., water, sewer, or new road systems) into areas previously not served. Consequently, it is not expected to have a significant growth-inducing effect.

The proposed rezoning and General Plan amendment will return the subject parcels to the zoning and land use designation they had prior to the 1994 General Plan update. In addition, a group of parcels west of the subject parcels that were also changed from C-4 and C-S are concurrently undergoing the rezoning and General Plan Amendment

|   |   |   |                   |
|---|---|---|-------------------|
| Significant<br>Or<br>Potentially<br>Significant<br>Impact | Less than<br>Significant<br>with<br>mitigation<br>Incorporation | Less than<br>Significant<br>Or<br>No Impact | Not<br>Applicable |
|---|---|---|-------------------|

(GPA) process. The concurrent rezoning/GPA of the western parcels will connect these parcels to the **C-4** properties located further west and will allow existing businesses that are currently non-conforming to attain conforming status. The proposed rezoning/GPA will not be growth inducing as it is not introducing new zoning or development opportunities that have not existed in this area in the past.

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

X

The proposed project involves a commercial development on a commercially designated property.

**M. Non-Local Approvals**

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

Yes    X            No

Monterey Bay Air Pollution Control District, Regional Water Quality Control Board and possibly California Department of Fish and Game (riparian restoration project)

**N. Mandatory Findings of Significance**

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

Yes                      No      X  

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

Yes                      No    X

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

Yes                      No    X

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

Yes                      No    X



# TECHNICAL REVIEW CHECKLIST

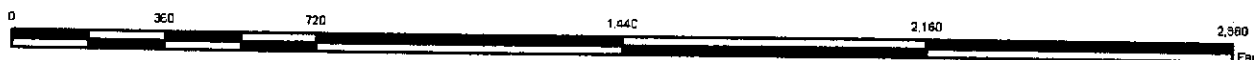
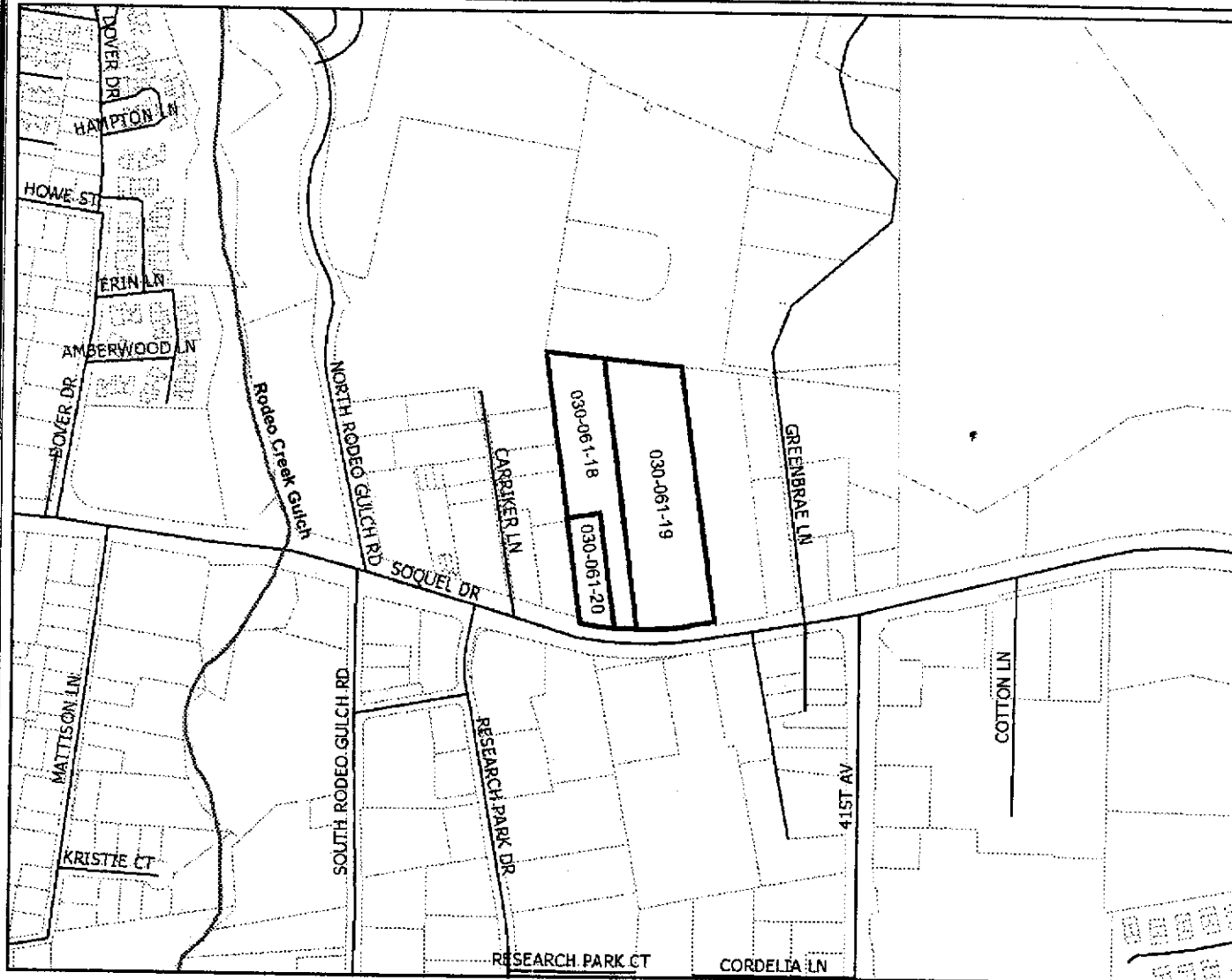
|   | <u>REQUIRED</u> | <u>COMPLETED*</u> | <u>N/A</u> |
|---|-----------------|-------------------|------------|
| Agricultural Policy Advisory Commission (APAC) Review | _____           |                   | <u>X</u>   |
| Archaeological Review                                 | _____           |  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

## Attachments:

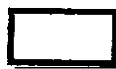



1. Vicinity Map
2. Map of Zoning Districts
3. Map of General Plan Designations
4. Project Plans
5. Assessors Parcel Map
6. Geotechnical Review Letter prepared by Kent Edler, dated 5/13/05
7. Geotechnical Investigation (Conclusions and Recommendations) prepared by Twining Laboratories, dated 4/25/05
8. Drainage calculations prepared by Bowman and Williams, dated 10/31/05
9. Discretionary Application Comments, miscellaneous dates, printed 2/15/06
10. Letter from City of Santa Cruz Water Department, dated 11/13/03; revised 05/10/05
11. Memo from Department of Public Works, Sanitation, dated November 18, 2005
12. Arborists Letter prepared by Kurt Fouts, dated 10/25/05
13. Riparian Presite 03-0410
14. Traffic Study (Conclusions and Recommendations) prepared by Higgins Associates, dated 10/27/05
15. Noise Study (Conclusions and Recommendations) prepared by Edward L. Pack, dated 7/14/05
16. Letters of May 24, 2005 and August 19, 2005 from Rolando Charles, EHS
17. Former UST Site Monitoring Well Closure and Remedial Excavation Report by Weber, Hayes & Associates, dated November 23, 2005
18. Letter of December 15, 2005 from Rolando Charles, EHS regarding Remedial Report
19. Air Quality Impact Analysis prepared by Donald Ballanti, dated February 16, 2006
20. Updated Air Quality Analysis, March 23, 2006
21. Comments rec'd during review period

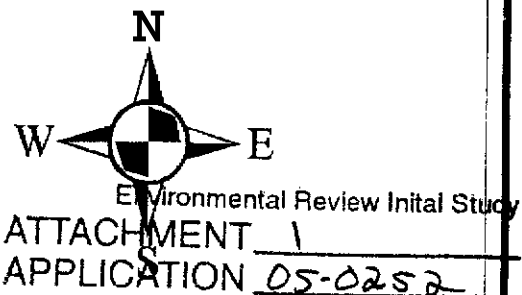


# Location Map



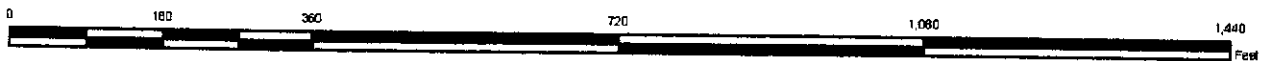
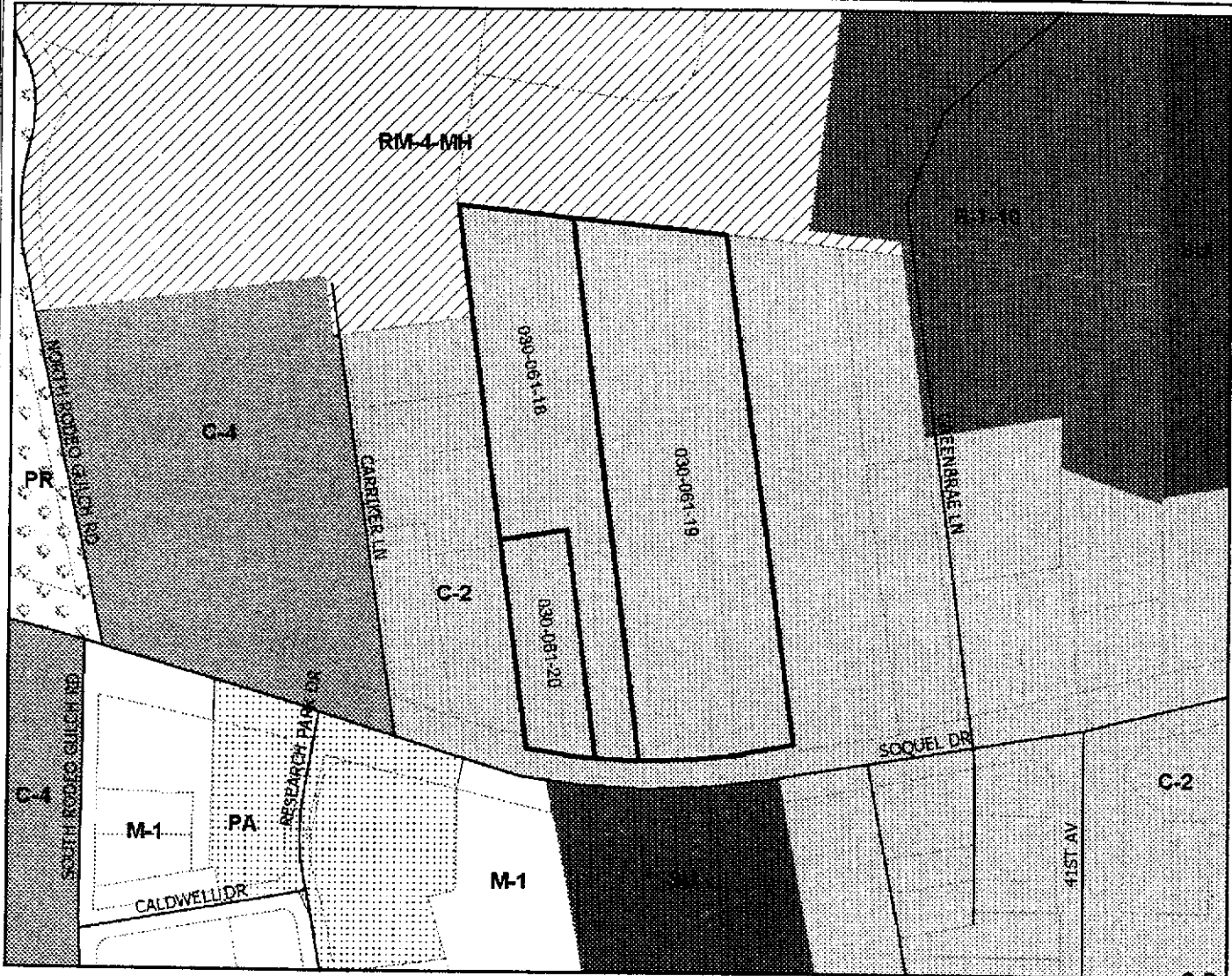
## Legend

-  Project Parcels
-  PERENNIAL STREAM
-  Streets
-  Assessors Parcels



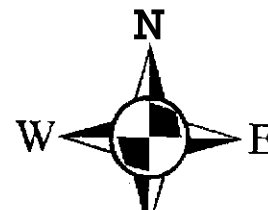
Map Created by  
County of Santa Cruz  
Planning Department  
February 2006

# Zoning Map



## Legend

- Project Parcels
- Streets
- Assessors Parcels
- COMMERCIALCOMMUNITY (C-2)
- COMMERCIALSERVICE (C-4)
- RESIDENTIAL-SINGLEFAMILY (R-1)
- SPECIAL USE (SU)
- LIGHT INDUSTRIAL (M-1)
- RESIDENTIAL-MULTIFAMILY (RM)
- COMMERCIAL-PROF OFFICE (PA)
- PARK (PR)



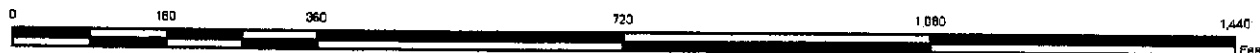
Environmental Review Initial Study

ATTACHMENT 2  
APPLICATION 05-0252


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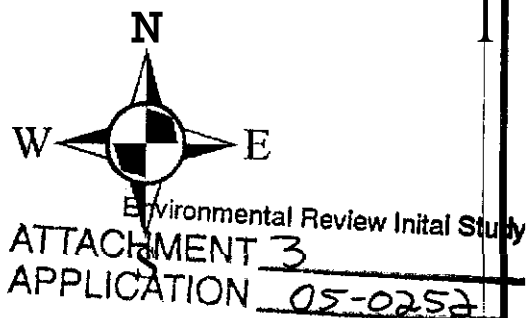


# General Plan Designation Map



## Legend

-  Project Parcels
-  Streets
-  Assessors Parcels
-  Commercial-Community (C-C)
-  Commercial-Service (C-S)
-  Urban Open Space (O-U)
-  Residential - Urban Medium Density (R-UM)



Map Created by  
County of Santa Cruz  
Planning Department  
February 2006

Design Review Submittal  
APN 030-061-18, 19, 20

# OCEAN HONDA and STORE MORE AMERICA

3711, 3715, 3801 Soquel Drive, Santa Cruz, California

## Index of Sheets

| SHEET NO. | DESCRIPTION  |
|-----------|--|
| COVER     | COVER SHEET  |
| C1        | PROPOSED LOT LINE ADJUSTMENT, LOT NUMBER, AND EASEMENT             |
| C2        | PRELIMINARY SHADING PLAN   |
| C3        | PRELIMINARY TRAFFIC & UTILITY PLAN                                 |
| C4        | EROSION CONTROL PLAN   |
| C5        | SOQUEL FRONTAGE IMPROVEMENT PLAN & PROFILE                         |
| C6        | SITE SECTIONS & MISCELLANEOUS DETAILS                              |
| C7        | MISCELLANEOUS DETAILS  |
| A1        | SITE PLAN  |
| A2        | OCEAN HONDA GROUND FLOOR PLAN                                      |
| A3        | OCEAN HONDA SECOND FLOOR PLAN                                      |
| A4        | OCEAN HONDA EXTERIOR ELEVATIONS                                    |
| A5        | OCEAN HONDA FLOOR PLAN   |
| A6        | STORE MORE AMERICA FIRST FLOOR PLAN AND EXTERIOR ELEVATIONS        |
| A7        | STORE MORE AMERICA UPPER FLOOR PLANS AND EXTERIOR ELEVATIONS       |
| A8        | BASEMENT PLAN  |
| A9        | STORE MORE AMERICA BUILDING #2 FLOOR PLANS AND EXTERIOR ELEVATIONS |
| LT-1      | TRUCK TURNING RADIUS   |
| L1        | PHOTO METRICS  |
| L2        | LANDSCAPE PLAN   |
| L3        | LANDSCAPE DETAILS AND NOTES  |

## Vicinity Map



## Project Data

ZONING C2 TO BE REZONED TO C4

|                      |  |
|----------------------|--|
| <b>Ocean Honda</b>   |  |
| PROPOSED BUILDING    | 13,264 SF  |
| FIRST FLOOR          | 1,880 SF   |
| SECOND FLOOR         | 11,400 SF  |
| TOTAL BUILDING AREA  | 13,280 SF  |
| PARKING REQUIREMENTS | 1 SPACE PER 300 SF BUILDING = 138                          |
| PARKING PROVIDED     | 1 HANDICAPPED - 65 EMPLOYEE / CUSTOMER - 166 STORAGE = 231 |
| TOTAL LOT AREA       | 177,855 SF   |
| BUILDING FOOT PRINT  | 9,700 SF = 17.8%   |
| PARKING / PAVING     | 137,654 SF = 71.3%   |
| LANDSCAPING          | 15,871 SF = 10.7%  |

## Consultants

|   |                                     |                                   |
|---|-------------------------------------|-----------------------------------|
| <b>Owner &amp; Submitter</b>                              | <b>Architect</b>                    | <b>Water Supply</b>               |
| Steve John, Ocean Honda                                   | Architect Design Honda              | Steve Cruz City Water             |
| Barbara John  | Association Associates              | 308 Ocean Avenue                  |
| 4400 Auto Plaza Dr, Capitola, CA 95061                    | 1000 Ocean Avenue, Suite 118        | San Jose, CA 95128                |
| TEL: 831-459-8892   | South San Francisco, CA 94080       | TEL: 408-281-8100                 |
| FAX: 831-459-8891   | George Associates (AJA)             |                                   |
|   | TEL: 650-953-7344                   |                                   |
|   | FAX: 650-953-0876                   |                                   |
| <b>Land Use Planner</b>                                   | <b>Architect Store More America</b> | <b>Sea &amp; Electric Service</b> |
| Hamilton Smith Land Use and Development Consultants, Inc. | Shawyer Group, Inc.                 | 615 Stevens Avenue                |
| 1809 Seabright Ave, Suite A1                              | 2871 Main Street, Suite C           | San Jose, CA 95128                |
| San Jose, CA 95128  | San Jose, CA 95128                  | TEL: 408-281-8100                 |
| TEL: 408-281-8100   | TEL: 408-281-8100                   | FAX: 408-281-8100                 |
| FAX: 408-281-8100   | FAX: 408-281-8100                   |                                   |
| <b>Civil Engineers</b>                                    | <b>Landscaper Architect</b>         | <b>Sanitary Sewer Service</b>     |
| Benson and Williams                                       | Landscaper Architect                | San Jose County Sanitation        |
| 1011 Cedar Street   | P.O. Box 1210                       | 701 Ocean Street                  |
| San Jose, CA 95108  | San Jose, CA 95108                  | San Jose, CA 95108                |
| TEL: 408-281-8100   | TEL: 408-281-8100                   | TEL: 408-281-8100                 |
| FAX: 408-281-8100   | FAX: 408-281-8100                   | FAX: 408-281-8100                 |

Environmental Review Initial Study  
ATTACHMENT 4, 1 of 15  
APPLICATION 05-0252

PROJECT DATA  
INDEX  
CONSULTANTS

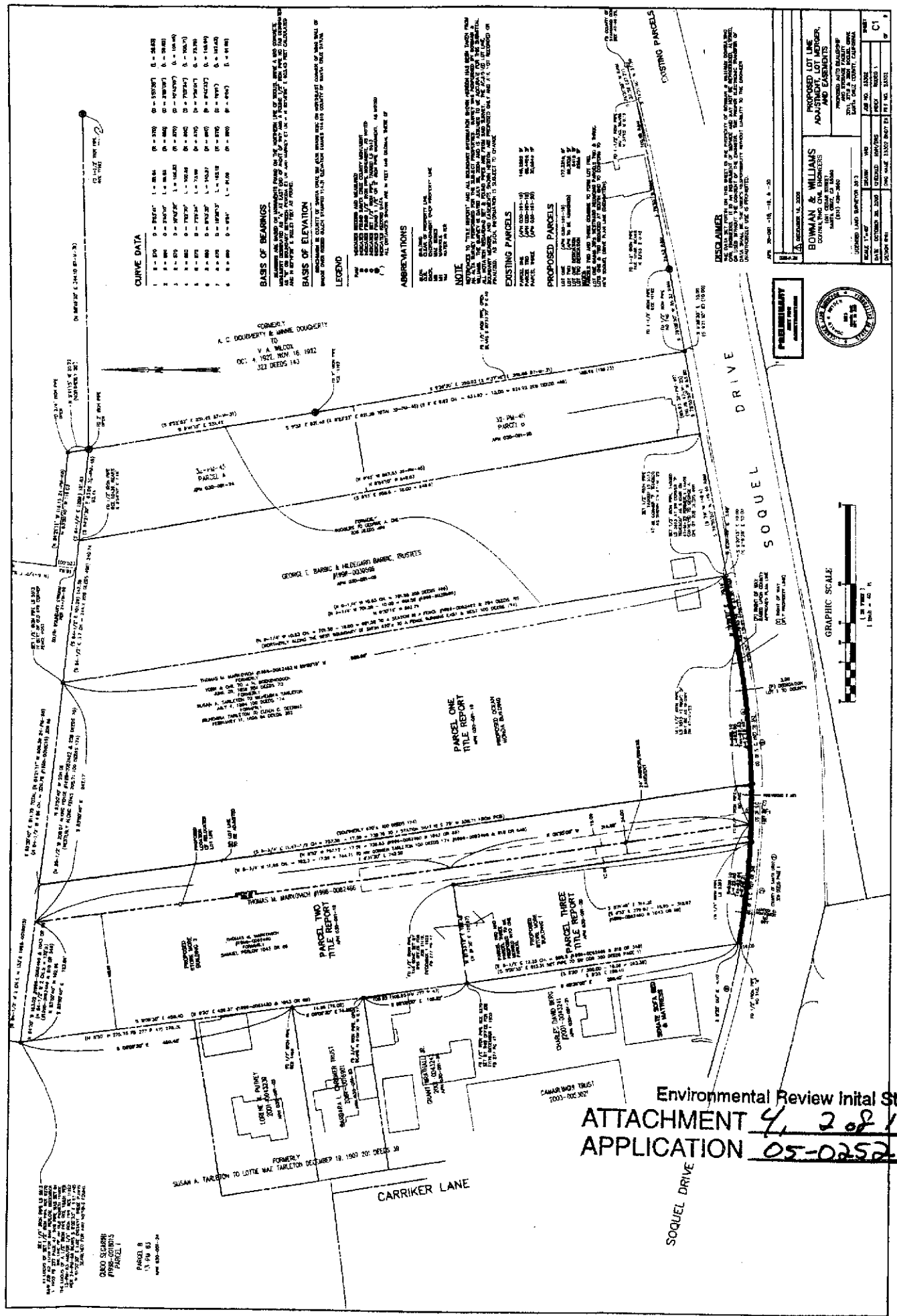
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JOB NO. 0108  
SHEET  
Cover  
OF 31 SHEETS

OCEAN HONDA, STORE MORE AMERICA  
3711, 3715, 3801 Soquel Drive, Santa Cruz, CA  
OWNERS: Steve John, Ocean Honda APN 030-061-18, 19, 20



Shiretree Group, Inc.  
1000 Ocean Avenue, Suite 118  
San Jose, CA 95128  
Phone (408) 281-8100

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| REVISIONS BY: |  |
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**CURVE DATA**

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| 3  | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| 4  | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
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**BASES OF BEARINGS**

ALL BEARINGS ARE TRUE BEARINGS

**BASES OF ELEVATION**

ALL ELEVATIONS ARE MEAN SEA LEVEL

**LEGEND**

ALL LINES ARE AS SHOWN

**ABBREVIATIONS**

ALL ABBREVIATIONS ARE AS SHOWN

**NOTE**

ALL NOTES ARE AS SHOWN

**EXISTING PARCELS**

ALL EXISTING PARCELS ARE AS SHOWN

**PROPOSED PARCELS**

ALL PROPOSED PARCELS ARE AS SHOWN

**DISCLAIMER**

ALL DISCLAIMERS ARE AS SHOWN

**PRELIMINARY**

ALL PRELIMINARY ARE AS SHOWN

**GRAPHIC SCALE**

ALL GRAPHIC SCALE ARE AS SHOWN

**Environmental Review Initial Study**

ATTACHMENT 4, 20815

APPLICATION 05-0252

82





## TEMPORARY EROSION CONTROL MEASURES

- [illegible]

**LEGEND**

GRAPHIC SCALE

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 SUBJECT CATCHED BY THE FBI  
 TRUCK ON STAN RAIL  
 SET FREE OF STAN RAIL  
 CONSTRUCTION COMPANY?  
 INDIAN

CONCLUSION

**PHILLIP MORRIS**

1

**Notice**

CONTRIBUTING TO THE SERVICE REQUIREMENTS

## DISCLAIMER

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404 20-001 1-15 1-15 1-15

DEC 14, 2003 REVERA PDR COUNTY CLERK

CONSULTING CIVIL ENGINEERS

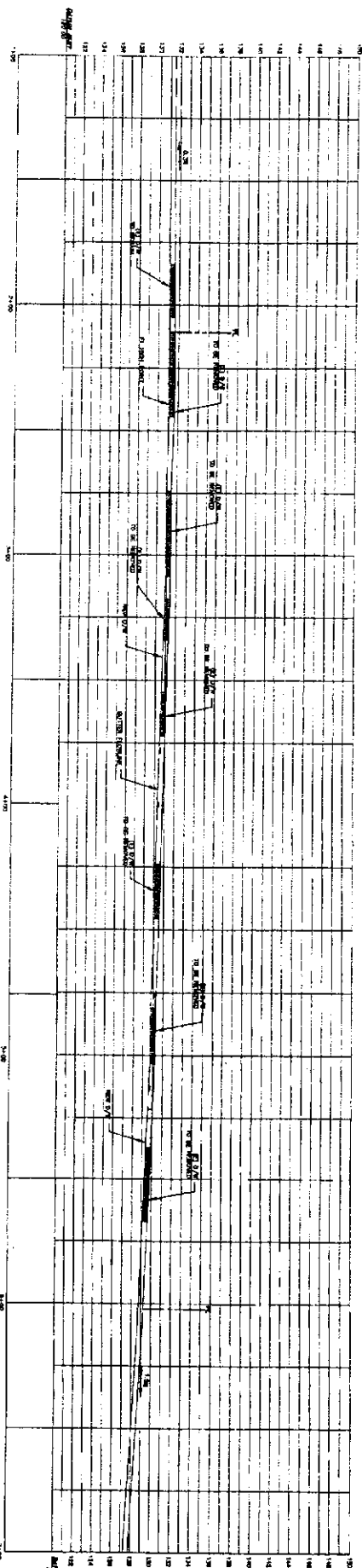
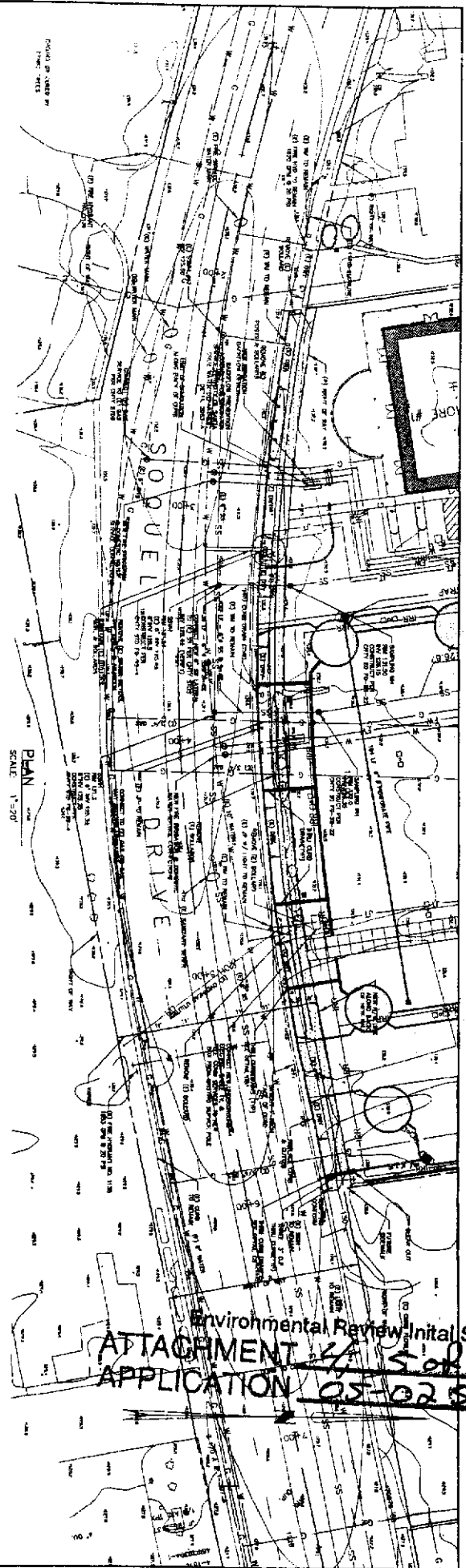
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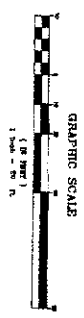
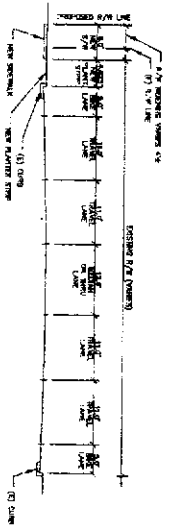
Environmental Review Initial Study  
ATTACHMENT 4, 4a, 15  
APPLICATION 05-0252





- NOTES
1. PROVIDE 10' WIDE CURE & DRIVE.
  2. ADD 10' WIDE CURE TO EXISTING DRIVE.
  3. ADD 10' WIDE CURE TO EXISTING DRIVE.
  4. EXISTING DRIVE SHALL BE EXISTING TO EXISTING DRIVE.

SOQUEL DRIVE TYPICAL SECTION



PROFESSIONAL  
ENGINEER  
No. 10000  
STATE OF CALIFORNIA

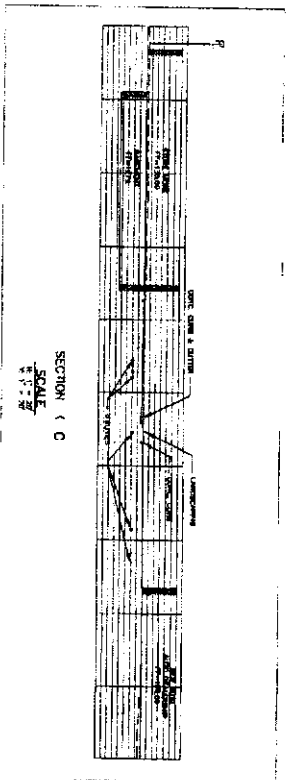
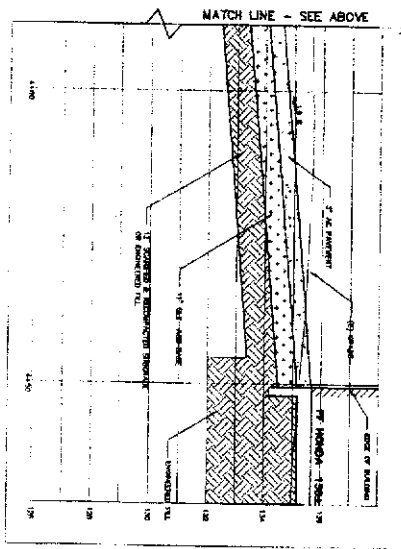


**DISCLAIMER:** THE ENGINEER HAS ASSURED THAT THE DESIGN AND CONSTRUCTION OF THE PROJECT WILL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CALIFORNIA ENGINEERING ACT AND THE RULES AND REGULATIONS OF THE BOARD OF ENGINEERS AND SURVEYORS OF THE STATE OF CALIFORNIA.

**PROJECT INFORMATION:**

PROJECT: SOQUEL DRIVE IMPROVEMENT PROJECT  
OWNER: BOWMAN & WILLIAMS  
DESIGNER: BOWMAN & WILLIAMS  
DATE: 05/01/2015  
SCALE: 1"=20' HORIZONTAL & VERTICAL  
SHEET: 05

Environmental Review Initial Study  
ATTACHMENT 4  
APPLICATION 05-0252

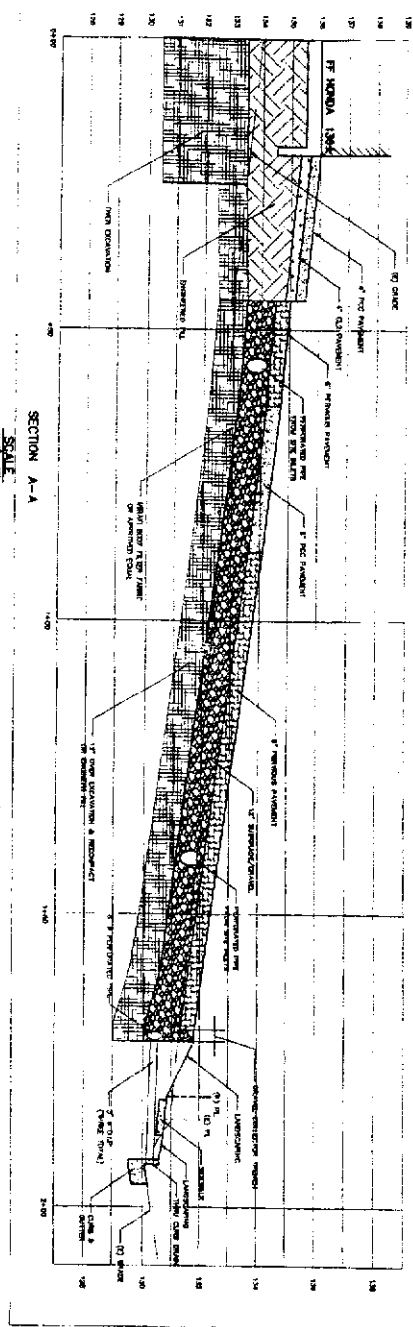
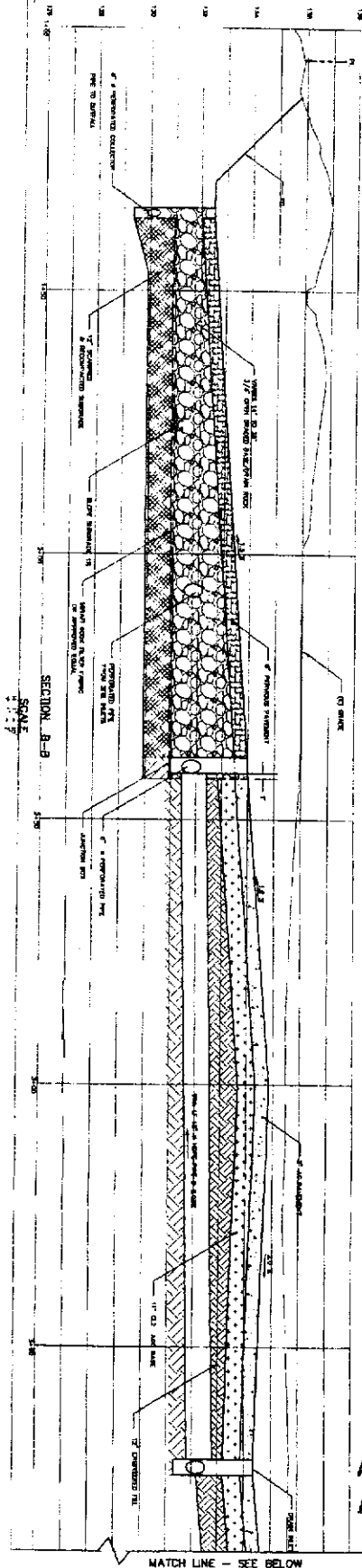


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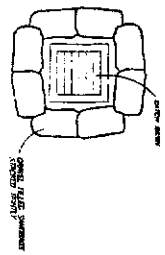
**PRELIMINARY**  
 NOT FOR CONSTRUCTION



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|---|--|---|
| <b>BOWMAN &amp; WILLIAMS</b><br>CONSULTING CIVIL ENGINEERS<br>1801 15th Street<br>San Francisco, CA 94103<br>(415) 774-2800 |  | <b>SITE SECTIONS</b><br>PREPARED AND DRAWN BY: [Name]<br>CHECKED BY: [Name]<br>DATE: [Date] |
|---|--|---|

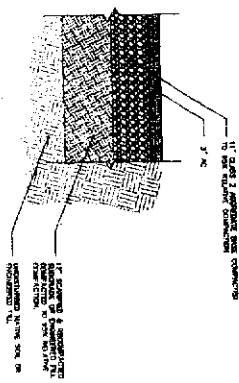


Environmental Review Initial Study  
**ATTACHMENT 4, 6 of 15**  
**APPLICATION 05-0252**

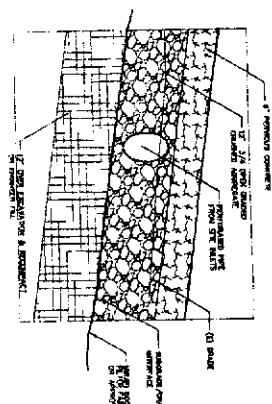


NOTES:  
1. GRAVEL BAGS SHALL BE PLACED OVER POLE AND ALUM. RODS.  
2. BAGS SHALL BE PLACED OVER POLE AND ALUM. RODS.  
3. BAGS SHALL BE PLACED OVER POLE AND ALUM. RODS.  
4. BAGS SHALL BE PLACED OVER POLE AND ALUM. RODS.

1 GRAVEL BAG CB PROTECTION  
SCALE: N.T.S.



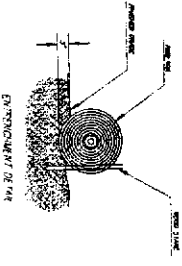
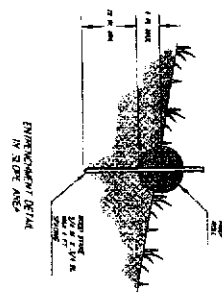
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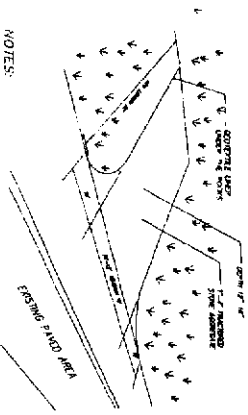
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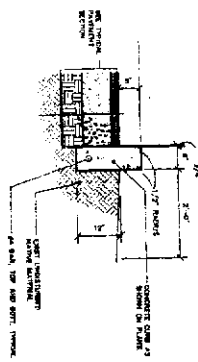
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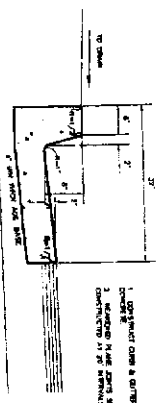
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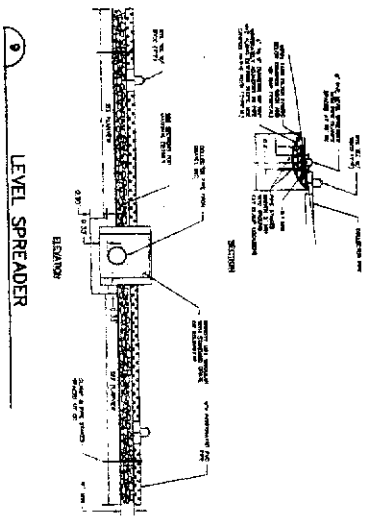
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7 TYPICAL CONCRETE CURB  
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8 CONCRETE CURB & GUTTER DETAIL  
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9 LEVEL SPREADER  
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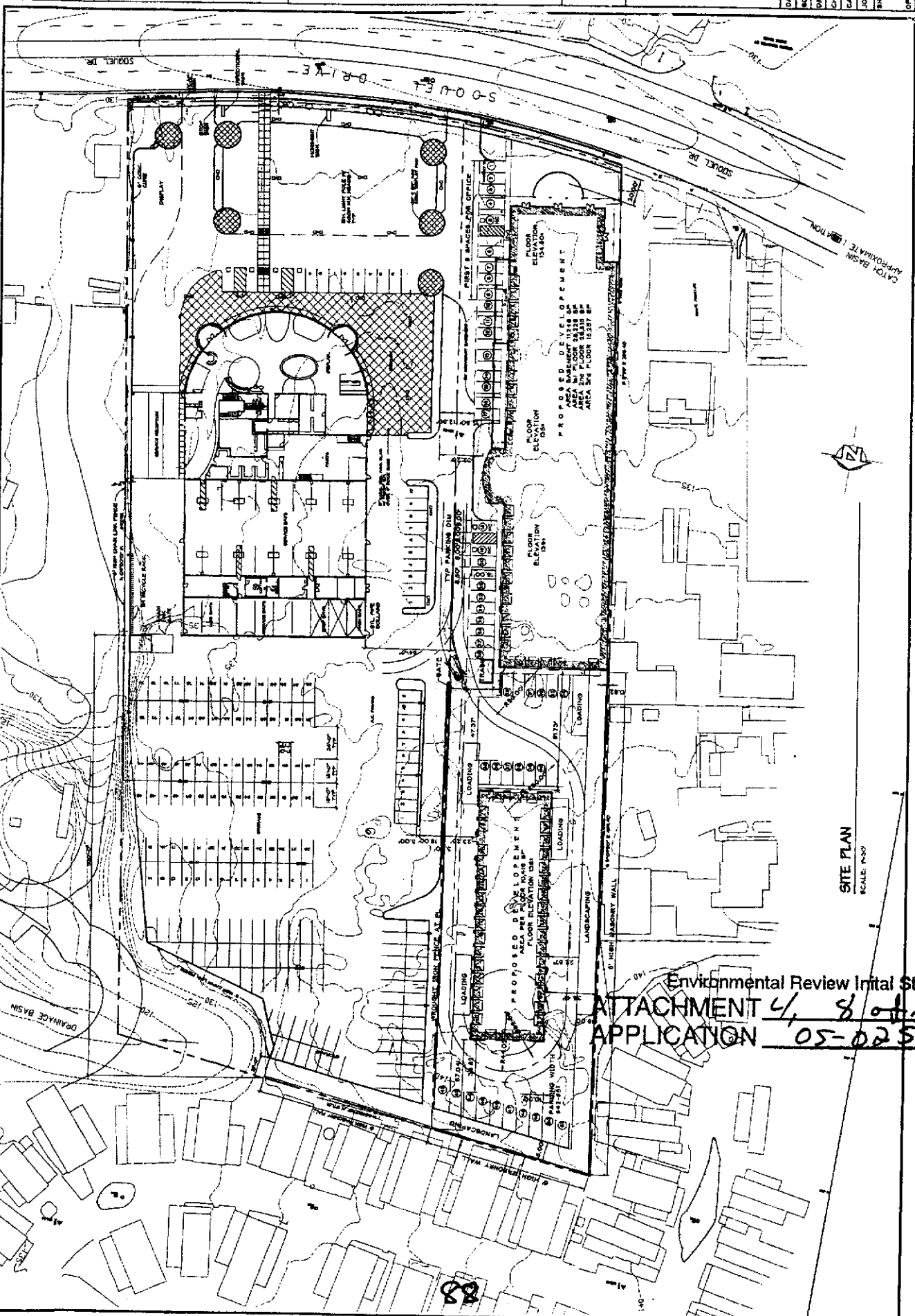
10 CONCRETE SWALE  
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PERMITS  
REQUIREMENTS



|   |                              |
|---|------------------------------|
| <b>DISCLAIMER</b><br>THE CONSULTANT HAS BEEN RETAINED BY THE CLIENT TO PROVIDE ENGINEERING SERVICES IN ACCORDANCE WITH THE PROFESSIONAL ENGINEERING ACT OF 1968, AS AMENDED. THE CONSULTANT HAS NOT BEEN RETAINED BY THE CLIENT TO PROVIDE ARCHITECTURAL SERVICES. THE CONSULTANT HAS NOT BEEN RETAINED BY THE CLIENT TO PROVIDE LANDSCAPE ARCHITECTURE SERVICES. THE CONSULTANT HAS NOT BEEN RETAINED BY THE CLIENT TO PROVIDE SURVEYING SERVICES. THE CONSULTANT HAS NOT BEEN RETAINED BY THE CLIENT TO PROVIDE ENVIRONMENTAL SERVICES. THE CONSULTANT HAS NOT BEEN RETAINED BY THE CLIENT TO PROVIDE OTHER SERVICES. |                              |
| <b>BOWMAN &amp; WILLIAMS</b><br>CONSULTING CIVIL ENGINEERS<br>3711 N. 10TH STREET<br>SUITE 200<br>ARLINGTON, VA 22201<br>(703) 261-1000   |                              |
| <b>MISCELLANEOUS DETAILS</b><br>PREPARED AND CHECKED BY: [Name]<br>DATE: [Date]<br>SCALE: [Scale]   |                              |
| SHEET NO. 1<br>TOTAL SHEETS: 1  | DATE: 06/06/06<br>BY: [Name] |

Environmental Review Initial Study  
 ATTACHMENT 4, 7 of 15  
 APPLICATION 050252



**SITE PLAN**  
 SCALE: 1"=20'

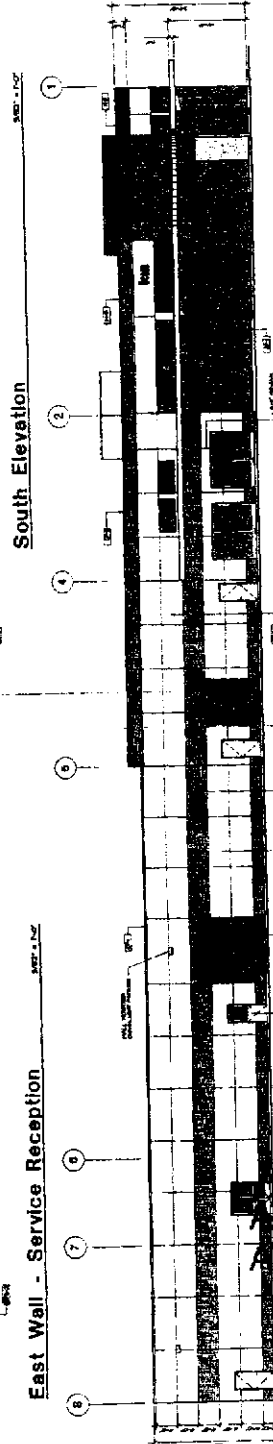
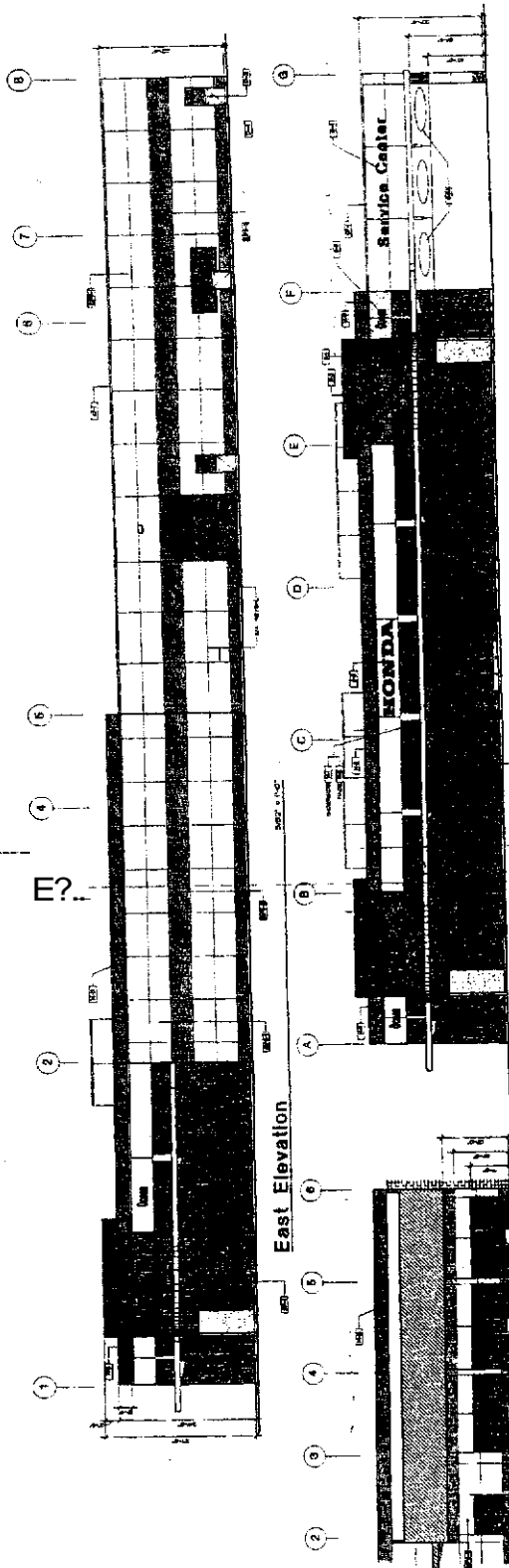
Environmental Review Initial Study  
**ATTACHMENT 4, 8 of 15**  
 APPLICATION 05-0252



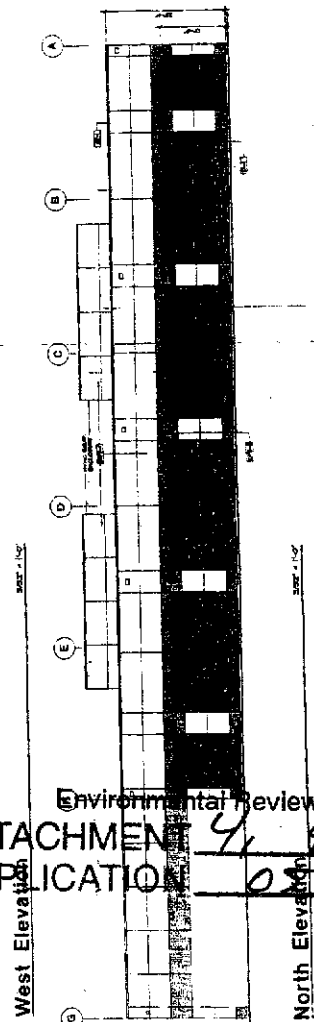
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| 1   | 08/17/2003 | Initial Design |
| 2   |            |                |
| 3   |            |                |
| 4   |            |                |
| 5   |            |                |
| 6   |            |                |
| 7   |            |                |
| 8   |            |                |
| 9   |            |                |
| 10  |            |                |

DATE: 08/17/2003  
DRAWN BY: [Signature]  
CHECKED BY: [Signature]  
SCALE: 1/8" = 1'-0"

Exterior Elevations  
A-4  
8



| NO. | DATE       | REVISIONS      |
|-----|------------|----------------|
| 1   | 08/17/2003 | Initial Design |
| 2   |            |                |
| 3   |            |                |
| 4   |            |                |
| 5   |            |                |
| 6   |            |                |
| 7   |            |                |
| 8   |            |                |
| 9   |            |                |
| 10  |            |                |



Environmental Review Initial Study  
ATTACHMENT 4  
APPLICATION 02-0252





| REVISIONS | BY | DATE |
|-----------|----|------|
| 1         |    |      |
| 2         |    |      |
| 3         |    |      |
| 4         |    |      |
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| 15        |    |      |
| 16        |    |      |
| 17        |    |      |
| 18        |    |      |
| 19        |    |      |
| 20        |    |      |

Address: 3271 0319, 3201 Sequel Dr., Santa Cruz, CA  
 3271 0319, 3201 Sequel Dr., Santa Cruz, CA 95061  
 3271 0319, 3201 Sequel Dr., Santa Cruz, CA 95061



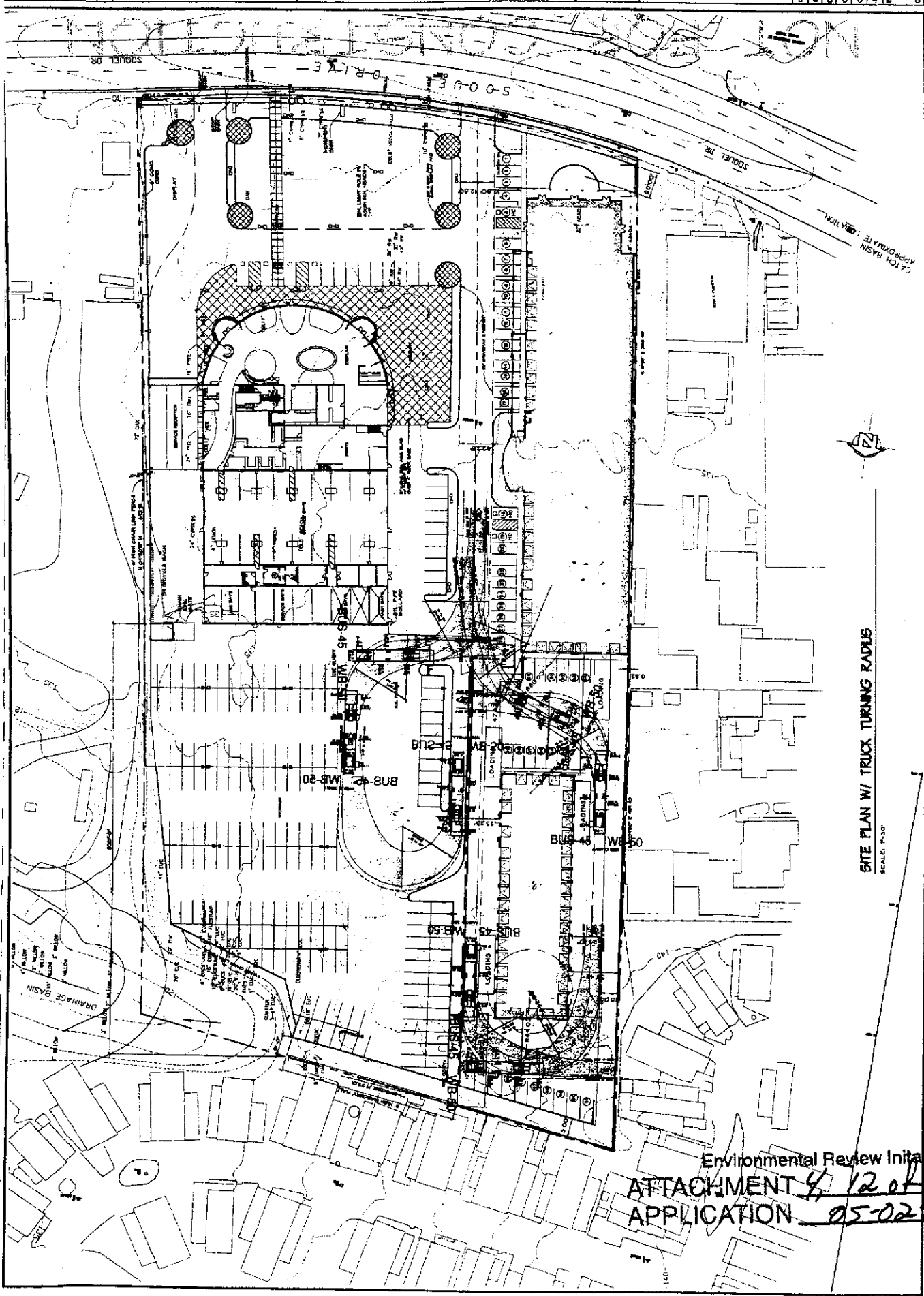
**Streeter Group, Inc.**  
 Address: 3271 0319, 3201 Sequel Dr., Santa Cruz, CA  
 3271 0319, 3201 Sequel Dr., Santa Cruz, CA 95061  
 3271 0319, 3201 Sequel Dr., Santa Cruz, CA 95061



**OCEAN HONDA, STORE MORE AMERICA**  
 3271 0319, 3201 Sequel Dr., Santa Cruz, CA  
 3271 0319, 3201 Sequel Dr., Santa Cruz, CA 95061  
 3271 0319, 3201 Sequel Dr., Santa Cruz, CA 95061

|                |                 |
|----------------|-----------------|
| DATE: 10-31-08 | SCALE: AS NOTED |
| DRAWN BY: HZ   | CHECK BY: SSS   |
| CAD FILE: A3   | JOB NO: 04189   |
| SHEET          | 99              |
| OF 24 SHEETS   |                 |

**TRUCK TURNING RADIUS**



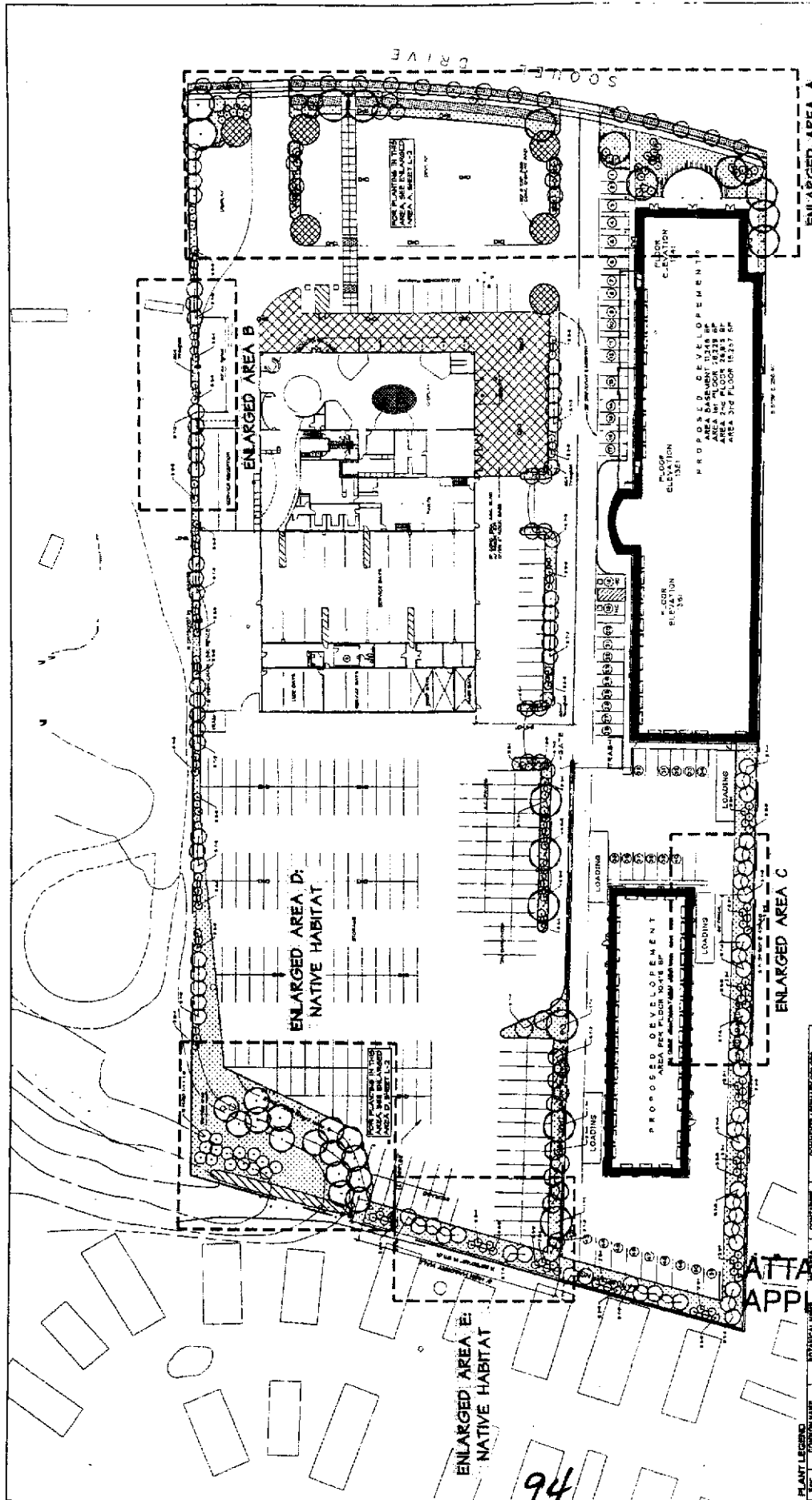
**SITE PLAN W/ TRUCK TURNING RADIUS**  
 SCALE: 1"=20'

Environmental Review Initial Study  
 ATTACHMENT 4, 12 of 15  
 APPLICATION 05-02502





© Madroni - London 5-2005



**SITE PLAN**  
SCALE: 1/4"=1'-0"

| Case | Case description  | Intervention  | Outcome   | Notes   |
|------|---|---|---|---|
| OC-1 | <p><b>First response</b></p> <p><b>Trainer's Client Position</b></p> <p>Trainer's Client Position</p> | <p><b>Response description</b></p> <p>Trainer's Client Position</p> | <p><b>Response description</b></p> <p>Trainer's Client Position</p> | <p><b>Response description</b></p> <p>Trainer's Client Position</p> |
| OC-2 | <p><b>First response</b></p> <p><b>Trainer's Client Position</b></p> <p>Trainer's Client Position</p> | <p><b>Response description</b></p> <p>Trainer's Client Position</p> | <p><b>Response description</b></p> <p>Trainer's Client Position</p> | <p><b>Response description</b></p> <p>Trainer's Client Position</p> |

[illegible]

Environmental Review Initial Study  
ATTACHMENT 4  
APPLICATION 015-0252

| DATE |              |
|------|--------------|
| 1.   | Mar 20, 2008 |
| 2.   | Apr 8, 2008  |
| 3.   | Apr 10, 2008 |
| 4.   | Apr 23, 2008 |
| 5.   | Oct 12, 2008 |
| 6.   | Oct 16, 2008 |

|        |          |              |  |           |
|--------|----------|--------------|--|-----------|
| SCALE: | AS NOTED | SHEET TITLE: | LANDSCAPE<br>DETAILS,<br>NOTES &<br>LEGEND | SHEET NO. |
|--------|----------|--------------|--|-----------|

21

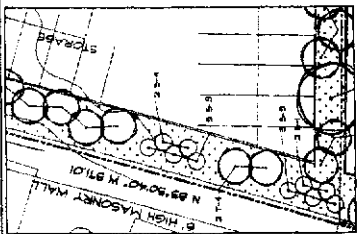
[illegible][illegible]

Amplified (overexpressed) gene will be used to produce a recombinant virus. The virus will be used to infect cells of interest or tissues of interest. The cells/tissues will be analysed for the presence of the recombinant virus. The cells/tissues will be analysed for the presence of the recombinant virus. The cells/tissues will be analysed for the presence of the recombinant virus.

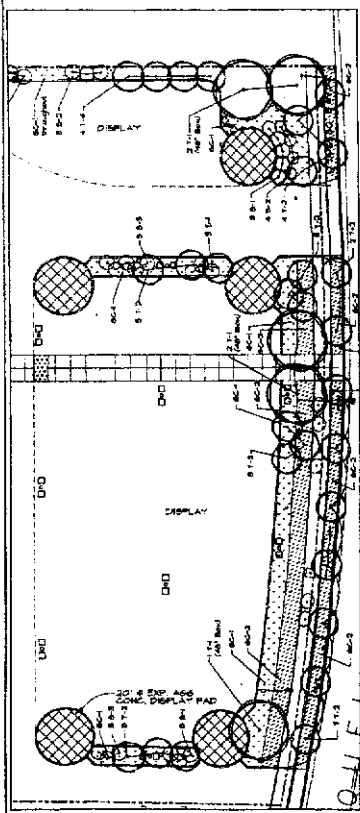
Base Information provided by:

**Streeter Group, Inc.**  
Architects, Landscape Architects  
1000 S. Main Street, Suite 200  
Portland, ME 04101  
Phone: (603) 866-1111

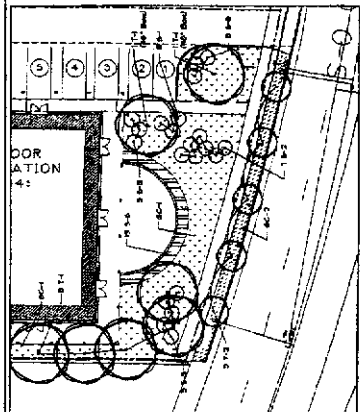
**Madrone Landscape Group - 2005**



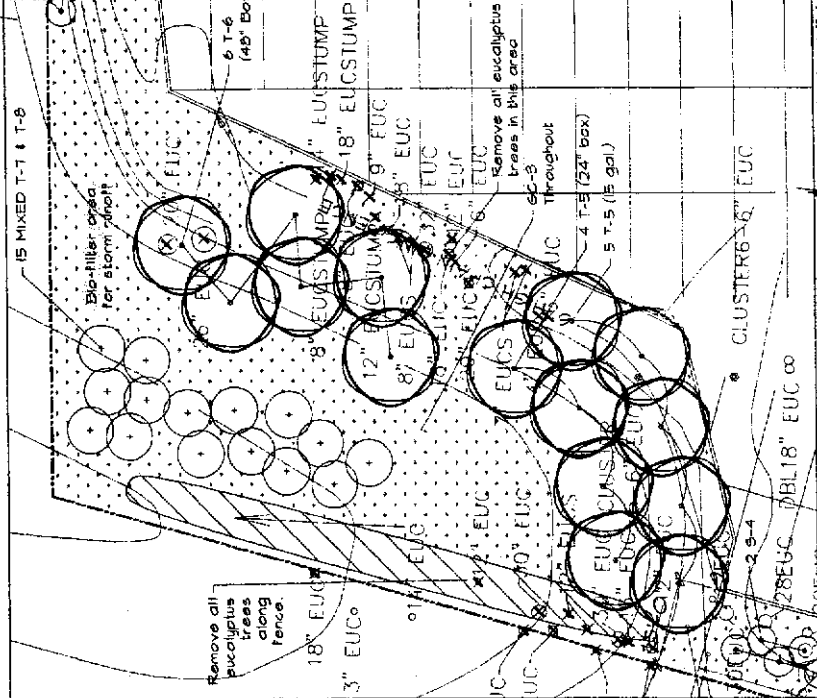
AREA E: NATIVE HABITAT



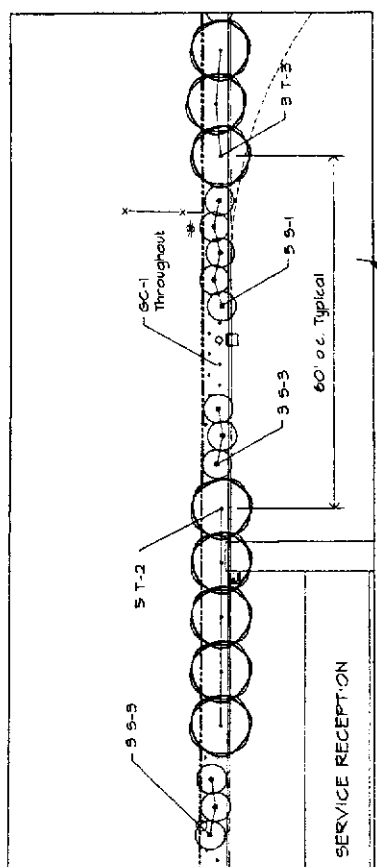
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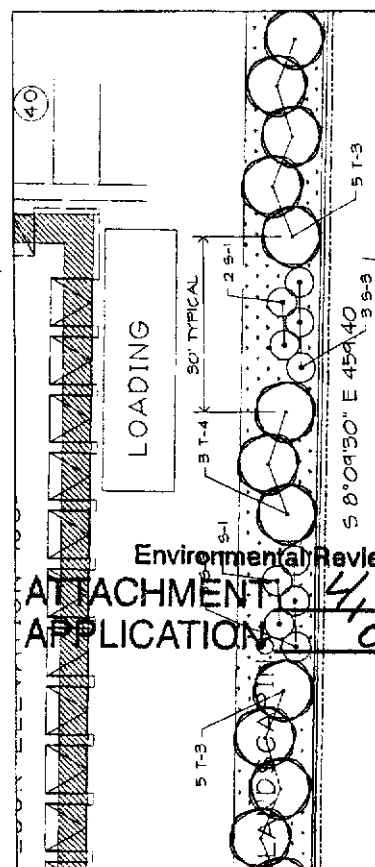
AREA A-2  
SCALE 1"=20'



AREA D: NATIVE HABITAT



AREA \_\_\_\_\_  
SCALE: 1" = 100'



AREA

Environmental Review Initial Study  
ATTACHMENT 4, 15 of 15  
APPLICATION 005-0252

FOR TAX PURPOSES ONLY

THE ASSESSOR MAKES NO GUARANTEE AS TO MAP ACCURACY NOR ASSUMES ANY LIABILITY FOR OTHER USES. NOT TO BE REPRODUCED. ALL RIGHTS RESERVED.

POR. RANCHO ARROYO DEL RUEDO  
SEC. 9 & 10, T.11S., R.1W., M.D.B. & M.

Tax Area Code  
96-103

30-06

SEC. 10  
SEC. 9



32PM45

87RS31  
12/8/93

GREENBRAE LN

SOQUEL

DR.



Assessor's Map No. 30-06  
County of Santa Cruz, Calif.  
September, 1998

Environmental Review Initial Study  
ATTACHMENT 5  
APPLICATION 05-0252



# COUNTY OF SANTA CRUZ

## PLANNING DEPARTMENT

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

**TOM BURNS, PLANNING DIRECTOR**

May 13, 2005

Hamilton Swift Land Use and Development  
1509 Seabright Avenue  
Santa Cruz, CA, 95062

Subject: Review of Geotechnical Investigation by Twining Laboratories, Inc.  
Dated April 25, 2004; Project No. C69701.01-01  
**APN: 030-061-78, -19, -20, Application No: 05-0252**

Dear Applicant:

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

1. Per the recommendations of the report, a design level geotechnical report must be submitted for review to the Planning Department prior building permit issuance.
2. All construction shall comply with the recommendations of the report.
3. Final plans shall reference the report and include a statement that the project shall conform to the report's recommendations.
4. Prior to building permit issuance a plan review letter shall be submitted to Environmental Planning. The author of the report shall write this letter and shall state that the project plans conform to the report's recommendations.

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

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

Please submit three copies of the reports at the time of building permit application.

Please call the undersigned at 454-3168 if we can be of any further assistance,

Sincerely,

Kent Edler  
Associate Civil Engineer

Cc Cathleen Carr, Project Planner

Environmental Review Initial Study  
**ATTACHMENT**  
**APPLICATION**

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

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

1. **When a project has engineeredfills and / or grading,** a letter from your soils engineer must be submitted to the Environmental Planning section of the Planning Department prior to foundations being excavated. This letter must state that the grading has been completed in conformance with the recommendations of the soils report. Compaction reports or a summary thereof must be submitted.
2. **Prior to placing concrete for foundations,** a letter from the soils engineer must be submitted to the building inspector and to Environmental Planning stating that the soils engineer has observed the foundation excavation and that it meets the recommendations of the soils report.
3. **At the completion of construction,** a *final* letter from your soils engineer is required to be submitted to Environmental Planning that summarizes the observations and the tests the soils engineer has made during construction. The final letter must also state the following: "Based upon our observations and tests, the project has been completed in conformance with our geotechnical recommendations."

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

Environmental Review Initial *SI*  
ATTACHMENT 6, 2 of 2  
APPLICATION 05-0252

Meritage Real Estate Development Group, Inc.  
April 25, 2005

These soil corrosion data should be provided to the manufacturers or suppliers of materials that will be in contact with soils (pipes or ferrous metal objects, etc.) to provide assistance in selecting the protection and materials for the proposed products or materials. If the manufacturers or suppliers cannot determine if materials are compatible with the soil corrosion conditions, a professional consultant, i.e. a corrosion engineer, with experience in corrosion protection should be consulted to provide design parameters.

**6.14 Sulfate Attack of Concrete:** Degradation of concrete in contact with soils due to sulfate attack involves complex physical and chemical processes. When sulfate attack occurs, these processes can reduce the durability of concrete by altering the chemical and microstructural nature of the cement paste. Sulfate attack is dependent on a variety of conditions including concrete quality, exposure to sulfates in soil/groundwater and environmental factors. The standard practice for geotechnical engineers in evaluation of the soils anticipated to be in contact with concrete is to perform testing to determine the sulfates present in the soils. The test results are then compared with the categories of the 2001 Uniform Building Code, Table 19-A-3 to provide guidelines for concrete exposed to sulfate-containing solutions. Common methods used to resist the potential for degradation of concrete due to sulfate attack from soils include, but are not limited to the use of sulfate-resisting cements, air-entrainment and reduced water to cement ratios.

## 7.0 CONCLUSIONS

Based on the review and evaluation of the previous geotechnical data (March 2004), our geotechnical experience in the vicinity of the project site, and our understanding of the anticipated construction, our preliminary conclusions are presented below.

- 7.1 Assuming the column loads for the two-story mini-storage building or equal to or less than the 75 kip load anticipated for the two-story car dealership building, the site is suitable for the proposed construction with regard to support of interconnected (quasi-rigid) foundations and concrete slabs-on-grade for the proposed two-story buildings (car dealership building and northern mini-storage building), provided the recommendations contained in this report are followed. However, the recommendations contained in this report are preliminary and should not be considered as design level recommendations. In addition, since anticipated column loads were not available regarding the proposed three-story mini-storage building with a basement, site preparation recommendations have not been provided in this report. In addition to needing the structural loads, further subsurface exploration will be needed at the site to provide design level recommendations for all of the proposed buildings at the subject site.
- 7.2 The soils encountered at the boring locations varied across the site. Fill soils were encountered in some of the exploratory borings and extended generally to depths of 2% to 3 feet below existing site grades. However, deeper fill soils were noted on the site during a previous investigation of the site area.

investigation 6 feet of fill was identified above a buried concrete pit located in the western-central portion of the site. In addition, test pit data from the previous investigation showed that fill soils extended to a depth of approximately 10 feet in the northeast corner of the site. Based on review of historical aerial photographs and observations made during excavation of past test pits, the deeper fill soils noted were a result of constructed fill slopes along the existing creek bank in the northeast corner of the site.

The fill soils consisted of sandy lean clays with organics and/or metal debris. The fill soils encountered above the buried concrete pit consisted of debris or trash including metal, paper, wood, plastic, etc. In addition, the fill soils associated with the constructed fill slopes along the existing creek bank consisted of sandy lean clay soils with organics and root material as large as 4 inches in diameter, pieces of concrete and asphaltic concrete, and roofing materials.

The near-surface native soils encountered in the test borings generally consisted of soft to medium stiff sandy lean clay soils to depths of 3 to 4 feet BSG. The underlying sandy lean clay soils are generally stiff to very stiff extending to depths of about 8 to 24 feet BSG. The native sandy lean clays are generally underlain by interbedded layers of medium dense silty sands or clayey sands extending to a depth of about 44 feet BSG. Very dense poorly graded sands were encountered from a depth of about 44 feet BSG extending to the maximum depth explored, 5 1/2 feet BSG.

- 7.3 The geotechnical concerns at the site are: 1) the expansion potential of the soft to medium stiff near surface sandy lean clay soils in the upper 3 to 4 feet BSG; 2) the compressibility and collapse potential of the fill and native near-surface soils, 3) the presence of undocumented fill soils not suitable for support of improvements, 4) the potential for liquefaction and seismic settlement; and 5) the presence of shallow groundwater levels that could impact the site during and after the construction.
- 7.4 Interconnected (quasi-rigid) foundations placed on at least 24 inches of engineered fill, or fill to a depth of 36 inches below preconstruction site grade, or engineered fill extending 12 inches below existing utilities to be abandoned, or to a depth to removed any undocumented fill soils, whichever is deeper, can provide adequate support for the proposed two-story structures (car dealership building and northern mini-storage building) when designed for the anticipated settlements as recommended in this report. These recommendations regarding site preparation for the two-story buildings are preliminary. Additional borings are required within the footprints of the new proposed buildings in order to make design level site preparation recommendations.
- 7.5 The southern, three-story mini-storage building with a basement is anticipated to be supported on a mat foundation. For preliminary planning purposes, a k-value of 50



maybe used for mat design contingent that the mat is placed on engineered fill soils. However, the depth to which engineered fills should be placed below the mat foundation and the allowable bearing capacity will need to be evaluated once additional structural load information has been provided to Twining.

- 7.6 Exterior slabs, pavement walkways, and asphaltic concrete pavements can be supported on the following engineered fill, whichever provides the deeper fill: 12 inches below preconstruction site grades, 12 inches below proposed pad grades, 12 inches below existing utilities to be abandoned, or to a depth suitable to remove any undocumented fills encountered during grading activities.
- 7.7 Total and differential static settlements for the proposed structures are estimated to be 1-inch and %-inch, respectively.
- 7.8 A total seismic settlement of about 2% inches was estimated under shaking from the design basis earthquake (0.55g and a magnitude of 7.9). A differential seismic settlement of about 1¼ inches in 40 lineal feet across individual building pads should be anticipated.
- 7.9 Slabs-on-grade may be supported on at least 12 inches of properly moisture conditioned and compacted imported non-expansive engineered fill (including 6 inches of AB recommended) which extends to the depths recommended for foundation over-excavation. Mat foundations may be supported on 6 inches of AB over engineered fill which extends to a depth to be determined upon further evaluation.
- 7.10 The results of soil sample analyses indicate that the near-surface soils exhibit a "moderately corrosive" corrosion potential to buried metal objects.
- 7.11 The results of soil sample analyses indicate "none detected" sulfate and chloride concentrations in the soil sample tested. Therefore, a low potential for sulfate attack on concrete placed in contact with the near-surface soils is anticipated.
- 7.12 The near-surface soils exhibit poor support characteristics for pavements.
- 7.13 Groundwater was detected in three (3) of the twelve (12) test borings the day after drilling. However, groundwater was not noted during drilling and sampling. Water depths measured in the borings varied from 14 feet BSG in borings B-2 and B-7 to 2 feet BSG in boring B-6. Dewatering and installation of subsurface drains may be necessary prior to and during construction.

## 8.0 RECOMMENDATIONS

Based on the evaluation of the field and laboratory data and our geotechnical experience in the vicinity of the project, we present the following recommendations for use in the project planning. However, this report should be considered preliminary. Additional design level investigations will be necessary to prepare a final geotechnical report. The recommended design consultation and construction monitoring by Twining are integral to the proper application of the recommendations.

### 8.1 General

- 8.1.1 This update report was written using existing geotechnical data from our March 2004 investigation. The recommendations provided in this report are not design level recommendations and should only be used for preliminary planning purposes. Based on the changed size and location of the car dealership building and the new proposed mini-storage buildings, additional borings are recommended in order to provide design level recommendations for the site. Backhoe excavated test pits are also recommended in order to assess the fill thickness in the proposed building and parking areas. In addition to additional borings and test pits, it is recommended a design level geotechnical investigation also include CPT soundings and evaluation of refined liquefaction and seismic settlement analyses. The results of CPT analyses may indicate settlements that can be addressed structurally without using quasi-rigid foundations for the two-story buildings, thus reducing project costs.
- 8.1.2 The preliminary grading plans should be provided to Twining when completed. The recommendations presented in this report could change depending on the proposed site grading. Therefore, it is critical that this plan, when available, be provided to Twining for review. A demolition plan should be developed to identify existing improvements which will require removal. At a minimum, this plan should indicate any vegetation, trees and utilities scheduled for removal and related backfill materials.
- 8.1.3 Some of the structural loads, types and details of the project were not known at the time this report was prepared. Therefore, it is recommended that structural plans and information regarding loads be provided to Twining for review.
- 8.1.4 Site preparation recommendations for the proposed three-story mini-storage building with the basement are not provided in this report. Once Twining has performed additional exploration during a design level geotechnical engineering investigation and has been provided structural plans, details, and information regarding anticipated loads for this building, Twining can then provide site preparation recommendations.

Environmental Review Initial Study  
ATTACHMENT 7, 4 of 49  
APPLICATION 05-0252

## 8.0 RECOMMENDATIONS

Based on the evaluation of the field and laboratory data and our geotechnical experience in the vicinity of the project, we present the following recommendations for use in the project planning. However, this report should be considered preliminary. Additional design level investigations will be necessary to prepare a final geotechnical report. The recommended design consultation and construction monitoring by Twining are integral to the proper application of the recommendations.

### 8.1 General

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Environmental Review Initial Study  
ATTACHMENT 7.50849  
APPLICATION 05-0252

- 8.2.4 Landscape and planter areas should be irrigated using low flow irrigation (such as drip, bubblers or mist type emitters). The use of plants with minimal water requirements are recommended.
- 8.2.5 Perimeter curbs should be extended at least 4-inches into the compacted native subgrade where irrigated landscape areas meet pavements.

### 8.3 Site Preparation

- 8.3.1 All topsoil, trees, grass lawns and other vegetation, organics, utility lines, stockpiled soils or gravel, and debris should be removed from proposed building and pavement areas and a minimum of 5 feet outside these areas. If a utility cannot be removed to meet this recommendation, then the building footprint should be moved at least 5 feet outside of the building footprint. The general depth of stripping should be sufficiently deep to remove the root systems and organic topsoils. A minimum stripping depth for areas with vegetation of 6 inches should be used for estimating purposes. The actual depth of stripping should be reviewed by Twining at the time of construction. It is possible that deeper stripping may be required if any roots larger than 1/4-inch are encountered during grading and in localized areas, such as low areas where water may pond. These stripped materials will not be suitable for use as engineered fill; however, stripped topsoil may be stockpiled and reused in landscape areas at the discretion of the owner.
- 8.3.2 Stripping should be observed by Twining. Roots larger than 1/4-inch and any accumulation of roots that result in an organic content greater than 3 percent by weight as determined by loss-on-ignition tests should be removed. After the required over-excavation, the exposed subgrade in the excavations should be scarified and compacted as engineered fill to a depth of 8 inches and the excavation backfilled with engineered fill.
- 8.3.3 Because residences have existed on the site, it is possible that septic system materials, leach fields, leach lines and piping, and septic tanks may exist on the subject site. As a result, combined with other debris encountered on site, a demolition plan should be developed in consultation with a qualified geotechnical engineer to identify areas which could impact future site improvements (i.e. pavements, foundations, floor slabs, etc.). Unsuitable materials, or conditions consisting of, but not limited to: 1) septic system materials, leach fields, leach lines, and piping; 2) septic tanks; 3) foundations or foundation remnants; 4) buried concrete pits and pit walls; 5) trees, tree stumps, and roots larger than 1/4-inch in diameter; 6) concrete slabs; 7) utility and irrigation lines; 8) burn pits and trash pits; 9) water wells; 10) roofing

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materials; and 11) other construction debris, buried structures and household trash should be anticipated, and removed. Additional costs to remove debris, etc. should be anticipated. These materials should be excavated and removed from the site prior to placement of fills, pavements, slabs, or foundations. Twining should be contacted to monitor demolition and over-excavation to remove existing fill materials debris including the above anticipated items. The actual depth of over-excavation should be determined during demolition and earthwork based the depths of the fill observed in the excavations.

- 8.3.4 During our March 2004 investigation, fill soils that were encountered in the borings generally ranged from 2 to 3 feet in depth across the site. During our May 1999 geotechnical investigation (the same general area of the subject site), 6 feet ~~of~~ fill was identified above a buried concrete pit located in the westem-central portion of the site. It is recommended all existing fill soils be over-excavated and compacted as engineered fill as part of site preparation. In addition, test pit data from our previous investigation showed that fill soils extend to a depth of approximately 10 feet in the northeast corner of the site, As an alternative to removing the fill soils, the project owner may elect to remove fill soils from the building area only (and to a distance of 5 feet beyond the building limits). Fill soils may be left in parking and driveway areas, however, it should be recognized that the presence of undocumented fills present a potential for higher settlements and the associated distress to pavements. If fill soils are to remain under pavement areas, these areas should be stripped, over-excavated, scarified, moisture conditioned and compacted to provide at least 12 inches of engineered fill below pavement structural section. Pavement areas should be proof rolled under the observation of Twining. Soft or pliant areas of soil should be removed and replaced with engineered fill.
- 8.3.5 The contractor should locate all on-site water wells. All wells scheduled for demolition should be abandoned per state and local requirements. The contractor should obtain an abandonment permit from the local environmental health department, and issue certificates of destruction to the owner and Twining upon completion.
- 8.3.6 After site stripping, over-excavation for the proposed two-story buildings (car dealership and northern mini-storage building) should be performed to provide the minimum depth of engineered fill to comply with all of the following recommended depths, whichever provides the deeper fill: 24 inches below footings, 36 inches below preconstruction site grades, 12 inches below existing utilities to be abandoned, or to a depth suitable to remove any undocumented fills encountered during grading activities. The over-excavation should extend horizontally within and 5 feet outside of building footprints, or equal to the depth of over-excavation, whichever is greater. The

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elevation of the base of the over-excavations should extend equally across the entire building areas and overbuild zones. The minimum depth of engineered fill below exterior slabs, pavement walkways, and asphaltic concrete pavements should comply with all of the following recommended depths, whichever provides the deeper fill: 12 inches below preconstruction site grades, 12 inches below proposed pad grades, 12 inches below bottom of slabs, 12 inches below existing utilities to be abandoned, or to a depth suitable to remove any undocumented fills encountered during grading activities. The zone of over-excavation should extend laterally a minimum of 5 feet outside the edges of foundations, to curblines or as indicated on the plans, whichever is greater. These recommendations regarding site preparation for the two-story buildings are preliminary. Additional borings are required within the footprints of the new proposed buildings in order to make design level site preparation recommendations.

- 8.3.7 Site preparation recommendations for the proposed three-story mini-storage building with the basement are not provided in this report. Once Twining has performed additional exploration during a design level geotechnical engineering investigation and has been provided structural plans, details, and information regarding anticipated loads for this building, Twining can then provide site preparation recommendations.
- 8.3.8 The exposed ground surface in areas to receive engineered fill material should be scarified to a depth of 8 inches, moisture conditioned to within optimum to three (3) percent above the optimum moisture content and compacted as engineered fill. However, if the exposed ground surface in areas to receive engineered fill is clayey material (as is anticipated), then the exposed soils should be scarified to a depth of 8 inches, moisture conditioned to two (2) to five (5) percent above the optimum moisture content and compacted as engineered fill. The zone of scarification and compaction should extend laterally a minimum of 5 feet outside the perimeters of the buildings or to the perimeter curblines if sidewalks are provided. The scarification and compaction should be conducted following stripping operations, removal of subsurface structures, over-excavation, and removal of all soft or pliant areas.
- 8.3.9 All fill required to bring the site to final grade should be placed as engineered fill. In addition, all native soils over-excavated should be compacted as engineered fill.
- 8.3.10 The moisture content of the compacted soils should be tested within 48 hours prior to the placement of concrete or vapor barrier to verify that the moisture content of the clays is at two (2) to five (5) percent above the optimum moisture content. If the moisture content of the soil is found to be less than two (2) to five (5) percent above the optimum moisture content, the soils should be scarified, moisture conditioned, and recompacted as engineered fill.

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- 8.3.11 It is recommended that care be taken by the contractor to ensure that the actual over-excavation depths and lateral extent are sufficient enough to conform to the site preparation recommendations presented in this report. Twining is not responsible for measuring and verifying lateral extent and depth of over-excavation or subgrade compaction. In addition, the contractor should verify in writing to the owner and to Twining that the horizontal and vertical over-excavation limits were completed in conformance with the recommendations of this report and/or the project plans and specifications. This verification may be an as-built drawing of the earthwork limits produced by a licenced surveyor. This verification should be provided prior to requesting pad certification from Twining or excavating for foundations.
- 8.3.12 A dewatering plan should be developed. As required, the contractor should design and provide dewatering systems using accepted and professional methods consistent with current industry practice to eliminate water entering the excavation under hydrostatic head from the bottom and/or sides. The system should be designed to prevent differential hydrostatic head, which would result in floating out soil particles in a manner, termed as a quick or a boiling condition. System shall not be dependent solely upon sumps and/or pumping water from within the excavation where differential head would result in a quick condition, which would continue to worsen the integrity of the excavations' stability. The contractor should provide dewatering systems of sufficient size and capacity to prevent ground and surface water flow into the excavation and to allow all Work to be installed in a dry condition. Additional dewatering guidelines are provided in Appendix D.
- 8.3.13 Any open graded gravel or rock material such as ¾-inch or ½-inch crushed rock used as backfill should be placed in 6-inch lifts and compacted using a vibratory compactor to a non-yielding condition as determined by a qualified geotechnical engineer. Each lift must be approved prior by a qualified geotechnical engineer to placing the next lift. All open graded materials should be encased in a geotextile filter fabric to prevent migration of fine grained soils into the porous material.
- 8.3.14 Fine grained native and engineered fill soils may become unstable during grading; and therefore, could require stabilization. Stabilization may include placing a geotextile fabric and aggregate base materials, and/or chemical treatment (i.e., lime treatment ) or a combination of these to stabilize soils. For bidding purposes for lime treatment, 5 percent by weight high calcium quick lime should be used. Laboratory testing is not required for lime treatment intended for subgrade stabilization purposes.

#### 8.4 Engineered Fill

- 8.4.1 The on-site soils encountered are predominantly sandy lean clays. These soils will be suitable for use as engineered fill material at depths in excess of 12 inches below the bottom of the interior slabs and below exterior slabs-on-grade, provided they are free of organics, debris, meet the requirements for material size stated in subsection 6.2 and the moisture content of the soil is within two to five percent above optimum moisture content at the time of placement and compacted to a dry density of at least 90 percent, but no more than 95 percent of the maximum dry density as determined by ASTM Test Method D1557.
- 8.4.2 The compactability of the native soils is dependent upon the moisture contents, subgrade conditions, degree of mixing, type of equipment, as well as other factors. The evaluation of such factors was beyond the scope of *this* report; therefore, they should be evaluated by the contractor during preparation of bids and construction of the project.
- 8.4.3 Import fill soil should be non-expansive and granular in nature with the following acceptance criteria recommended.

|                               |                               |
|-------------------------------|-------------------------------|
| Percent Passing 3-Inch Sieve  | 100                           |
| Percent Passing No. 4 Sieve   | 50 - 100                      |
| Percent Passing No. 200 Sieve | 10 - 30                       |
| Plasticity Index              | Less than 10                  |
| Expansion Index (UBC 29-2)    | Less than 10                  |
| R-Value                       | Minimum 30                    |
| Organics                      | Less than 3 percent by weight |
| Sulfates                      | < 0.05 % by weight            |
| Min. Resistivity              | > 10,000 ohms-cm              |

Prior to importing fill, the contractor shall submit test data that demonstrates that the proposed import complies with the recommended criteria. Twining will test the material after receipt of this information. Prior to being transported to the site, the import fill material should be tested and approved by Twining. The import material shall also be certified by the contractor and the supplier, to the satisfaction of the Owner and Twining, that the soils do not contain any environmental contaminants regulated by local, state or federal agencies having jurisdiction. This certification should consist of analytical test data as a minimum.

- 8.4.4 Recycled materials (such as asphaltic concrete or Portland cement concrete) should not be used within 5 feet of any improvement without approval by the

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owner, and/or Twining. Existing pavements (asphaltic concrete) varied from 1½ to 6 inches thick underlain by native soils, or 1% inches of asphaltic concrete underlain by 4 inches of aggregate base. Grindings from the existing pavements and underlying aggregate base material may be re-used as aggregate subbase material underlying the proposed parking areas as long as the materials are not mixed with any of the underlying sandy lean clay soils and meet the proper specifications of Caltrans aggregate subbase material. Contractors should not assume that recycled materials can be used in preparing bids for the project without approval by the owner, and/or Twining.

- 8.4.5 Imported, granular, non-expansive fill soils should be placed in loose lifts approximately 8 inches thick, moisture conditioned to within optimum to three (3) percent above the optimum moisture content, and compacted to a dry density of at least 92 percent ~~of~~ the maximum dry density as determined by ASTM Test Method D1557. Additional lifts should not be placed if the previous lift did not meet the required dry density or if soil conditions are not stable.
- 8.4.6 For fills placed which will be deeper than 5 feet below finished grades, soils should be placed in loose lifts approximately 8 inches thick, moisture-conditioned to within optimum to 3 percent above the optimum moisture content, and compacted to a dry density of at least 95 percent of the maximum dry density as determined by ASTM Test Method D1557. Additional lifts should not be placed if the previous lift did not meet the required dry density or if soil conditions are not stable.
- 8.4.7 Aggregate base shall comply with Class 2 aggregate base per State of California Standard Specifications. Aggregate base shall be compacted to a minimum relative compaction of 95 percent. Prior to delivery of the aggregate base to the site, the contractor shall submit test data to the architect indicating the material complies with the requirements of Class 2 AB.

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8.5 Foundations

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- 8.5.1 Structural loads for the proposed two-story buildings (car dealership and northern mini-storage building) may be supported on interconnected (quasi-rigid) foundations placed entirely on engineered fill extending 24 inches below footings, 36 inches below preconstruction site grades, 12 inches below existing utilities to be abandoned, or to a depth suitable to remove any undocumented fills encountered during grading activities, whichever provides the deeper fill. The exposed ground surface in areas to receive engineered fill material should be scarified to a depth of 8 inches, moisture conditioned to within optimum to 3 percent above the optimum moisture content and compacted as engineered

fill. However, if the exposed ground surface in areas to receive engineered fill is clayey material (as is anticipated), then the exposed soils should be scarified to a depth of 8 inches, moisture conditioned to two (2) to five (5) percent above the optimum moisture content and compacted as engineered fill.

- 8.5.2 Interconnected (quasi-rigid) foundations may be designed for a maximum allowable soil bearing pressure of 2,000 pounds per square foot (net). These values may be increased by one-third for short duration wind or seismic loads.
- 8.5.3 The exterior footings should have a minimum depth of 24 inches below rough pad grade or adjacent exterior grade, whichever is lower. The interior footings should have a minimum depth of 12 inches below rough pad grade or adjacent exterior grade, whichever is lower. Footings should have a minimum width of 15 inches for foundations supporting two stories, regardless of load.
- 8.5.4 The interconnected (quasi-rigid) foundations should be continuous around the perimeter of the structure to reduce moisture migration beneath the structure. Continuous perimeter foundations should be extended through doorways and/or openings that are not needed for support of loads. Additional recommendations regarding quasi-rigid foundations will be provided following design level geotechnical engineering investigations.
- 8.5.5 The three-story mini-storage building with a basement is anticipated to be supported on a mat foundation. Additional information regarding the structural loads for the three-story mini-storage building with a basement is needed in order to provide site preparation recommendations. For preliminary purposes, a k-value of 50 pounds per square inch may be used for mat design contingent the mat is placed on engineered fill soils. However, the amount of engineered fill required underneath the mat and the maximum allowable soil bearing pressure will be evaluated once additional structural load information for the three-story mini-storage building with a basement has been provided to Twining. For preliminary planning purposes, the upper 6 inches of engineered fill directly below the slabs should consist of non-corrosive, non-expansive Class 2 aggregate base. The minimum 6 inches of AB is recommended directly below the slabs to improve the slab support and constructability characteristics. The aggregate base should be compacted to a minimum relative compaction of 95 percent. The 6 inches of Class 2 aggregate base should be underlain by engineered fill soils that will be determined upon further evaluation during a design level investigation.
- 8.5.6 The bottom of all footing excavations and sidewalls should be observed by Twining to verify that soils are properly moisture conditioned to **within** optimum to three (3) percent above the optimum moisture content for granular

soils, and compacted to achieve a minimum density of 92 percent of the maximum dry density as determined by ASTM D1557-91. However, if the bottom of the footing excavations and sidewalls are clayey soils, Twining should verify that the clayey soils are properly moisture conditioned to within two (2) to five (5) percent above the optimum moisture content, and compacted to achieve a minimum density of 90 to 95 percent of the maximum dry density as determined by ASTM D1557-91. Foundation excavations or exposed soils should not be left uncovered and allowed to dry such that the moisture content of the soils is less than optimum moisture content or drying produces cracks in the soils. The moisture and density should be maintained until concrete is placed. It should be noted that the contractor should take precautions not to allow the exposed soils to dry, including on weekends and holidays. Our firm should observe the bottoms and sides of the foundations excavations, and exposed soils to verify that the excavations and exposed soils are properly moisture conditioned, and comply with the requirements of the Geotechnical Engineering Investigation Report prior to placement of concrete. If dry soils are noted, the contractor should request written recommendations from our firm to properly moisture condition the foundation excavations. In addition, if soft or unstable soils are encountered during excavation or compaction operations, our firm should be notified so the soils conditions can be examined and additional recommendations provided to address the pliant areas.

- 8.5.7 Structural loads for miscellaneous foundations (such as retaining walls, sound walls, screen walls, monument and pylon signs, etc.) should be evaluated on a case by case basis to present supplemental recommendations for site preparation and foundation design. In lieu of a case by case evaluation, miscellaneous foundations may be supported on spread or continuous footings placed entirely on engineered fill that extends at least 12 inches below the footings, 36 inches below preconstruction site grades, 12 inches below existing utilities to be abandoned, to a depth suitable to remove any undocumented fills encountered during grading activities, whichever provides the deeper fill. The base of the over-excavation should extend equally across the entire building area and overbuild zone. The exposed ground surface in areas to receive engineered fill material should be scarified to a depth of 8 inches, moisture conditioned to within optimum to three (3) percent above the optimum moisture content for granular soils and compacted as engineered fill. However, if the exposed ground surface in areas to receive engineered fill is clayey material (as is anticipated), then the exposed soils should be scarified to a depth of 8 inches, moisture conditioned to two (2) to five (5) percent above the optimum moisture content and compacted as engineered fill. The zone of over-excavation and compacted engineered fill should extend a minimum of 5 feet outside the edges of foundations. Spread and continuous footings may be designed for a maximum allowable soil bearing pressure of

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2,000 pounds per square foot (net). These values may be increased by one-third for short duration wind or seismic loads. These recommendations may be conservative for lightly loaded structures. Therefore, the supplemental geotechnical evaluations may reduce construction costs.

- 8.5.8 Total and differential static settlements of 1-inch and  $\frac{1}{2}$ -inch, respectively, should be anticipated for design. A swell of  $\frac{1}{2}$  inch should be anticipated for design.
- 8.5.9 Total seismic settlement of about 2% inches should be used for design. This settlement may not occur uniformly over the site due to variations in the thicknesses of different soil layers; therefore, differential seismic settlement of about  $1\frac{1}{4}$  inches in 40 lineal feet across the building pads should be used for design pending (or in lieu of) a refined analyses of seismic settlement,
- 8.5.10 The interconnected (quasi-rigid) foundations and mat foundations should be designed and reinforced for the anticipated differential settlements. A structural engineer experienced in foundation design should recommend the thickness, design details and concrete specifications for the foundations based on: 1) total and differential anticipated static settlements of 1 inch and  $\frac{1}{2}$  inch, respectively; 2) a differential anticipated settlement of  $\frac{1}{2}$ -inch between isolated column footings; 3) total and differential seismic settlements of 2% inches and  $1\frac{1}{4}$  inches in 40 lineal feet, respectively; 4) a swell of  $\frac{1}{2}$  inch in 40 feet; and 5) combined static and seismic settlements of 3% inches total and 1% inches differential in 40 lineal feet.

8.5.1

| Seismic Factor                          | CBC Value |
|---|-----------|
| Soil Type                               | $S_D$     |
| CBC Seismic Zone                        | $Z = 0.4$ |
| Source Type: San Andreas                | Type A    |
| Near Source Acceleration Factor, $N_a$  | 1.00      |
| Near Source Velocity Factor, $N_v$      | 1.06      |
| Seismic Acceleration Coefficient, $C_a$ | 0.44      |
| Seismic Velocity Coefficient, $C_v$     | 0.68      |

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8.6 Frictional Coefficient and Earth Pressures

- 8.6.1 The bottom surface area of concrete footings or concrete slabs in direct contact with engineered fill can be used to resist lateral loads (areas of slabs underlain by a synthetic moisture barrier cannot be considered). An ultimate coefficient of friction of 0.44, reduced by an appropriate factor of safety, can be used for design.
- 8.6.2 The ultimate passive resistance of the native soils and engineered fill may be assumed to be equal to the pressure developed by a fluid with a density of 235 pounds per cubic foot. An appropriate factor of safety should be applied.
- 8.6.3 The passive pressure was calculated based on a minimum soil unit weight of 100 pounds per cubic foot. The soils within the passive zone at the foot of retaining walls (one footing width in front of the wall to a depth equal to the footing depth) should be tested to verify that the soils have the minimum unit weight of 100 pounds per cubic foot (with moisture). If the soils have a unit weight of less than 100 pounds per cubic foot, the soils within this zone should be over-excavated and replaced as engineered fill. These soils should be tested prior to backfilling behind the wall.
- 8.6.4 A minimum factor of safety of 1.5 should be used for the lateral resistance, or as required by the governing building codes. A minimum factor of safety of 2.0 should be used when combining the fictional and passive resistance of the soil to determine the total lateral resistance. The upper 12 inches of subgrade should be neglected in determining the total passive resistance.
- 8.6.5 The active and at-rest pressures of the native soils and engineered fill may be assumed to be equal to the pressures developed by a fluid with a density of 57 and 80 pounds per cubic foot, respectively. These pressures assume level ground surface and do not include the surcharge effects of construction equipment, loads imposed by nearby foundations and roadways and hydrostatic water pressure.
- 8.6.6 Retaining walls should be constructed with non-expansive granular free-draining backfill placed within the zone extending from a distance of 1 foot laterally from the bottom of the wall footing at a 1 horizontal to 1 vertical gradient to the surface. This requirement should be detailed on the construction drawings. Granular backfill will reduce the effects of shrink and swell on the wall.
- 8.6.7 The active and at-rest pressures were calculated based on a maximum soil unit weight of 135 pounds per cubic foot. The compacted soils behind the

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retaining walls should not have a compacted unit weight above 135 pounds per cubic foot (with moisture). If the soils have a unit weight of greater than 135 pounds per cubic foot, the soils should be over-excavated and replaced at a lower degree of compaction. If the backfill soils must be placed at a unit weight of over 135 pounds per cubic foot to achieve minimum compaction requirements the material should not be used as backfill behind retaining walls.

- 8.6.8 The at-rest pressure should be used in determining lateral earth pressures against walls which are not free to deflect. For walls which are free to deflect at least one percent of the wall height at the top, the active earth pressure may be used.
- 8.6.9 The wall designer should determine if seismic increments (i.e. dynamic earth pressures) are required. If seismic increments are required, contact Twining for recommendations for seismic geotechnical design considerations for the retaining structures.
- 8.6.10 The above earth pressures assume that the backfill soils will be drained. Therefore, all retaining walls should incorporate the use of a drain, either a filter fabric encased gravel section or a geo-composite drain, to prevent hydrostatic pressures from acting on the walls. Drainage should be directed either into weep-holes or perforated pipe which can carry drainage from behind the walls.
- 8.6.11 Since the pressures recommended in this section do not include vehicle surcharges, it is recommended to use lighter hand operated or walk behind compaction equipment to avoid wall damage during construction. Heavier compaction equipment could cause loads in excess of design loads which could result in cracking, excessive rotation, or failure of a retaining structure.
- 8.6.12 Retaining wall plans should be provided to Twining for review. Based on the topography and site plan, retaining walls are not anticipated.

## **8.7 Interior Concrete Slabs-on-Grade**

- 8.7.1 The floor slabs should be reinforced for the anticipated temperature and shrinkage stresses. A structural engineer experienced in slab-on-grade design should recommend the thickness, design details and concrete specifications for the proposed slabs-on-grade for the settlements noted in this report.
- 8.7.2 In areas where concrete slabs-on-grade are anticipated, the site should be over-excavated to provide the minimum depth of engineered fill below the bottoms

of footings as recommended in Section 8.3.6 of this report. Engineered fill soils should be placed in accordance with subsection 8.4.

- 8.7.3 Interior floor slabs should be underlain with at least 12 inches of imported con-expansive fill (see subsection 8.4 for import fill requirements).
- 8.7.4 It has been our experience that placing concrete for the concrete slabs by the tailgating method can cause subgrade instability due to the high frequency of concrete trucks which travel across the prepared subgrade. Even compacted subgrades can experience instability under high traffic loads resulting in heaving and depressions in the subgrade during critical pours. This condition becomes more critical during wet winter and spring months. Often a layer of aggregate base (AB) can reduce the potential for instability even under the high frequency loading of concrete trucks. Also, the improved support characteristics of the AB can be used in the design of the slab sections. Therefore, it is recommended to utilize a slab design with at least 6 inches of AB for construction and design purposes. The 6 inches of AB should be placed over the compacted clay soils and under a layer of Stegowrap 10, and compacted within optimum to three (3) percent over optimum moisture content to 95 percent relative compaction of the maximum dry density as determined by ASTM Test Method D1557.
- 8.7.5 The native clay subgrade soils should be tested to verify that the in-situ moisture content is between two (2) to five (5) percent above optimum moisture content just prior to construction of the slab. If the moisture is below the range of two (2) to five (5) percent above optimum moisture content, the dry soils should be moisture conditioned to achieve a moisture content within this range and maintained until vapor barrier or concrete placement. If soft or pliant areas are encountered in which moisture contents are excessively high, Twining should be contacted to make further recommendations. The moisture content of the subgrade soils should be tested and proper moisture verified by a qualified geotechnical engineer within 48 hours of placement of the vapor barrier or the concrete for the slab-on-grade if a vapor barrier is not used. If necessary to achieve the recommended moisture content the native subgrade could be over-excavated, moisture conditioned as necessary and compacted as engineered fill.
- 8.7.6 To aid in uniform curing of the slabs, the slabs and underlying subgrade should be constructed in accordance with current American Concrete Institute (ACI) standards.
- 8.7.7 ACI recommends that the interior slab-on-grade should be placed directly on a vapor retarding membrane when the potential exists that the underlying subgrade or sand layer could be wet or saturated prior to placement of the

on-grade. We recommend that Stegowrap 15 or equivalent should be used where floor coverings, such as carpet and tile, are anticipated or where moisture could permeate into the interior and create problems. The layer of Stegowrap 15 should overlay a minimum of 4 inches of compacted Caltrans Class 2 AB. It should be noted that placing the PCC slab directly on the vapor retarding membrane will increase the potential for cracking and curling; however, ACI recommends the placement of the vapor retarding membrane directly below the slab to reduce the amount vapor emission through the slab-on-grade. Based on discussions with Mr. Eric Gerst with Stego Industries, L.L.C. (telephone 949-493-5460), the Stegowrap can be placed directly on the Class 2 AB and the concrete can be placed directly on the Stegowrap. It is recommended that the design professional obtain written confirmation from Stego Industries that this product is suitable for the specific project application. It is recommended that the slab be moist cured for a minimum of 7 days to reduce the potential for excessive cracking. The underslab membrane should have a high puncture resistance (minimum of approximately 2,400 grams of puncture resistance), high abrasion resistance, rot resistant, and mildew resistant. We recommend the membrane be selected in accordance with ASTM C 755-02, Standard Practice For Selection of Vapor Retarder For Thermal Insulation and conform to ASTM E 154-99 Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Waters, or as Ground Cover. It is recommended that the vapor retarding membrane selection and installation conform to the ACI Manual of Concrete Practice, Guide for Concrete Floor and Slab Construction (302.1R-96), Addendum, Vapor Retarder Location and ASTM E 1643-98, Standard Practice for Installation of Water Vapor Retarders Used In Contact with Earth or Granular Fill Under Concrete Slabs. In addition, it is recommended that the manufacturer of the floor covering and floor covering adhesive be consulted to determine if the manufacturers have additional recommendations regarding the design and construction of the slab-on-grade, testing of the slab-on-grade, slab preparation, application of the adhesive, installation of the floor covering and maintenance requirements.

- 8.7.8 The membrane should be installed so that there are no holes or uncovered areas. All seams should be overlapped and sealed with the manufacturer approved tape continuous at the laps so they are vapor tight. All perimeter edges of the membrane, such as pipe penetrations, interior and exterior footings, joints, etc.) should be caulked per manufacturer's recommendations.
- 8.7.9 Tears or punctures that may occur in the membrane should be repaired prior to placement of concrete per manufacturer's recommendations. Once repaired, the membrane should be inspected by the contractor and the owner to verify adequate compliance with manufacture's recommendations.



- 8.7.10 The manufacturer's requirements vary regarding the surface and cover material around the placed membrane. Vapor retarding membranes should be installed in accordance with the manufacturers' specifications.
- 8.7.11 The vapor retarding membranes are not required beneath exposed concrete floors, such as garages, provided that moisture intrusions into the structure are permissible for the design life of the structure.
- 8.7.12 Additional measures to reduce moisture migration should be implemented if moisture sensitive floor coverings [such as wood or vinyl] are used. These include: 1) constructing a less pervious concrete floor slab by maintaining a low water-cement ratio as recommended by ACI in the concrete for slabs-on-grade; 2) moist cure the slab for at least 7 days; 3) ensuring that all seams and utility protrusions are sealed with tape to create a "water tight" moisture barrier; 4) placing concrete walkways or pavements adjacent to the structure; 5) locating lawns and flower beds away from the structure; and 6) providing adequate drainage away from the structure at a minimum *two* percent slope. In addition, water should not be allowed to stand adjacent to structures.
- 8.7.13 For concrete slabs, chemical curing products should be VOC compliant and meet ASTM standard C-1315, Type 1, Class A. It is recommended to obtain manufacturer's certification for intended use. The following products or equivalent should be used: "Super Aqua Cure VOX," as manufactured by Euclid Chemical Company (800-321-7628), or "TLAH 1315," as manufactured by W.R. Meadows, Inc. (800-342-5976). The material should be applied at a rate of 200 square feet per gallon and in accordance with the manufacturer's recommendations. In our opinion, chemical curing compounds are not as effective as moist curing and can result in a higher potential for cracking, moisture migration, etc. The material should be compatible with flooring adhesives and floor coverings.
- 8.7.14 It should be noted that the placement and compaction of the Class 2 aggregate **base**, the vapor retarding membrane installation, protection, etc., and the placement, curing, etc. of concrete should be in accordance with the project geotechnical engineering report, applicable ACI requirements, and the manufacturer's requirements.
- 8.7.15 The moisture vapor transmission through the slab should be tested at a frequency and method as specified by the flooring manufacturer. Vapor transmission results should be within floor manufacturers' specifications prior to placing flooring.

8.8 Retaining Walls

- 8.8.1 The following recommendations are preliminary. Retaining wall plans, when available, should be reviewed by Twining to evaluate the actual backfill materials, proposed construction, drainage conditions, and other design geotechnical parameters.
- 8.8.2 Landscape retaining walls should be supported on spread or continuous footings placed entirely on at least 12 inches of engineered fill, or engineered fill which extends to depth of 36 inches below preconstruction site grades, or engineered which extends at least 12 inches below utilities to be removed, or to a depth to removed undocumented fill soils, whichever is deeper. Footings should have a minimum width of 15 inches and a minimum depth of 18 inches, regardless of load.
- 8.8.3 Retaining wall footings may be designed for a maximum allowable soil bearing pressure of 2,000 pounds per square foot for dead-plus-live loads. This value may be increased by one-third for short duration wind or seismic loads.
- 8.8.4 Retaining wall footings should have a minimum depth of 18 inches below rough pad grades or adjacent exterior grades, whichever is lower.
- 8.8.5 Retaining walls should be constructed with non-expansive granular free-draining backfill placed within the zone extending from a distance of 1 foot laterally from the bottom of the wall footing at a 1 horizontal to 1 vertical gradient to the surface. This requirement should be detailed on the construction drawings. Granular backfill will reduce the effects of shrink and swell on the wall.
- 8.8.6 Segmented wall design (mechanically stabilized walls) should be conducted by a California licensed geotechnical engineer familiar with segmented wall design and having successfully designed at least three walls at sites with similar soil conditions. None of the data included in this report should be used for wall design. A design level geotechnical report should be conducted to provide wall design parameters. If the designer uses the data in this report for wall design, the designer assumes the sole risk for this data.
- 8.8.7 Retaining walls may be subject to lateral loading from pressures exerted from the soils, groundwater, slabs-on-grade, and pavement traffic loads, adjacent to the walls. In addition to earth pressures, lateral loads due to slabs-on-grade, footings, or traffic above the base of the walls should be included in design of the walls. The designer should take into consideration the allowable settlements for the improvements to be supported by the retaining wall.

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- 8.8.8 Retaining walls should be designed with a drain system including permeable backfill and drain pipes near the wall to adequately reduce the potential for hydrostatic pressures behind the wall. Drainage should be directed to pipes which gravity drain to closed pipes of the storm drain or subdrain system. Drain pipe outlet invert elevations should be sufficient (a bypass should be constructed if necessary) to preclude hydrostatic surcharge to the wall in the event the storm drain system did not function properly. Clean out and inspection points should be incorporated into the drain system. Drainage should be directed to the site storm drain system.
- 8.8.9 If open graded materials such as crushed rock are used as drain material, these materials should be fully encased in filter fabric and compacted to a non-yielding condition under the observation of the geotechnical engineer. A Caltrans Class 2 permeable material, installed without the use of filter fabric, is preferable to open graded material as it presents a lower potential for clogging than the filter fabric. Class 2 permeable material should be compacted to 95 percent relative compaction (CAL Test 216) using a vibratory plate.
- 8.8.10 It is recommended to use lighter hand operated or walk behind compaction equipment in the zone equal to one wall height behind the wall to reduce the potential for damage to the wall during construction. Heavier compaction equipment could cause loads in excess of design loads which could result in cracking, excessive rotation, or failure of a retaining structure. The contractor is responsible for damage to the wall caused by improper compaction methods behind the wall.
- 8.8.11 If retaining walls are to be finished with dry wall, plaster, decorative stone, etc., waterproofing measures should be applied. Waterproofing should also be used if efflorescence (discoloration of wall face) is not acceptable. Waterproofing should be determined by the project architect.

## **8.9 Exterior Slabs-On-Grade**

The recommendations for exterior slabs provided below are not intended for use for slabs subjected to vehicular traffic, rather lightly loaded sidewalks, curbs, and planters, etc. Recommendations for concrete slabs subjected to vehicular traffic are included in PCC Pavement Section of this report. Subgrade preparation for exterior slabs within the pad over-build zone (5 feet outside the building perimeter, or edge of curbs, whichever is greater, should be prepared in accordance with recommendations for interior slabs.

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- 8.9.1 In areas where exterior concrete slabs-on-grade are anticipated, the areas should be over-excavated to provide at least 12 inches of engineered fill below bottom of slabs, or at least 12 inches of engineered fill below preconstruction site grades, or at least 12 inches of engineered fill below existing utilities to be removed, or engineered fill replacing any undocumented fill soils that are removed, whichever provides the deeper fill. The exposed undisturbed ground surface to receive the slabs should be scarified to a depth of 8 inches, moisture conditioned to within optimum to 3 percent above the optimum moisture content, and compacted to a minimum of 92 percent of the maximum dry density as determined by ASTM Test Method D1557-91. However, if the exposed ground surface in areas to receive engineered fill is clayey material, then the exposed soils should be scarified to a depth of 8 inches, moisture conditioned to within two (2) to five (5) percent above the optimum moisture content and compacted as engineered fill to a minimum of 92 percent of the maximum dry density as determined by ASTM Test Method D1557-91.
- 8.9.2 Because of the expansive nature of the on site clay soils, the exterior slabs-on-grade should be underlain by a 12 inch section of non-expansive soil consisting of 4 inches of aggregate base overlying 8 inches of non-expansive granular soil. The aggregate base should be moisture conditioned between optimum and two (2) percent above optimum moisture content and compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM Test Method D1557. The non-expansive granular soil should be moisture conditioned between optimum and three (3) percent above optimum moisture content and compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM Test Method D1557.
- 8.9.3 If the subgrade is prepared and then disturbed by equipment workers, weather or other source, it is recommended that the exposed subgrade to receive slabs be tested to verify adequate compaction. If adequate compaction is not verified, the disturbed subgrade should be over-excavated, scarified, and re-compacted. This condition should be verified prior to installation of plumbing, footing excavation, and construction of the slabs-on-grade.
- 8.9.4 Where flatwork meets exposed landscape areas or open pads which could allow the subgrade to dry out or take on moisture around the edges of the flatwork, lateral cutoffs such as inverted curbs or a sheet vapor barrier are recommended. The inverted curbs or sheet vapor barriers should extend vertically at the edges of the flatwork to a depth of at least 4 inches below the bottom of the non-expansive section (i.e. about 16 inches below the exterior grade).

- 8.9.5 These recommendations for flatwork will reduce, but not eliminate, some of the adverse effects of swelling and shrinking subgrade. If minor cracking and differential movement is not tolerable, additional measures would be required, such as: 1) providing at least 6 inches of non-expansive materials below the flatwork, 2) placement of reinforcement, and 3) sealing construction joints with water stops to prevent infiltration of water.
- 8.9.6 Since exterior sidewalks, curbs, etc., are typically constructed at the end of the construction process, the moisture conditioning conducted during earthwork can revert to natural dry conditions. For sidewalks, following over-excavation, the sidewalks should be placed on a minimum of 4 inches of Class 2 aggregate base overlying 8 inches of non-expansive, granular soil over engineered fill. This recommendation was made to reduce the potential for differential movement and reduce future maintenance. It is recommended that the general contractor notify Twining to conduct in-place moisture and density tests prior to placing aggregate base and concrete flatwork. Written test results indicating passing density and moisture tests should be in the general contractor's possession prior to placing concrete for exterior flatwork.

#### 8.10 Asphaltic Concrete (AC) Pavements

- 8.10.1 In areas where asphaltic concrete (AC) pavement sections are anticipated, the areas should be over-excavated to provide at least 12 inches of engineered fill below finished subgrade to the depth necessary to over-excavate and compact all existing undocumented fill soils, or at least 12 inches of engineered fill below preconstruction site grades, or at least 12 inches of engineered fill below existing utilities to be removed, or engineered fill replacing any undocumented fill soils that are removed, whichever provides the deeper fill. Unless documentation of fill soil compaction can be provided to Twining for review, the undocumented fill soils should be completely removed from pavement areas prior to placement of engineered fill or aggregate base sections. The vertical and lateral extent of the fill soils (documented and undocumented) should be delineated prior to, or in conjunction with, initial site grading (indicate location on demolition plan from aerial photographs).
- 8.10.2 As an alternative, the project owner may elect to leave fill soils in parking and driveway areas, if the fills are **free** of debris and organic matter. However, it should be recognized that the presence of undocumented fills present a potential for higher settlements and the associated distress to pavements if these soils are not removed and replaced as engineered fill. If fill soils are to remain under pavement areas, these areas should be stripped, moisture conditioned and compacted to a depth of **12 inches**, **and** proof rolled under the observation of Twining. Soft or pliant areas of soil should be removed.

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8.10.3 The upper 12 inches of subgrade beneath aggregate base or sub-base should be scarified, moisture conditioned as necessary and compacted to at least 95 percent of the maximum dry density as determined by ASTM Test Method D1557-91.

8.10.4 The following pavement sections are based on an R-value of 5 and traffic index values ranging from 5.0 to 8.5. It should be noted that if pavements are constructed prior to the building construction, the traffic index value should account for construction traffic. The actual traffic index values applicable to the site should be determined by the project civil engineer.

Two and Three Layer Alternatives for Asphaltic Concrete Pavements

| Traffic Index | AC thickness, inches | AB thickness, inches | ASB thickness, inches | Compacted Subgrade, inches |
|---------------|----------------------|----------------------|-----------------------|----------------------------|
| 5.0           | 3.0                  | 10.0                 | --                    | 12                         |
| 5.0           | 3.0                  | 3.5                  | 7.0                   | 12                         |
| 5.5           | 3.0                  | 12.0                 | --                    | 12                         |
| 5.5           | 3.0                  | 5.0                  | 7.5                   | 12                         |
| 6.0           | 3.0                  | 13.5                 | --                    | 12                         |
| 6.0           | 3.0                  | 6.0                  | 8.5                   | 12                         |
| 6.5           | 3.5                  | 14.5                 | --                    | 12                         |
| 6.5           | 3.5                  | 6.5                  | 9.0                   | 12                         |
| 7.0           | 3.5                  | 16.5                 | --                    | 12                         |
| 7.0           | 3.5                  | 7.0                  | 10.5                  | 12                         |
| 7.5           | 4.0                  | 17.5                 | --                    | 12                         |
| 7.5           | 4.0                  | 7.5                  | 11.0                  | 12                         |
| 8.0           | 4.5                  | 18.5                 | --                    | 12                         |
| 8.0           | 4.5                  | 7.5                  | 12.0                  | 12                         |
| 8.5           | 5.0                  | 19.5                 | --                    | 12                         |
| 8.5           | 5.0                  | 8.0                  | 13.0                  | 12                         |

AC - Asphaltic Concrete  
AB - Aggregate Base compacted to at least 95 percent relative compaction (ASTM D-1557)  
ASB - Aggregate Subbase (R-value = 50 min.) compacted to at least 95 % relative compaction (ASTM D-1557)  
Subgrade - Subgrade soils compacted to at least 95 percent relative compaction (ASTM D-1557).

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- 8.10.5 The curbs where pavements meet irrigated landscape areas or uncovered open areas should be extended below the aggregate base section at least 4 inches into native subgrade soils. This should reduce the potential for subgrade moisture from irrigation and runoff to migrate into the base section and reduce the life of the pavements.
- 8.10.6 Alternative pavement sections, such as equivalent asphaltic concrete sections or full depth asphaltic concrete sections may be used. Twining should be contacted for adjusted AC sections and AB sections, if needed.
- 8.10.7 If actual pavement subgrade materials are significantly different than those tested for this study due to unanticipated grading or soil importing, the pavement section should be re-evaluated for the changed subgrade conditions.
- 8.10.8 If the paved areas are to be used during construction, or if the type and frequency of traffic is greater than assumed in design, the pavement section should be re-evaluated for the anticipated traffic.
- 8.10.9 Pavement section design assumes that proper maintenance, such as sealing and repair of localized distress, will be performed on an as needed basis for longevity and safety.
- 8.10.10 Pavement materials and construction methods should conform to Sections 25, 26, and 39 of the State of California Standard Specification Requirements.
- 8.10.11 The asphaltic-concrete should be compacted to an average relative compaction of 97 percent, with no single test value being below a relative compaction of 95 percent based on a 50 blow Marshall maximum density.
- 8.10.12 The asphalt concrete should comply with Type "B" asphalt concrete as described in Section 39 of the State of California Standard Specification Requirements. Twining recommends that an asphalt concrete mix design be prepared and approved prior to construction.

#### **8.11 Portland Cement Concrete (PCC) Pavements**

Recommendations for Portland cement concrete pavement structural sections are presented in the following subsections. These recommendations should be used for design and construction of loading dock, pit slabs, and other slabs to receive vehicle traffic. These sections are not to be used with decorative pavers. In addition, the subgrade preparation for PCC pavements adjacent to the building and/or within the

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building pad over-build zone should incorporate the non-expansive fill section recommended in the interior slabs-on-grade section of this report. Site preparation for PCC pavements should be as noted in the flexible pavement section.

- 8.11.1 Pavements should be removed and the exposed subgrade over-excavated to 12 inches below the bottom of the aggregate base layer (or AC section if no AB section is present). The exposed soils following the over-excavation should be scarified to a depth of 8 inches, moisture conditioned, and compacted as engineered fill before placement and compaction of additional engineered fill. The zone of over-excavation and compaction should extend laterally a minimum of 5 feet outside the perimeters of pavement areas.
- 8.11.2 The PCC pavement design assumes a minimum modulus of rupture of 550 psi. A qualified design professional should specify where heavy duty and standard duty slabs are used based on the anticipated type and frequency of traffic.
- 8.11.3 The "light duty" pavement section was designed based on an ADTT of three 5-axle trucks per day (equivalent axial load of 15 per day). A design K-value of 150 psi/in was used considering a recommended 6-inch layer of Class 2 aggregate base material (R-value of 78), over the native compacted soils (the k-value of the native soils is approximately 65 psi/in).

| <u>Pavement Component</u>                                   | <u>Thickness, Inches</u> |
|---|--------------------------|
| Portland Cement Concrete                                    | 6.0                      |
| Class 2 Aggregate Base<br>(95% Minimum Relative Compaction) | 6.0                      |
| Compacted Subgrade<br>(95% Minimum Relative Compaction)     | 6.0                      |

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- 8.11.4 The "heavy duty" pavement section was designed based on an ADTT of 30 trucks and a K-value of 150psi/in considering a recommended 6-inch layer of Class 2 aggregate base material (R-value of 78) over prepared subgrade.

| <u>Pavement Comuonent</u>                                   | <u>Thickness, Inches</u> |
|---|--------------------------|
| Portland Cement Concrete                                    | 6.5                      |
| Class 2 Aggregate Base<br>(95% Minimum Relative Compaction) | 6.0                      |
| Compacted Subgrade<br>(95% Minimum Relative Compaction)     | 6.0                      |

- 8.11.5 Stresses are anticipated to be greater at the edges and construction joints of the pavement section. A thickened edge is recommended on the outside of slabs subjected to wheel loads.

- 8.11.6 Joint spacing in feet should not exceed twice the slab thickness in inches, e.g., 12 ft X 12 ft for a 6-inch slab thickness. Regardless of slab thickness, joint spacing should not exceed 15 feet.

- 8.11.7 Lay out joints to form square panels. When this is not practical, rectangular panels can be used if the long dimension is no more ~~than~~ 1.5 times the short.

- 8.11.8 Control joints should have a depth of at least one-fourth the slab thickness, e.g., 1-inch for a 4-inch slab.

- 8.11.9 Isolation (expansion) joints should extend the full depth and should be used only to isolate fixed objects abutting or within paved areas. Construction joint location should be determined by the contractor's equipment and procedures.

- 8.11.10 Pavement section design assumes that proper maintenance such as sealing and repair of localized distress will be performed on a periodic basis.

- 8.11.11 Pavement construction should conform to Sections 40 and 80 of the State of California Standard Specifications.

- 8.11.12 Fine grained native and engineered fill soils may become unstable during grading; and therefore, could require stabilization. Stabilization may include placing a geotextile fabric and aggregate base materials, and/or chemical treatment (i.e., lime treatment) or a combination of these to stabilize soils.

For bidding purposes for lime treatment, 5 percent by weight high calcium

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quick lime should be used. Laboratory testing is not required for lime treatment intended for subgrade stabilization purposes.

## 8.12 Temporary Excavations

- 8.12.1 It is the responsibility of the contractor to provide safe working conditions with respect to excavation slope stability.
- 8.12.2 Temporary excavations should be constructed in accordance with CAL OSHA requirements. Temporary cut slopes should not be steeper than 1½ to 1, horizontal to vertical, and flatter if possible. If excavations cannot meet these criteria, the temporary excavations should be shored.
- 8.12.3 Shoring systems, if used, should be designed by an engineer with experience in designing shoring systems and registered in the State of California.
- 8.12.4 It is anticipated that groundwater will enter deeper excavations (subsurface features, utilities, etc.) and dewatering should be anticipated for construction and included in contractors bids. A dewatering specification is included in Appendix D of this report.

## 8.13 Utility Trenches

- 8.13.1 The trench width, type of pipe bedding, the type of initial backfill, and the compaction requirements of bedding and initial backfill material for utility trenches (storm drainage, sewer, water, electrical, gas, cable, phone, irrigation, etc.) should be specified by the project Civil Engineer or applicable design professional compliance with the manufacturer's requirements, governing requirements and this report, whichever is more stringent. For flexible polyvinylchloride (PVC) pipes, these requirements should be in accordance with the manufacturer's requirements or ASTM D-2321, whichever is more stringent. The width of the trench should provide sufficient space between the sidewall of the trench and the pipe to allow testing with a nuclear density gage (minimum 12 inches). As a minimum, the pipe bedding should consist of 4 inches of compacted (92 percent relative compaction) ASTM C-33 sand. The haunches and initial backfill (12 inches above the top of pipe) should consist of ASTM C-33 sand that is placed in maximum 6-inch thick lifts compacted to a minimum relative compaction of 92 percent using hand equipment. The final fill (12 inches above the pipe to the surface) should be non-expansive material compacted to a minimum of 92 percent relative compaction. All materials should be placed at optimum moisture content to 3 percent above optimum moisture content. The project civil engineer should take measures to control migration of moisture in the trenches such as slurry collars, etc.

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- 8.13.2 If ribbed or corrugated pipes are used on the project, then the backfill should extend to at least 1 foot above the top of pipe or as required by the manufacturer, whichever is greater, to prevent damage to the pipe by the compaction operations above the pipe. Crushed gravel should be used below (bedding) and around the pipe and should be entirely encased in an approved geotextile fabric such as Mirafi 140 N or equivalent. However, a geotextile fabric would not be required if the granular materials consist of Caltrans Class 2 Permeable material. In either case, the sand, gravel, and/or Class 2 Permeable material should be densified using both vibratory and compaction equipment to achieve a non-yielding condition and a minimum relative compaction of 92 percent. The haunches should be hand tamped to achieve the required relative compaction. The maximum lift shall be 6 inches unless approved in writing by the project geotechnical engineer. The backfill within the pipe zone should be a crushed gravel material placed and compacted in a manner to fill the irregular exterior surface of the pipe. The gravel should be compacted to a non-yielding condition under the observation of a qualified geotechnical engineer representative. ~~As an~~ alternative, the pipe zone can be backfilled with a sand-cement slurry.
- 8.13.3 Utility trench backfill placed in or adjacent to building areas, exterior slabs or pavements should be moisture conditioned to within optimum to three (3) percent above the optimum moisture content and compacted to at least 95 percent of the maximum dry density as determined by ASTM Test Method D1557. The contractor should use appropriate equipment and methods to avoid damage to utilities and/or structures during placement and compaction of the backfill materials.
- 8.13.4 Trench backfill should be placed in 8 inch lifts, moisture conditioned to within optimum to three (3) percent above the optimum moisture content and compacted to achieve the minimum relative compaction. Lift thickness can be increased if the contractor can demonstrate the minimum compaction requirements can be achieved.
- 8.13.5 On-site soils and approved imported engineered fill may be used as final backfill in trenches.
- 8.13.6 Jetting of trench backfill is not recommended to compact the backfill soils.
- 8.13.7 Where utility trenches extend from the exterior to the interior limits of a building, lean concrete should be used as backfill material for a minimum distance of 2 feet laterally on each side of the exterior building line to prevent the trench from acting as a conduit to exterior surface water.

- 8.13.8 Storm drains and/or utility lines should be designed to be "watertight." If encountered, leaks should be immediately repaired. Leaking storm drain and/or utility lines could result in trench failure, sloughing and/or soil heave causing damage to surface and subsurface structures, pavements, flatwork, etc. In addition, landscaping irrigation systems should be monitored for leaks. It is recommended that the pipelines be inspected prior to placement of foundations, slabs-on-grade or pavements to verify that the pipelines are constructed properly and are "watertight."
- 8.13.9 Where corrugated pipes are used, the backfill within the pipe zone should be a gravel material to fill the irregular exterior surface of the pipe. The gravel backfill should extend at least 1 foot above the pipe. The gravel should be either Class 2 permeable material, or 1/2-inch or 3/4-inch crushed gravel completely enclosed in a geotextile filter fabric. The gravel should be compacted to a non-yielding condition under the observation of a qualified geotechnical engineer representative.
- 8.13.10 The plans should note that utility trenches for electrical lines, irrigation lines, etc. should be compacted to a minimum relative compaction of 95 percent per ASTM D1557.
- 8.13.11 Utility trenches should not be constructed within a zone defined by a line that extends at an inclination of 2 horizontal to 1 vertical downward from the bottom of building foundations.
- 8.13.12 The project Civil Engineer should include slurry type cutoff collars along utility trenches at critical locations to prevent the migration of surface water into the trench and along the trench backfill material.
- 8.13.13 Granular soils and approved imported engineered fill may be used as final backfill in trenches provided they meet the approved project plans and specifications.

#### **8.14 Corrosion Protection**

- 8.14.1 Based on the ASTM Special Technical Publication 741 and the analytical results of four soil sample analyses, the soils are "moderately corrosive" to ferrous alloy pipes, as indicated by a resistivity value of 8,000 ohm-centimeters. Buried metal objects should be protected in accordance with the manufacturer's recommendations based on the "moderately corrosive" corrosion potential of the soil. The evaluation was limited to the effects of soils to metal objects; corrosion due to other potential sources, such as stray currents and groundwater, was not evaluated.

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8.14.2 Corrosion of concrete due to sulfate attack is not anticipated based on a low detected concentration of sulfates determined for the near-surface soils. According to Table **19-A-4** of the 2001 California Building Code, the concentration of sulfates falls in the negligible classification (0.00 to 0.10 percent by weight) for concrete. Therefore, restrictions are not required regarding the type, water-to-cement ratio, or strength of the concrete used for foundation and slabs due to the sulfate content.

8.14.3 These soil corrosion data should be provided to the manufacturers or suppliers of materials that will be in contact with soils (pipes or ferrous metal objects, etc.) to provide assistance in selecting the protection and materials for the proposed products or materials. If the manufacturers or suppliers cannot determine if materials are compatible with the soil corrosion conditions, a professional consultant, i.e., a corrosion engineer, with experience in corrosion protection should be consulted to design parameters. Twining is not a corrosion engineer; thus, cannot provide recommendations for mitigation of corrosive soil conditions. It is recommended that a corrosion engineer be consulted for the site specific conditions.

## 9.0 DESIGN CONSULTATION

9.1 Twining should be provided the opportunity to review those portions of the contract drawings and specifications that pertain to earthwork operations, slabs-on-grade, pavements, and foundations prior to finalization to determine whether they are consistent with our recommendations. This service is not a part of this current contractual agreement.

9.2 It is the client's responsibility to provide plans and specification documents for our review prior to their issuance for construction bidding purposes.

9.3 If Twining is not afforded the opportunity for review, Twining assumes no liability for the misinterpretation of our conclusions and recommendations. This review is documented by a formal plan/specification review report provided by Twining.

## 10.0 CONSTRUCTION MONITORING

10.1 It is recommended that Twining be retained to observe the excavation, earthwork, and foundation phases of work to determine that the subsurface conditions are compatible with those used in the analysis and design.

10.2 Twining can provide observation and field testing to determine if the recommendations of the project geotechnical report are achieved. Upon completion of the work, a written summary of our observations will be provided, field testing and conclusions regarding the conformance of the completed work to the intent of the

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| Area                   | Minimum Test Frequency                                 |
|------------------------|--|
| Mass Fills or Subgrade | 1 test per 2,500 square feet per compacted lift        |
| Pavement Subgrade      | 1 test per 5,000 square feet per compacted 6-inch lift |
| Utility Lines          | 1 test per 150 feet per 6-inch lift                    |

- 10.4 The construction monitoring is an integral part of this investigation. This phase of the work provides the geotechnical engineer the opportunity to verify the subsurface conditions interpolated from the soil borings and make alternative recommendations if the conditions differ from those anticipated.
- 10.5 If Twining is not afforded the opportunity to provide engineering observation and field-testing services during construction activities related to earthwork, foundations, pavements and trenches; then, Twining will not be responsible for compliance of any aspect of the construction with our recommendations or performance of the structures or improvements if the recommendations of this report are not followed. We recommend that if a ~~firm~~ other than Twining is selected to conduct these services that they provide evidence of professional liability insurance of at least \$1,000,000 and review this report. After their review, the firm should, in writing, state that they understand and agree with the conclusions and recommendations of this report and agree to conduct sufficient observations and testing to ensure the construction complies with this report's recommendations. Twining should be notified, in writing, if another firm is selected to conduct observations and field testing services prior to construction.
- 10.6 Upon the completion of work, a final report should be prepared by a qualified geotechnical engineer per the requirements of the California Building Code, Chapter 33, "Excavation and Grading," Section 3318.1, "Final Reports." This report is essential to ensure that the recommendations presented are incorporated into the project construction, and to note any deviations from the project plans and

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specifications. The client should notify the geotechnical engineer upon the completion of work to provide this report. This service is not, however, part of this current contractual agreement.

#### **11.0 NOTIFICATION AND LIMITATIONS**

- 11.1 The conclusions and recommendations presented in this report are based on the information provided regarding the proposed construction, and the results of the field and laboratory investigation, combined with interpolation of the subsurface conditions between boring locations.
- 11.2 The nature and extent of subsurface variations between borings may not become evident until construction.
- 11.3 If variations or undesirable conditions are encountered during construction, a qualified geotechnical engineer should be notified promptly so that these conditions can be reviewed and the recommendations reconsidered where necessary. It should be noted that unexpected conditions frequently require additional expenditures for proper construction of the project.
- 11.4 If the proposed construction is relocated or redesigned, or if there is a substantial lapse of time between the submission of our report and the start of work (more than 12 months) at the site, or if conditions have changed due to natural cause or construction operations at or adjacent to the site, the conclusions and recommendations contained in this report should be considered invalid unless the changes are reviewed and our conclusions and recommendations modified or approved in writing.
- 11.5 Changed site conditions, or relocation of proposed structures, may require additional field and laboratory investigations to determine if our conclusions and recommendations are applicable considering the changed conditions or time lapse.
- 11.6 The conclusions and recommendations contained in this report are valid only for the project discussed in Section 3.4, Anticipated Construction. The use of the information and recommendations contained in this report for structures on this site not discussed herein or for structures on other sites not discussed in Section 3.3, Site Description, is not recommended. The entity or entities that use or cause to use this report or any portion thereof for another structure or site not covered by this report shall hold Twining, its officers and employees harmless from any and all claims and provide Twining's defense in the event of a claim.
- 11.7 This report is issued with the understanding that it is the responsibility of the client to transmit the information and recommendations of this report to developers,

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owners, buyers, architects, engineers, designers, contractors, and other parties having interest in the project so that the steps necessary to carry out these recommendations in the design, construction and maintenance of the project are taken by the appropriate party.

- 11.8 This report presents the results of a geotechnical engineering investigation report only and should not be construed as an environmental audit or study. Recommendations for termite control, soil suitability for landscaping, etc. were beyond the scope of this investigation and report.
- 11.9 Our professional services were performed, our findings obtained, and our recommendations prepared in accordance with generally-accepted engineering principles and practices in Santa Cruz County as of April 2004. This warranty is in lieu of all other warranties either expressed or implied.
- 11.10 This investigation report should not be used in the preparation of a Storm Water Pollution Prevention Plan (SWPPP). Use of this report or any data included in the report in preparation of a SWPPP would be at the owner's sole risk.
- 11.11 Reliance on *this* report by a third party (i.e., that is not a party to our written agreement) is at the **party's** sole risk. If the project and/or site are purchased by another party, the purchaser must obtain written authorization and sign an agreement with Twining in order to rely upon the information provided in this report for design or construction of the project.

We appreciate the opportunity to be of service to Ocean Honda Chevrolet. If you have any questions regarding this report, or if we can be of further assistance, please contact us at your convenience.

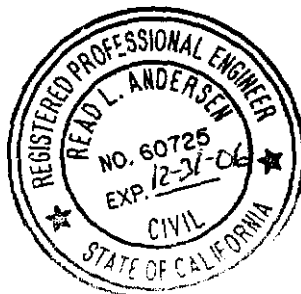
Sincerely,  
THE TWINING LABORATORIES, INC.

*Allen H. Harker*

Allen H. Harker  
Project Engineer  
Geotechnical Engineering Division

*Read L. Andersen*

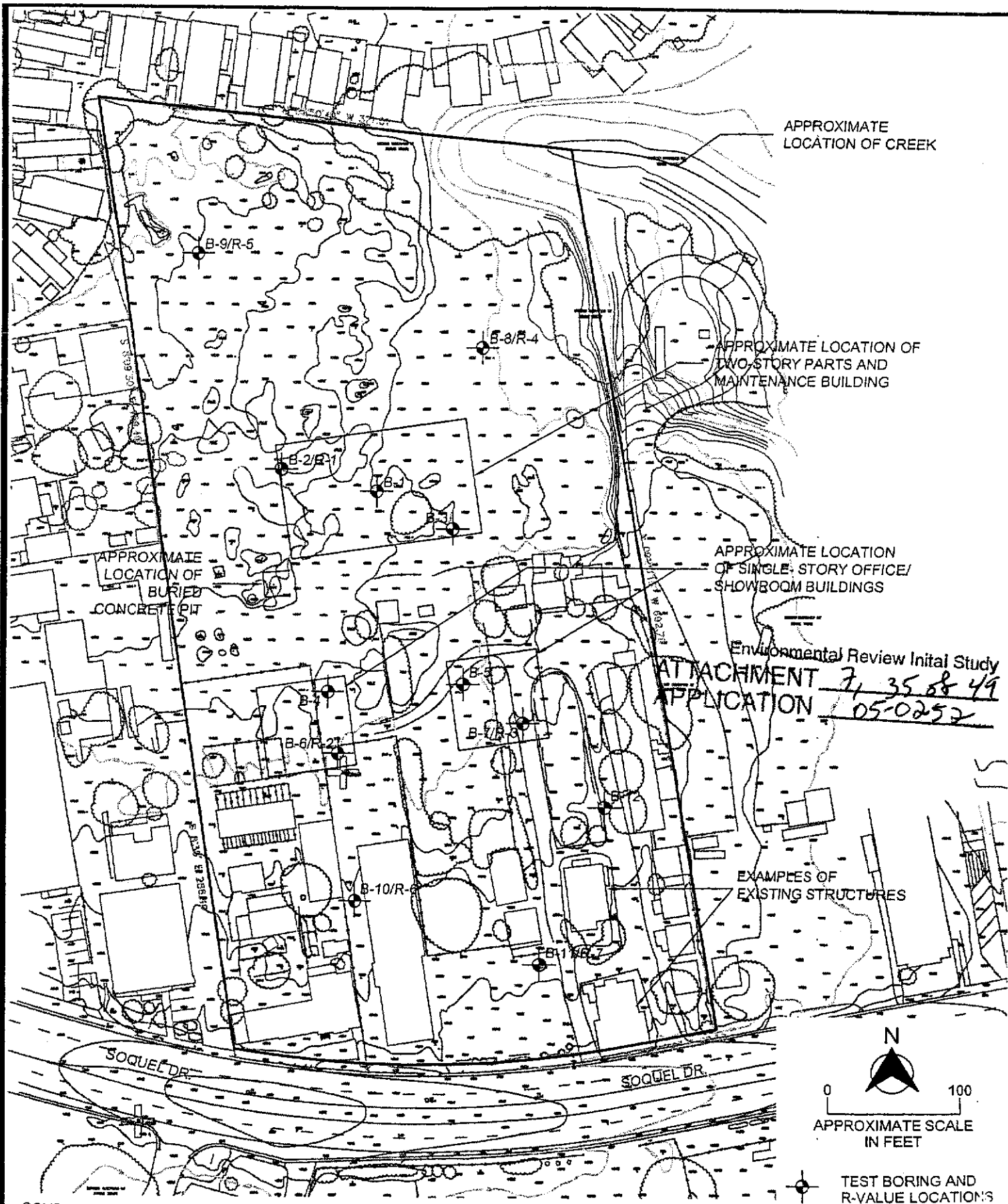
Read L. Andersen, RCE  
Manager  
Geotechnical Engineering Division



Environmental Review Initial study  
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AHH/RLA/ah





SOURCE DRAWING PROVIDED BY: BOWMAN AND WILLIAMS

SITE PLAN SHOWING TEST BORING AND R-VALUE SAMPLE LOCATIONS AND PREVIOUSLY PROPOSED CAR DEALERSHIP BUILDINGS  
SOQUEL DRIVE  
SOQUEL, SANTA CRUZ COUNTY, CALIFORNIA

FILE NO.  
69701-01

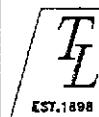
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PROJECT NO.  
C69701.01

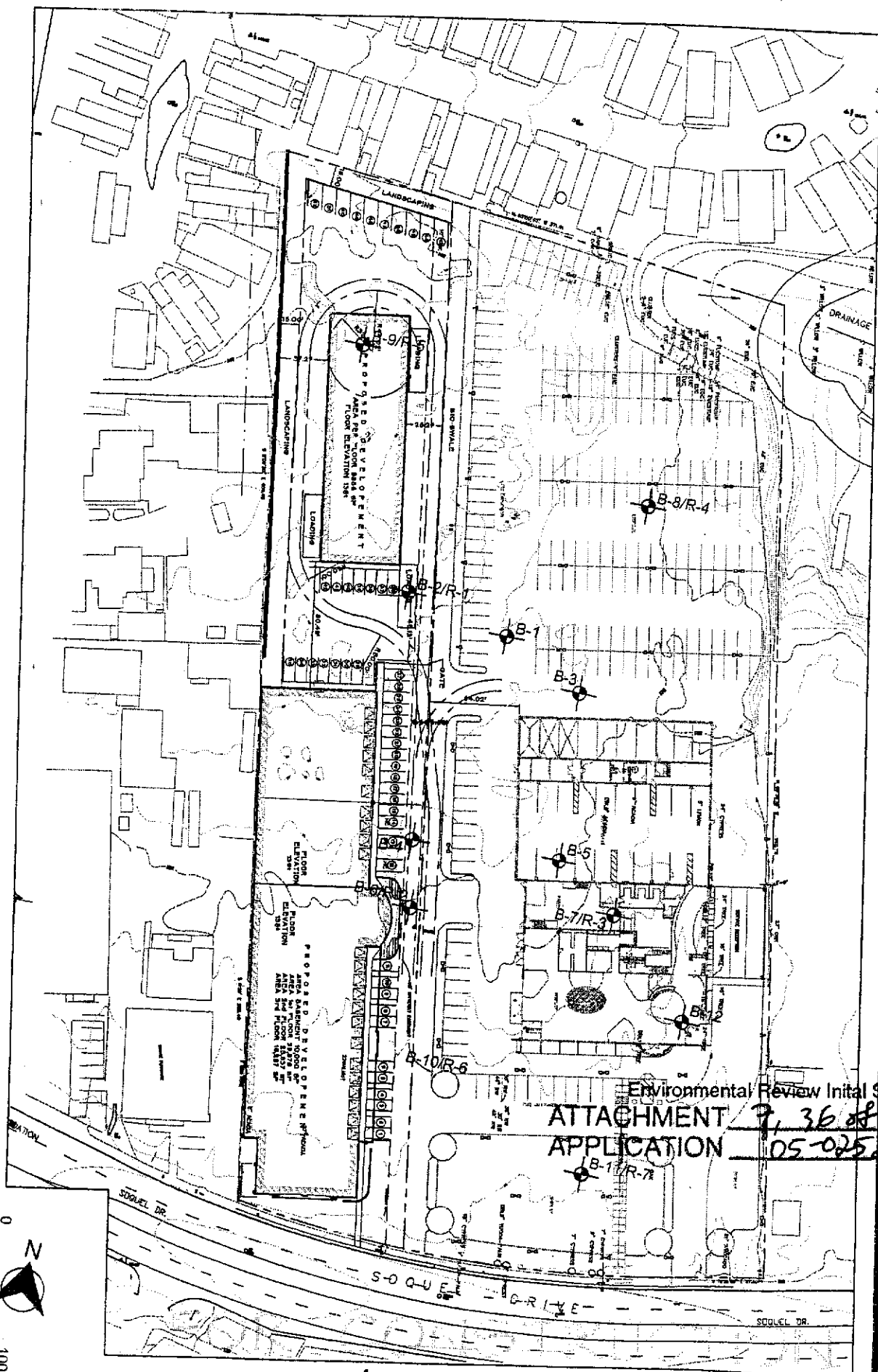
DATE DRAWN:  
03/31/04

APPROVED BY:  
*[Signature]*

DRAWING NO.  
2



**THE TWINING**  
LABORATORIES, INC.  
FRESNO/MOCASTO/VISALIA/BAKERSFIELD/MONTEREY



TEST BORING AND R-VALUE LOCATIONS

APPROXIMATE SCALE  
IN FEET

|             |               |              |             |
|-------------|---------------|--------------|-------------|
| FILE NO.    | 69701-01-01   | DATE DRAWN:  | 04/25/05    |
| DRAWN BY:   | RM            | APPROVED BY: | [Signature] |
| PROJECT NO. | NP/AMING INC. |              |             |

EST. 1898  
**THE TWINING**  
LANDSCAPE ARCHITECTS

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# SOIL TEST BORING SYMBOLIC LOG

BORING B-1

Project: Hamilton Swift, Ocean Chevrolet

Project Number: 893101.01

Location: Soquel, CA

Date: 03/11/04

Logged By: D. Ledgerwood

Elevation: 136 Feet

Drilled By: T. Conley

Depth to Groundwater: N/E

Drill Type: CME 75

Cased to Depth: N/A

Auger Type: 6 5/8" O.D. Hollow Stem Auger

Hammer Type: Trip

| ELEVATION)<br>DEPTH<br>(feet) | SOIL SYMBOLS<br>SAMPLER SYMBOLS<br>AND FIELD TEST DATA | USCS       | Soil Description   | Remarks      | N-values<br>blows/ft. | Moisture<br>Content % |
|-------------------------------|--|------------|--|--------------|-----------------------|-----------------------|
| 135                           | 8/6<br>5/6<br>4/6                                      | FILL<br>CL | SAND with Gravel; medium dense, moist, fine to medium, grayish-brown ... LEAN CLAY, Sandy; stiff, moist, low plasticity, brown to dark brown | DD = 114 pcf | 9                     | 17                    |
| 130                           | 8/6<br>13/6<br>13/6                                    |            | At 3 Feet - Very stiff, moist, increase in percent sand, grayish-brown   |              | 26                    | 17                    |
| 125                           | 4/6<br>5/6<br>6/6                                      |            | Stiff, increase in percent, coarse sand<br>2 inch layer coarse clayey sand   |              | 11                    | 23                    |
| 120                           | 3/6<br>4/6<br>4/6                                      |            | Medium stiff, decrease in percent coarse sand  |              | 8                     | 27                    |
| 115                           | 2/6<br>4/6<br>5/6                                      |            | Stiff, gray to grayish-brown   |              | 9                     | 24                    |
| 110                           | 8/6<br>12/6<br>14/6                                    | SM         | SAND, silty; medium dense, moist, fine, brown to grayish-brown   |              | 26                    | 15                    |
| 105                           | 40/6<br>38/6<br>50/6                                   | GM         | GRAVEL, Sandy; very dense, moist, fine to coarse subangular. brown to reddish-brown<br>With interbedded sandy lean clay                      |              |                       |                       |

Notes:

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# SOIL TEST BORING SYMBOLIC LOG

BORING B-1

Project: Hamilton Swift, Ocean Chevrolet

Project Number: B93101.01

Location: Soquel, CA

Date: 03/11/04

Logged By: D. Ledgetwood

Elevation: 136 Feet

Drilled By: T. Conley

Depth to Groundwater: N/E

Drill Type: CME 75

Cased to Depth: N/A

Auger Type: 6 5/8" O.D. Hollow Stem Auger

Hammer Type: Trip

| ELEVATION<br>DEPTH<br>(feet) | SOILSYMBOLS<br>SAMPLER SYMBOLS<br>AND FIELD TEST DATA | USCS | Remarks  | l-values<br>blows/ft. | Moisture<br>Content % |
|------------------------------|---|------|--|-----------------------|-----------------------|
| 35                           | 21/6<br>17/6<br>16/6                                  | SM   |  | 33                    | 8                     |
| 40                           | 17/6<br>50/6  |      |  | >67                   | 15                    |
| 45                           | 22/6<br>37/6<br>50/6                                  | P-SM | SAND, Poorly Graded with Silt;<br>very dense, moist, <b>fine</b> to<br>medium, grayish-brown | 87                    | 8                     |
| 50                           | 29/6<br>42/6<br>50/6                                  |      | Brown  | 92                    | 10                    |
| 51.5                         |   |      | Bottom of Boring at 51.5 Feet  |                       |                       |
| 55                           |   |      |  |                       |                       |
| 60                           |   |      |  |                       |                       |
| 65                           |   |      |  |                       |                       |

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Notes:

# SOIL TEST BORING SYMBOLIC LOG

BORING B-2

Project: Hamilton Swift, Ocean Chevrolet

Project Number: 893101.01

Location: Soquel, CA

Date: 03/11/04

Logged By: D. Ledgerwood

Elevation: 137.5 Feet

Drilled By: T. Conley

Depth to Groundwater: 14 feet

Drill Type: CME 75

Cased to Depth: N/A

Auger Type: 6 5/8" O.D. Hollow Stem Auger

Hammer Type: Trip

| ELEVATION/<br>DEPTH<br>(feet) | SOIL SYMBOLS<br>SAMPLER SYMBOLS<br>AND FIELD TEST DATA | USCS | Soil Description  | Remarks                            | N-values<br>blows/ft. | Moisture<br>Content % |
|-------------------------------|--|------|---|------------------------------------|-----------------------|-----------------------|
| 0                             |  | Fill | LEAN CLAY, Sandy; stiff, moist, low plasticity, some metal debris, dark-brown | E.I. = 0                           |                       |                       |
| 135                           | 1/6<br>3/6<br>8/6                                      | CL   | LEAN CLAY, Sandy, stiff, moist, low plasticity, grayish-brown                 | DD = 104 p d<br>LL = 27<br>PI = 14 | —                     | 19                    |
| 5                             | 9/6<br>13/6<br>17/6                                    |      | Very stiff, increase in percent sand, trace fine gravel                       | QID = 105 pcf                      | 11                    | 15                    |
| 130                           |  |      |   |                                    | —                     | 20                    |
| 10                            |  |      |   |                                    | 30                    | 24                    |
| 125                           |  |      |   |                                    |                       |                       |
| 15                            | 8/6<br>16/6<br>22/6                                    | SM   | SAND, Silty; dense, moist, fine to medium, with trace clay, brown             |                                    | 38                    |                       |
| 120                           |  |      |   |                                    |                       |                       |
| 20                            | 4/6<br>5/6<br>16/6                                     |      | Medium dense, with interbedded 1.5 inch clay lens                             |                                    | 21                    | 23                    |
| 115                           |  |      | Bottom of Boring at 20 Feet   |                                    |                       |                       |
| 25                            |  |      |   |                                    |                       |                       |
| 110                           |  |      |   |                                    |                       |                       |
| 30                            |  |      |   |                                    |                       |                       |
| 105                           |  |      |   |                                    |                       |                       |

Environmental Review Initial Study

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Notes:

# SOIL TEST BORING SYMBOLIC LOG

BORING B-3

Project: Hamilton Swift, Ocean Chevrolet

Location: Soquel, CA

Logged By: D. Ledgewood

Drilled By: T. Conley

Drill Type: CME 75

Auger Type: 6 5/8" O.D. Hollow Stem Auger

Project Number: 893101.01

Date: 03/11/04

Elevation: 135.5 Feet

Depth to Groundwater: N/E

Cased to Depth: N/A

Hammer Type: Trip

| ELEVATION<br>DEPTH<br>(feet) | SOILSYMBOLS<br>SAMPLER SYMBOLS<br>AND FIELD TEST DATA | JSCS | Soil Description   | Remarks                                 | values<br>ows/ft. | Moisture<br>content % |
|------------------------------|---|------|--|---|-------------------|-----------------------|
| 135                          | 0   | CL   | AC = 1.5 inches<br>LEAN CLAY, Sandy; stiff,<br>moist, low plasticity, trace<br>fine gravel, brown to dark<br>brown<br>Hard, damp, gray | DD = 104 pcf<br>o = 31.5"<br>c = 27 psf | --                | 19                    |
| 130                          | 5   |      |  |   | 48                | 15                    |
| 125                          | 10  |      | Stiff. increase in percent<br>sand, brown<br>Decrease in percent sand  | DD = 105 pcf                            | --                | 20                    |
| 120                          | 15  |      | increase in percent sand   |   | 15                | 24                    |
| 115                          | 20  |      | Decrease in percent sand   |   | 12                | 22                    |
| 110                          | 25  |      |  |   | 10                | 23                    |
| 105                          | 30  |      | Bottom of Boring at 21.5 Feet  |   |                   |                       |

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Notes:



# SOIL TEST BORING SYMBOLIC LOG

## BORING B-4

Project: Hamilton Swift, Ocean Chevrolet

Project Number: B93101.01

Location: Soquel, CA

Date: 03111/04

Logged By: D. Ledgerwood

Elevation: 135.7 Feet

Drilled By: T. Conley

Depth to Groundwater: 13 Feet

Drill Type: CME 75

Cased to Depth: N/A

Auger Type: 6 5/8" O.D. Hollow Stem Auger

Hammer Type: Trip

| ELEVATION/<br>DEPTH<br>(feet) | SOIL SYMBOLS<br>SAMPLER SYMBOLS<br>AND FIELD TEST DATA | USCS | Soil Description   | Remarks      | N-values<br>blows/ft. | Moisture<br>Content % |
|-------------------------------|--|------|--|--------------|-----------------------|-----------------------|
| 135                           |  | FILL | AC = 6 inches  | DD = 117 pcf | --                    | 16                    |
|                               | 2/6<br>1/6<br>4/6                                      | CL   | LEAN CLAY, Sandy; soft, moist, low plasticity, trace organics, black |              | 5                     | 22                    |
| 130                           | 8/6<br>13/6<br>14/6                                    |      | LEAN CLAY, Sandy; medium stiff, moist, low plasticity, brown         |              | 27                    | 16                    |
|                               |  |      | At 3.5 Feet - 2 inch sand lens                                       |              |                       |                       |
|                               |  |      | Very stiff, decrease in percent sand, grayish-brown                  |              |                       |                       |
| 125                           | 10/6<br>12/6<br>11/6                                   | SM   | SAND, Silty; medium dense, moist, with clayey sand interbeds, brown  | -200 = 21%   | 23                    | 19                    |
| 120                           | 4/6<br>4/6<br>7/6                                      |      | With 2 inch clay lens  | -200 = 37%   | 11                    | 28                    |
| 115                           | 6/6<br>6/6<br>5/6                                      | CL   | LEAN CLAY; stiff, moist, low plasticity, olive-brown                 |              | 11                    | 34                    |
|                               |  |      | Bottom of Boring at 21.5 Feet  |              |                       |                       |

Notes:

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# SOIL TEST BORING SYMBOLIC LOG

BORING B-5

Project: Hamilton Swift, Ocean Chevrolet

Project Number: 893101.01

Location: Soquel, CA

Date: 03/11/04

Logged By: D. Ledgerwood

Elevation: 135.6 Feet

Drilled By: T. Conley

Depth to Groundwater: N/E

Drill Type: CME 75

Cased to Depth: N/A

Auger Type: 6 5/8" O.D. Hollow Stem Auger

Hammer Type: Trip

| ELEVATION/<br>DEPTH<br>(feet) | SOIL SYMBOLS<br>SAMPLER SYMBOLS<br>AND FIELD TEST DATA | USCS | Soil Description  | Remarks      | N-values<br>blows/ft. | Moisture<br>Content % |
|-------------------------------|--|------|---|--------------|-----------------------|-----------------------|
| 135                           | 0  | CL   | LEAN CLAY, Sandy; soft, moist,<br>low plasticity, trace fine<br>subrounded gravel, dark brown<br>At 1.5 Feet - Moist, brown | DD = 104 pcf | --                    | 12                    |
|                               | 1/6<br>2/6<br>1/6                                      |      |   |              | 3                     | 21                    |
| 130                           | 5  |      | Hard, increase in percent<br>sand   | DD = 114 pcf | 46                    | 16                    |
|                               | 13/6<br>33/6   |      |   |              |                       |                       |
| 125                           | 10   |      | Very stiff, gray to<br>grayish-brown  |              | 16                    | 25                    |
|                               | 4/6<br>8/6<br>8/6                                      |      |   |              |                       |                       |
| 120                           | 15   | SC   | SAND, Clayey; medium dense,<br>moist, fine to medium, brown<br>At 16 Feet - 2 inch lean clay<br>lens                        |              | 25                    | 30                    |
|                               | 4/6<br>10/6<br>15/6                                    |      |   |              |                       |                       |
| 115                           | 20   | CL   | LEAN CLAY, Sandy; medium<br>stiff, moist, low plasticity,<br>brown  |              | 7                     | 41                    |
|                               | 4/6<br>3/6<br>4/6                                      |      |   |              |                       |                       |
|                               |  |      | Bottom of Boring at 21.5 Feet   |              |                       |                       |
| 110                           | 25   |      |   |              |                       |                       |
| 105                           | 30   |      |   |              |                       |                       |

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Notes:





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EST. 1898 LABORATORIES, INC

# SOIL TEST BORING SYMBOLIC LOG

BORING B-6

Project: Hamilton Swift, Ocean Chevrolet

Project Number: B93101.01

Location: Soquel, CA

Date: 03111/04

Logged By: D. Ledgerwood

Elevation: 135 Feet

Drilled By: T. Conky

Depth to Groundwater: 2 feet

Drill Type: CME 75

Cased to Depth: N/A

Auger Type: 6 5/8" O.D. Hollow Stem Auger

Hammer Type: Trip

| ELEVATION/<br>DEPTH<br>(feet) | SOIL SYMBOLS<br>SAMPLER SYMBOLS<br>AND FIELD TEST DATA | UNCS | Soil Description   | Remarks                    | N-values<br>blows/ft. | Moisture<br>Content % |
|-------------------------------|--|------|--|----------------------------|-----------------------|-----------------------|
| 135 0                         |  | CL   | AC = 2.5 inches<br>LEAN CLAY, Sandy; soft, moist,<br>low plasticity, brown | = 31<br>  = 14<br>  = 14.5 | 3                     | 19                    |
| 130 5                         |  |      | Very stiff, sharp increase in<br>percent sand                              | = 111 pcf                  | —                     | 18                    |
| 125 10                        |  |      |  |                            | 18                    | 21                    |
| 120 15                        |  |      | Stiff, with interbedded<br>clayey fine sand                                |                            | 12                    | 26                    |
| 115 20                        |  |      | Medium stiff, Increase in<br>moisture, olive-brown                         |                            | 8                     | 45                    |
| 110 25                        |  |      | Bottom of Boring at 20 Feet  |                            |                       |                       |
| 105 30                        |  |      |  |                            |                       |                       |

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Notes:

# SOIL TEST BORING SYMBOLIC LOG

BORING B-7

Project: Hamilton Swift, Ocean Chevrolet

Location: Soquel, CA

Logged By: D. Ledgerwood

Drilled By: T. Conley

Drill Type: CME 75

Auger Type: 6 5/8" O.D. Hollow Stem Auger

Project Number: 893101.01

Date: 03111104

Elevation: 133.9 Feet

Depth to Groundwater: N/E

Cased to Depth: N/A

Hammer Type: Trip

| ELEVATION/<br>DEPTH<br>(feet) | SOIL SYMBOLS<br>SAMPLER SYMBOLS<br>AND FIELD TEST DATA | USCS | Soil Description  | Remarks  | N-values<br>blows/ft. | Moisture<br>Content % |
|-------------------------------|--|------|---|--|-----------------------|-----------------------|
| 0                             | 4/6<br>2/6<br>2/6                                      | CL   | LEAN CLAY, Sandy; soft,<br>moist, low plasticity, brown                   |  | 4                     | 18                    |
| 5                             | 19/6<br>33/6   |      | Hard, increase in percent<br>sand   | DD = 111 pcf<br>$\phi = 31^\circ$<br>C = 124 psf | 52                    | 17                    |
| 10                            | 6/6<br>7/6<br>9/6                                      |      | Very stiff, grayish-brown   |  | 16                    | 21                    |
| 15                            | 5/6<br>12/6<br>13/6                                    | SM   | SAND, Silty; medium dense,<br>moist, fine to medium,<br>trace clay, brown |  | 25                    | 16                    |
| 20                            | 6/6<br>4/6<br>5/6                                      | CL   | LEAN CLAY; stiff, moist, low<br>plasticity, olive-brown                   |  | 9                     | 29                    |
| 20                            |  |      | Bottom of Boring at 20 Feet   |  |                       |                       |

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Notes:

# SOIL TEST BORING SYMBOLIC LOG

BORING B-8

Project: Hamilton Swift, Ocean Chevrolet

Project Number: B93101.01

Location: Soquel, CA

Date: 3/12/2004

Logged By: D. Ledgetwood

Elevation: 135 Feet

Drilled By: T. Conley

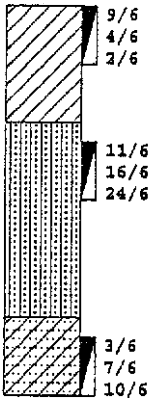
Depth to Groundwater: N/E

Drill Type: CME 75

Cased to Depth: N/A

Auger Type: 6 5/8" O.D. Hollow Stem Auger

Hammer Type: Trip

| ELEVATION/<br>DEPTH<br>(feet) | SOIL SYMBOLS<br>SAMPLER SYMBOLS<br>AND FIELD TEST DATA                             | USCS | Soil Description  | Remarks | N-values<br>blows/ft. | Moisture<br>Content % |
|-------------------------------|--|------|---|---------|-----------------------|-----------------------|
| 135 0                         |  | CL   | LEAN CLAY, Sandy, medium stiff, moist, low plasticity, trace fine to medium subangular gravel. dark-brown |         | 6                     | 18                    |
| 130 5                         |  | SM   | SAND, Silty; dense, moist, fine to medium, brown  |         | 40                    | 16                    |
| 125 10                        |  | SC   | SAND, Clayey; medium dense, moist, fine, brown  |         | 17                    | 23                    |
| 120 15                        |  |      | Bottom of Boring at 10 Feet   |         |                       |                       |
| 115 20                        |  |      |   |         |                       |                       |
| 110 25                        |  |      |   |         |                       |                       |
| 105 30                        |  |      |   |         |                       |                       |

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APPLICATION 25-0252

Notes:



# SOIL TEST BORING SYMBOLIC LOG

BORING B-9

Project: Hamilton Swift, Ocean Chevrolet

Project Number: 893101.01

Location: Soquel, CA

Date: 3/12/2004

Logged By: D. Ledgerwood

Elevation: 135.8 Feet

Drilled By: T. Conley

Depth to Groundwater: N/E

Drill Type: CME 75

Cased to Depth: N/A

Auger Type: 6 5/8" O.D. Hollow Stem Auger

Hammer Type: Trip

| ELEVATION<br>DEPTH<br>(feet) | SOILSYMBOLS<br>SAMPLER SYMBOLS<br>AND FIELD TEST DATA | uses | Soil Description   | Remarks | N-values<br>blows/ft. | Moisture<br>Content % |
|------------------------------|---|------|--|---------|-----------------------|-----------------------|
| 0                            |   |      |  |         |                       |                       |
| 135                          |   | CL   | LEAN CLAY, <i>Sandy; soft, moist,</i><br><i>low plasticity, grayish-brown</i><br><i>mottled with light</i><br><i>reddish-brown</i> |         | 3                     | 21                    |
| 5                            |   |      | Hard, dark brown   |         |                       |                       |
| 130                          |   |      |  |         | 82                    | 14                    |
| 10                           |   |      | Very stiff, increase in<br>percent sand  |         |                       |                       |
| 125                          |   |      |  |         | 16                    | 25                    |
| 15                           |   |      | Bottom of Boring at 11.5 Feet  |         |                       |                       |
| 120                          |   |      |  |         |                       |                       |
| 20                           |   |      |  |         |                       |                       |
| 115                          |   |      |  |         |                       |                       |
| 25                           |   |      |  |         |                       |                       |
| 110                          |   |      |  |         |                       |                       |
| 30                           |   |      |  |         |                       |                       |
| 105                          |   |      |  |         |                       |                       |

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# SOIL TEST BORING SYMBOLIC LOG

BORING B-10

Project: Hamilton Swift, Ocean Chevrolef

Project Number: B93101.01

Location: Soquel, CA

Date: 3/12/2004

Logged By: D. Ledgerwood

Elevation: 134 Feet

Drilled By: T. Conley

Depth to Groundwater: N/E

Drill Type: CME 75

Cased to Depth: N/A

Auger Type: 6 5/8" O.D. Hollow Stem Auger

Hammer Type: Trip

| ELEVATION/<br>DEPTH<br>(feet) | SOILSYMBOLS<br>SAMPLER SYMBOLS<br>AND FIELDTEST DATA | USCS | Soil Description  | Remarks | N-values<br>blows/ft. | Moisture<br>Content % |
|-------------------------------|--|------|---|---------|-----------------------|-----------------------|
| 0                             |  | CL   | AC = 1.5 inches<br>Base = 4 inches<br>LEAN CLAY, Sandy: soft,<br>moist, low plasticity,<br>dark brown<br>At 1.5 Feet - Brown<br>At 3 Feet - Very stiff,<br>brown to grayish-brown |         | 3                     | 29                    |
| 130                           |  |      |   |         | 29                    | 17                    |
| 5                             |  |      |   |         |                       |                       |
| 125                           |  | SC   | SAND, Clayey: medium dense,<br>moist, fine to medium,<br>with sandy lean clay<br>interbeds, brown to<br>grayish-brown<br>Bottom of Boring at 10 Feet                              |         | 23                    | 28                    |
| 10                            |  |      |   |         |                       |                       |
| 15                            |  |      |   |         |                       |                       |
| 115                           |  |      |   |         |                       |                       |
| 20                            |  |      |   |         |                       |                       |
| 110                           |  |      |   |         |                       |                       |
| 25                            |  |      |   |         |                       |                       |
| 30                            |  |      |   |         |                       |                       |
| 105                           |  |      |   |         |                       |                       |

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Notes:

# SOIL TEST BORING SYMBOLIC LOG

BORING B-11

Project: Hamilton Swift, Ocean Chevrolet

Project Number: B93101.01

Location: Soquei, CA

Date: 3/12/2004

Logged By: D. Ledgerwood

Elevation: 132.2 Feet

Drilled By: T. Conley

Depth to Groundwater: N/E

Drill Type: CME 75

Cased to Depth: N/A

Auger Type: 6 5/8" O.D. Hollow Stem Auger

Hammer Type: Trip

| ELEVATION/<br>DEPTH<br>(feet) | SOIL SYMBOLS<br>SAMPLER SYMBOLS<br>AND FIELD TEST DATA | USCS | Soil Description  | Remarks | N-values<br>blows/ft. | Moisture<br>Content % |
|-------------------------------|--|------|---|---------|-----------------------|-----------------------|
| 0                             |  |      |   |         |                       |                       |
| 130                           | 1/6<br>1/6<br>1/6                                      | CL   | LEAN CLAY, Sandy; soft,<br>moist, low plasticity, brown<br>with reddish-brown                     |         | 3                     | 19                    |
| 5                             | 7/6<br>13/6<br>19/6                                    |      | Hard, brown   |         | 32                    | 18                    |
| 125                           |  |      |   |         |                       |                       |
| 10                            | 7/6<br>10/6<br>19/6                                    | SC   | SAND, Clayey; medium dense,<br>moist, fine to medium, with<br>sandy lean clay interbeds,<br>brown |         | 29                    | 20                    |
| 120                           |  |      | Bottom of Boring at 11.5 Feet   |         |                       |                       |
| 15                            |  |      |   |         |                       |                       |
| 115                           |  |      |   |         |                       |                       |
| 20                            |  |      |   |         |                       |                       |
| 110                           |  |      |   |         |                       |                       |
| 25                            |  |      |   |         |                       |                       |
| 105                           |  |      |   |         |                       |                       |
| 30                            |  |      |   |         |                       |                       |
| 100                           |  |      |   |         |                       |                       |

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Notes:

# SOIL TEST BORING SYMBOLIC LOG

BORING 8-12

Project: Hamilton Swift, Ocean Chevrolet

Location: Soquel, CA

Logged By: D. Ledgerwood

Drilled By: T. Conley

Drill Type: CME 75

Auger Type: 6 5/8" O.D. Hollow Stem Auger

Project Number: B93101.01

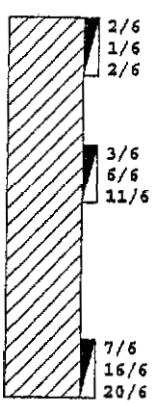
Date: 3/12/2004

Elevation: 132.7 Feet

Depth to Groundwater: N/E

Cased to Depth: N/A

Hammer Type: Trip

| DEPTH<br>(feet) | SOILSYMBOLS<br>SAMPLER SYMBOLS<br>AND FIELD TEST DATA                              | uses | Soil Description   | Remarks | N-values<br>blows/ft. | Moisture<br>Content % |
|-----------------|--|------|--|---------|-----------------------|-----------------------|
| 0               |  | CL   | AC = 2 inches<br>LEAN CLAY, Sandy; soft, moist,<br>low plasticity, brown<br>Very stiff |         | 3                     | 20                    |
| 130             |  |      |  |         | 17                    | 18                    |
| 5               |  |      |  |         |                       |                       |
| 125             |  |      | Hard, grayish-brown mottled<br>with reddish-brown                                      |         | 36                    | 14                    |
| 10              |  |      | Bottom of Boring at 10 Feet  |         |                       |                       |
| 120             |  |      |  |         |                       |                       |
| 15              |  |      |  |         |                       |                       |
| 115             |  |      |  |         |                       |                       |
| 20              |  |      |  |         |                       |                       |
| 110             |  |      |  |         |                       |                       |
| 25              |  |      |  |         |                       |                       |
| 105             |  |      |  |         |                       |                       |
| 30              |  |      |  |         |                       |                       |

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Notes:

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**BOWMAN & WILLIAMS**  
CONSULTING CIVIL ENGINEERS  
A CALIFORNIA CORPORATION

1011 CEDAR • PO BOX 1621 • SANTA CRUZ CA 95061-1621  
PHONE (831) 426-3560 FAX (831) 426-3182 www.bowmanandwilliams.com

EXCERPTS FROM:

CALCULATIONS  
AVAILABLE FOR  
REVIEW AT  
PLANNING DEPT

**PRELIMINARY  
STORM WATER MANAGEMENT PLAN  
&  
HYDROLOGIC CALCULATIONS**

**For**

**Proposed Ocean Honda/ Store More Site  
APNs: 030-061-18, -19, & -20  
Soquel Drive  
Santa Cruz, CA 95073**

**October 31, 2005**



**BASIS OF DESIGN:**

1. County of Santa Cruz Design Criteria.
2. ASCE Manual of Engineering Practice No. 37
3. Bowman & Williams Preliminary Drawings dated 10/29/05

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**ATTACHMENT** 8, Lot 11  
**APPLICATION** 05-0252



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| 3.0 | METHOD OF ANALYSIS.....    | 1 |
| 4.0 | HYDROLOGIC EVALUATION..... | 2 |
| 5.0 | SUMMARY.....               | 4 |
| 6.0 | CONCLUSIONS.....           | 4 |

APPENDIX A – VICINITY & DRAINAGE AREA *MAPS*

APPENDIX B – CALCULATIONS

APPENDIX C - COUNTY DESIGN STANDARD INFORMATION

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APPLICATION 05-0252

## 1.0 INTRODUCTION

Ocean Honda/Store More proposes a joint development consisting of a new automobile dealership and storage facility on Soquel Drive in the County of Santa Cruz. Parcels included are 030-061-18, 19, & 20 and are proposed to be merged into two lots as part of the project. The new construction will consist of demolishing existing structures and gravel paving and constructing new buildings, paved parking areas, and landscaped areas. The proposed project improvements encompass an area of approximately 6.15 acres. Based on the existing topography of the project area, drainage discharges to three general locations. The project development will slightly reconfigure the drainage areas but will maintain pre-development drainage characteristics such as peak runoff rates and final discharge locations. However, a significant change in the post development drainage pattern will reroute runoff that currently sheet flows to the east (Barbic) and subsequently to Soquel Drive and reroute to discharge directly to Soquel Drive. As such, after development, runoff will either discharge to the existing vegetated swale at the northeasterly corner of the property, or to Soquel Drive.

## 2.0 METHOD OF MITIGATION

In order to satisfy County General Plan Policy 7.23.1, the use of pervious pavement in limited areas on site will be used. The characteristics of the pavement and underlying base will be used to detain runoff and limit runoff rates for all storm events, rather than just the 10 year event as outlined in the County Design Manual. The use of pervious pavement has been used with success in the eastern United States. However, extensive use in the Central Coast area has not occurred. In addition, the County has not developed design standards for the use of, or the evaluation of runoff from pervious pavement sections. As such, it is left to the designer to present a method based on engineering principals.

Generally, pervious pavements are used with best success where the underlying soils allow for percolation of captured runoff to occur. Unfortunately, the site soils are not conducive to percolation (Dees & Associates, 8/31/05). As such, the pervious pavement will be used to behave as a detention and filtration system, in lieu of underground storage pipes and pre fabricated water quality units. The advantage to using the pervious pavement system is that the increase in peak runoff from smaller, more frequent events is also mitigated.

The pervious pavement sections were first designed for this project based on site grading and drainage constraints. It should be noted that not all of the pavement on site can be pervious due to functional limitations, such as limited performance with heavy wheel loads which is anticipated. As such, impervious areas have been designed to drain to the pervious pavement areas either as sheet flow, or through underground pipe which then leaches into the pervious pavement section.

## 3.0 METHOD OF ANALYSIS

- In order determine peak runoff rates for pre development and post development conditions, the Rational Formula (shown below) will be used.

$$Q = C_a C_i i A$$

Where:

Q= Estimated Peak Runoff from site (cfs)

C<sub>a</sub>= Antecedent Moisture Factor (Unitless)

C= Runoff Coefficient (Unitless)

i<sub>a</sub>= Rainfall Intensity Adjustment Factor (Unitless)

i= Rainfall Intensity (in/hr)

A= Area of Site (Acres)

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| Area | Impervious (Buildings and Paving) | Pervious Pavement | Landscaping |
|------|-----------------------------------|-------------------|-------------|
| 1PR  | 72,792 sf                         | 19,700 sf         | 7,635 sf    |
| 2PR  | 127,229sf                         | 19,805 sf         | 21,955 sf   |

### Time of Concentration

For predevelopment conditions, all runoff flows overland. Based upon accepted nomographs, the estimated time of concentration is 15 minutes.

For post development conditions, runoff is routed through the pervious pavement. As this is assumed to act as a saturated aquifer, calculations are based upon Darcy's Law. From Darcy's Law, the effective velocity of movement of water through an aquifer is a function of the permeability of the soil, and the hydraulic gradient. Using Darcy's Law for the pervious pavement, and assuming an initial time of concentration of 10 minutes, the total time of concentration is approximately 50 minutes and 35 minutes for Area 1PR and 2PR, respectively. This is based upon the assumed permeability of the underlying gravel to be  $10^6$  gal/day-ft<sup>2</sup>.

### Peak Runoff

Spreadsheets are included in Appendix A of this report for the 10 year return period. The calculations show the estimated peak runoff rates for current and post development conditions. In addition to peak runoff rates, calculations are included in the spreadsheet which show the required detention to mitigate the proposed development.

Following are more particulars of the evaluation performed.

- The times of concentration (tc) is 15 minutes for all predevelopment conditions. For post development conditions the time of concentration is 50 minutes for the northerly drainage area that drains to the northeast drainage swale. The time of concentration is 35 minutes for the southerly drainage area that drains directly to Soquel Drive. The increase in time of concentration after development is due to the runoff being routed through the pervious pavement, which creates a method of mitigating increases in peak runoff rates.
- The runoff values shown in the spreadsheets are calculated using the Rational Formula. Runoff coefficients were presented earlier, but it should be noted that for evaluation purposes, Areas 2 & 3 were combined. The weighted runoff coefficient for the combined areas is 0.57.
- Antecedent Moisture factors ( $C_a$ ) for the Rational formula are found in The County of Santa Cruz Design Criteria, a copy of these values is attached to this report.  $C_a$  is 1.0 for the 10-year event.
- The rainfall intensities are taken from the IDF curve, which is attached to this report. These intensities are for the 10-year event.
- Storage volumes for detention, shown in the spreadsheets, are calculated using the Modified Rational Unit Hydrograph. A copy of this method is attached for reference. A factor of safety of 1.25 is applied to the estimated volume to ensure adequate storage is achieved and to allow for possible future connections to the system. Although the project proposes the use of pervious pavement, little to no infiltration is anticipated. As such, the pavement section will serve as storage volume.
- Further consideration is made as to the capacity of the surface drainage facilities, in particular, the curb & gutter on Soquel Drive. To the west, towards Rodeo Gulch, the capacity of the curb & gutter is about 4.0 CFS. To the east, towards Soquel Village, the gutter capacity is approximately 8.0 CFS.

Environmental Review Initial Study  
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## 5.0 SUMMARY

The summaries of estimated peak flows for the project are given below:

| Predevelopment Area | Post Development Area | Predevelopment Peak Runoff | Post Development Peak Runoff |
|---------------------|-----------------------|----------------------------|------------------------------|
| Area 1              | Area 1PR              | 2.53 cfs                   | 3.03 cfs                     |
| Areas 2&3           | Area 2PR              | 2.82 cfs                   | 2.35 cfs                     |
| Total               |                       | 5.53 cfs                   | 5.38 cfs                     |

By inspection it can be seen that the total post development peak runoff will actually be less than predevelopment conditions. This is due to the increase in the time of concentration by using the pervious pavement section. As such, rainfall intensities are less, and runoff rates are less.

In addition, the spreadsheet calculations show an estimated storage volume to mitigate post development flows. These volumes are calculated based upon a more "standard" discharge from the site. Although detention storage is not technically necessary, storage is achieved through the pervious pavement sections. Based upon calculations, the required storage volume for the site to mitigate runoff is 2180 cubic feet and 180 cubic feet for the northerly and southerly portions of the site, respectively. Assuming a void ratio of 35% in the pervious pavement section, estimated storage capacity is 6930 cubic feet and 6895 cubic feet for the northerly and southerly portions of the site, respectively. Therefore, in addition to providing a lag in time of concentration, the pervious pavement has more than sufficient capacity to detain volumes of runoff and release these volumes over a greater length of time.

## 6.0 CONCLUSIONS

The use of pervious pavement has been designed to be the primary source of storm water management. Unfortunately, due to site soil characteristics, little to no percolation will occur. As such, the pervious pavement will act as a mechanism to delay runoff from leaving the site, and allow for on site detention of storm water, thereby satisfying County Design Criteria.

In addition, publications by the EPA indicate that pervious pavement also provides storm water quality improvement. As storm water migrates through the porous substrate, particles are removed. Aerobic mechanisms also help to break down hydrocarbons, also improving storm water quality. Therefore, no additional structures, such as a Vortech unit, will be used.

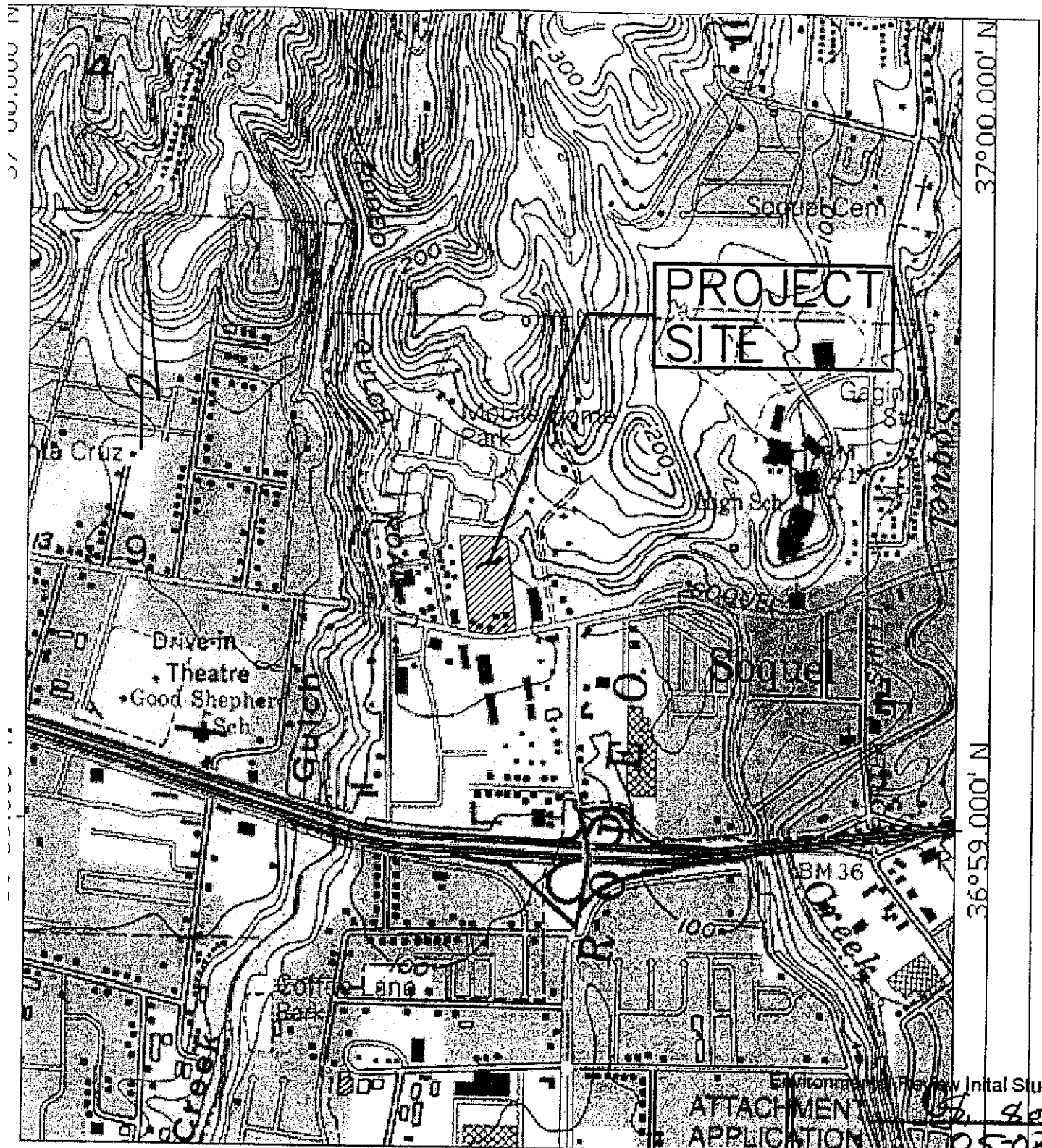
Based upon our evaluation, it is our opinion that runoff from the proposed improvements will not have any significant impacts on downstream properties. The pervious pavement will mimic current site conditions, allowing for discharge to be more gradual and more dispersed.

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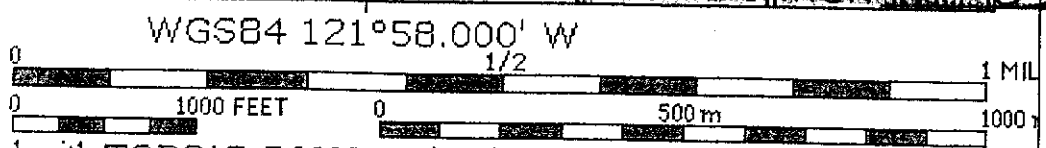
**APPENDIX A**

VICINITY  
&  
DRAINAGE AREA MAPS

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ATTACHMENT 8, 7 of 11  
APPLICATION 05-0252



N★/MN  
15°



Map created with TOPO!® ©2002 National Geographic (www.nationalgeographic.com)

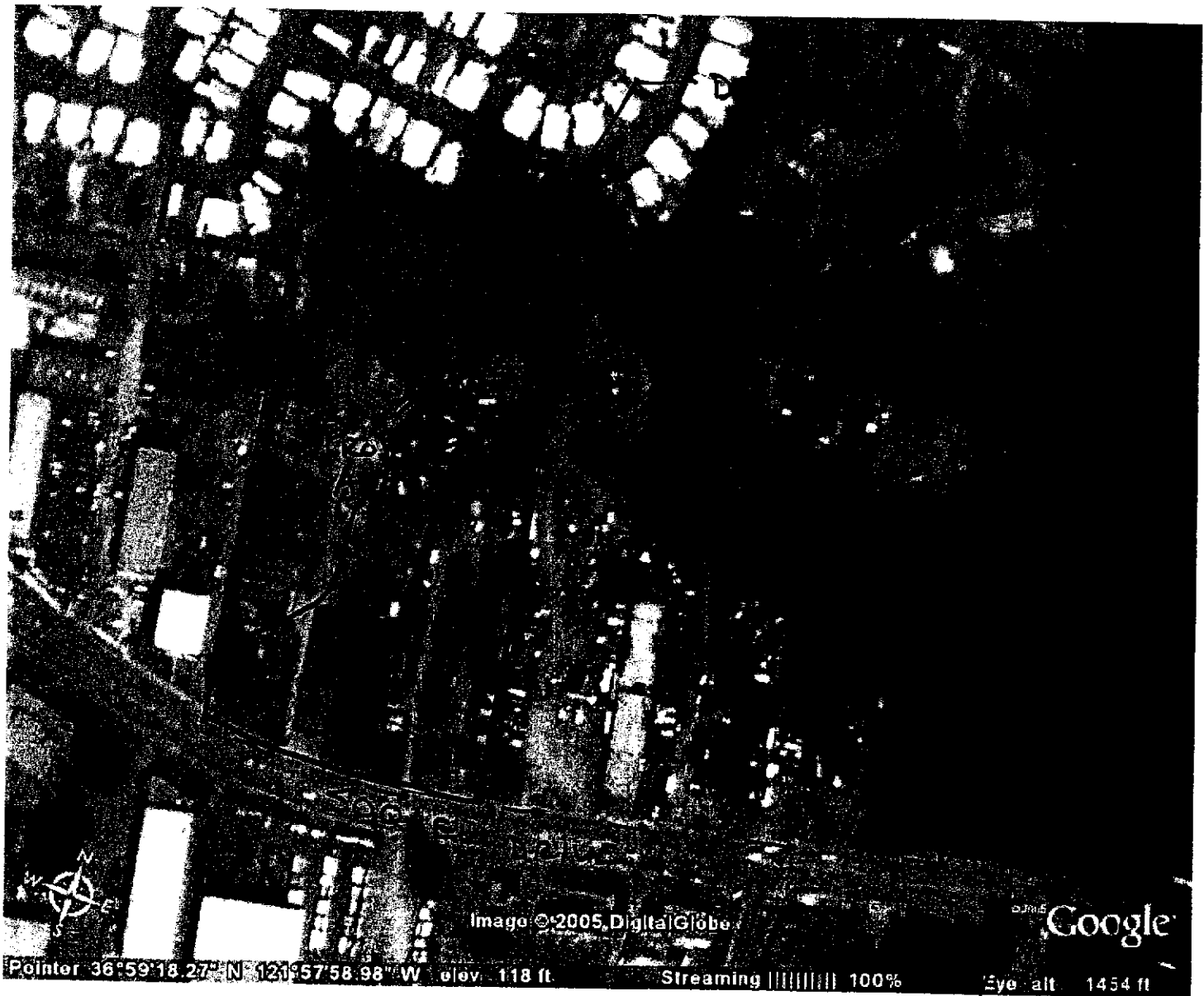
# VICINITY MAP

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DOMINANT & ASSOCIATES  
CONSULTING CIVIL ENGINEERS  
1011 CEDAR STREET SANTA CRUZ CALIFORNIA  
(831) 426-3560  
(831) 426-3560

|            |               |       |
|------------|---------------|-------|
| SCALE: NTS | JOB NO. 23302 | PAGE: |
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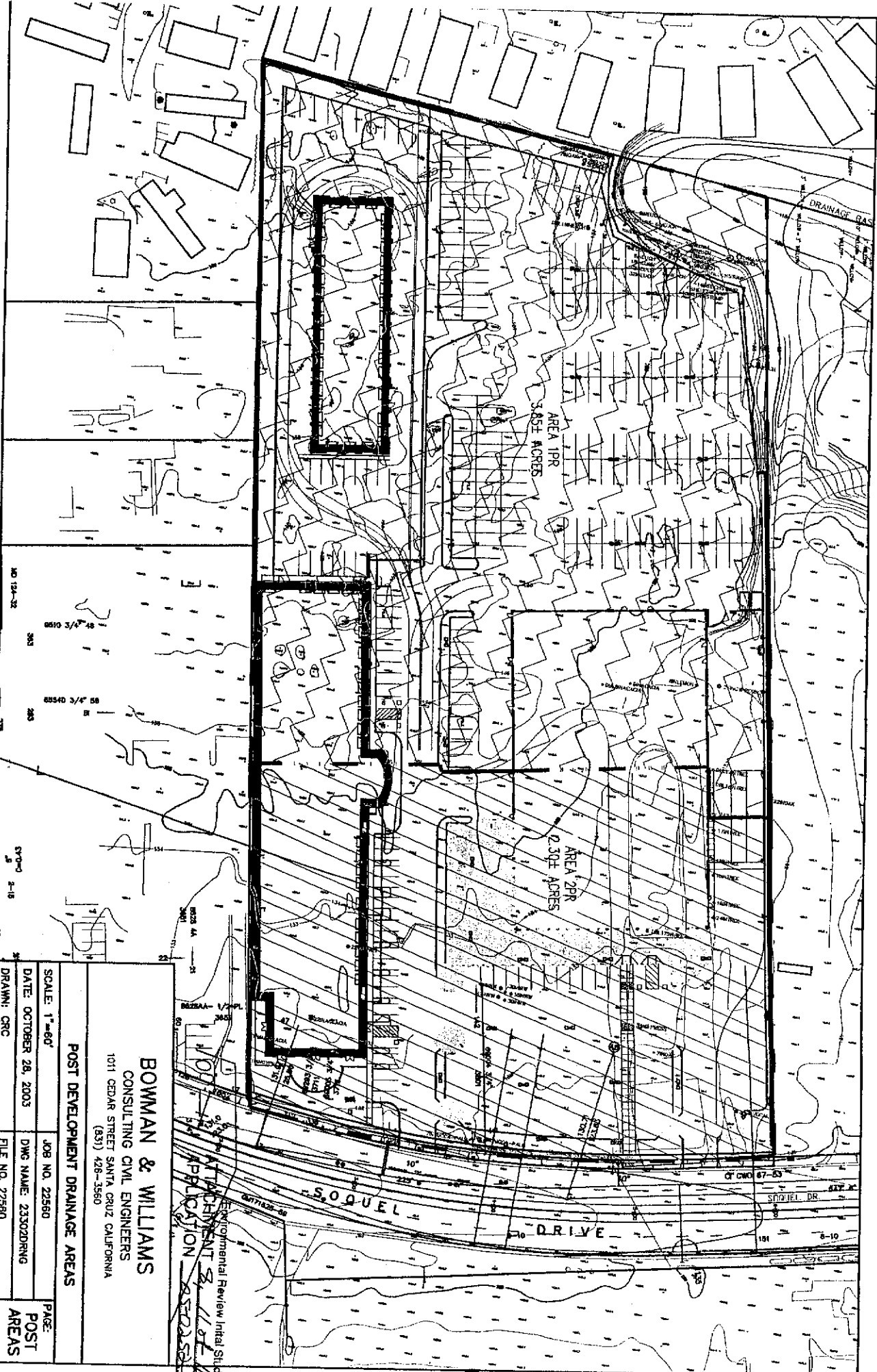


Gully

DI

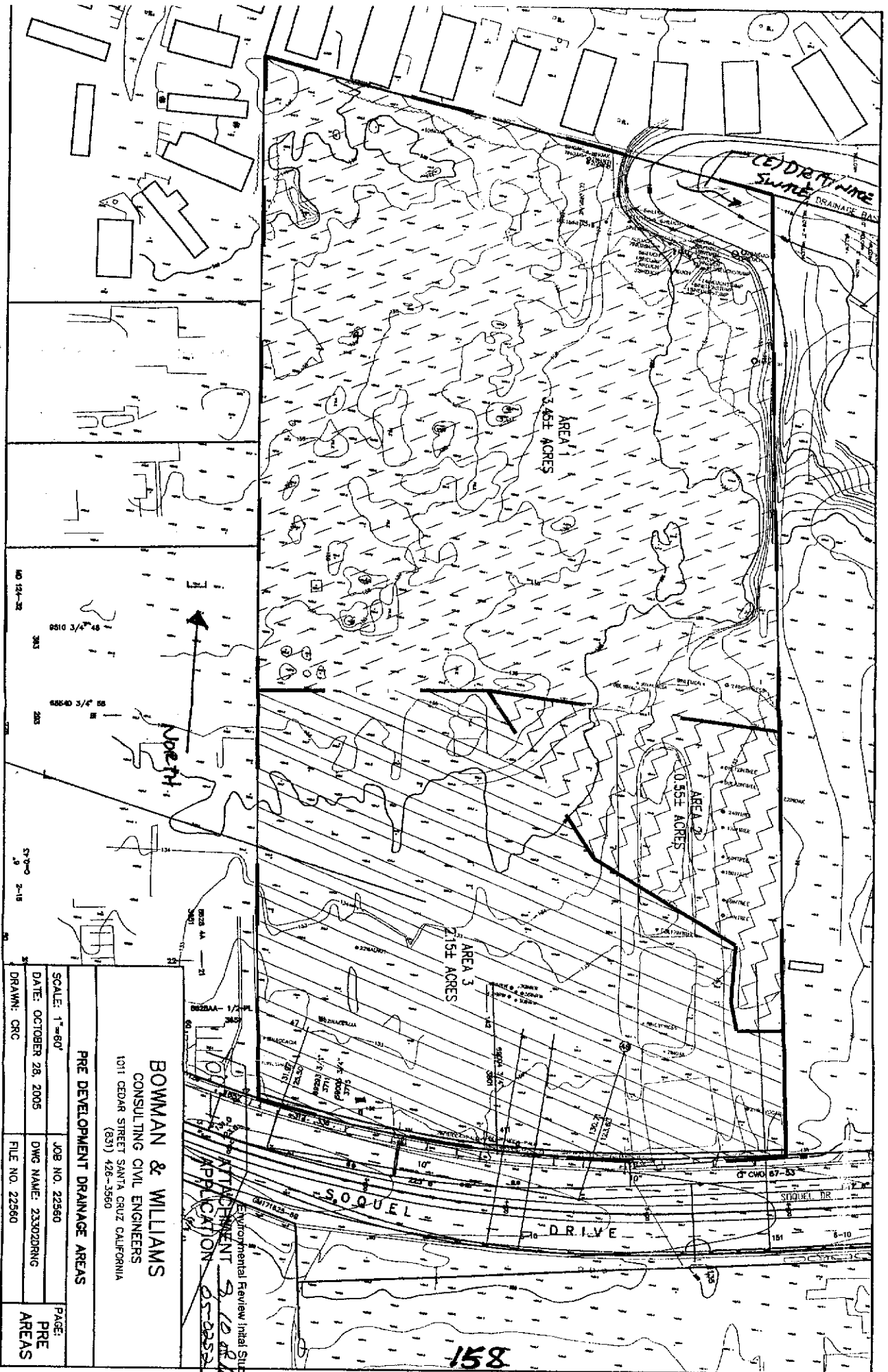
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|   |   |
|---|---|
| <b>BOWMAN &amp; WILLIAMS</b><br>CONSULTING CIVIL ENGINEERS<br>1011 CEDAR STREET SANTA CRUZ CALIFORNIA<br>(831) 428-3560 |   |
| <b>POST DEVELOPMENT DRAINAGE AREAS</b>  |   |
| SCALE: 1"=60'<br>DATE: OCTOBER 28, 2003<br>DRAWN: CRC   | JOB NO. 22560<br>DWG NAME: 2302DRNG<br>FILE NO. 22560 |
| PAGE: POST AREAS  |   |

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 ATTACHMENT 24.11.01  
 APPLICATION 250250



**C O U N T Y   O F   S A N T A   C R U Z**  
**D I S C R E T I O N A R Y   A P P L I C A T I O N   C O M M E N T S**

Project Planner: Cathleen Carr  
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Date: February 15, 2006  
Time: 14:07:44  
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**Environmental Planning Completeness Comments**

===== REVIEW ON MAY 13, 2005 BY KENT M EDLER ===== 1. The soils report has been accepted. Note: additional geotechnical info will be required in the building permit stage - see misc. comments.

2. Preliminary grading plans are acceptable as submitted. Grading and development has been set back from the riparian corridor as outlined under application 03-0410  
===== UPDATED ON NOVEMBER 7, 2005 BY KENT M EDLER =====

During a site meeting with Steve McGuirk on 7/11/05, it was discussed that there may be grading done in "Area D" of the landscape plans to create a swale. If grading is going to occur in this area, please show this on the plans.

The landscape plans only identify eucalyptus removal from "Area D". If there are additional eucalyptus trees along the northern property line to be removed, they should be identified on the plans for removal. If eucalyptus trees are to remain on-site, identify locations.

No further completeness comments.

===== UPDATED ON NOVEMBER 16, 2005 BY ANDREA M KOCH =====

11/16/05

1) No further completeness comments.

**Environmental Planning Miscellaneous Comments**

----- REVIEW ON MAY 13, 2005 BY KENT M EDLER ----- 1. The soils report is accepted as submitted. A design level report will be required in the building permit stage, as recommended by the soils engineer.

2. A plan review letter from the soils engineer will be required in the building permit stage.

3. Winter grading will not be allowed on this site.

4. The project should be conditioned that grading must commence by August 1 or grading must be postponed until April 15 of the following year.

5. The drainage system must be in place by September 15.

===== UPDATED ON NOVEMBER 7, 2005 BY KENT M EDLER ===== Additional Misc Comments:

1) On "Area D" of the landscape plans, identify what type of invasive species will be eradicated.

2) On "Area D" of the landscape plans, there is a hatched area that is not labeled - identify what this is intended to be.

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Discretionary Comments - Continued

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- 3) Specify the type of pre-emergent herbicide that will be used in "Area D"
- 4) Include a maintenance plan for 3-5 years for control of invasive species and which also identifies success criteria for new plantings.  
===== UPDATED ON NOVEMBER 16, 2005 BY ANDREA M KOCH =====

11/16/05

- 1) No further miscellaneous comments

Long Range Planning Completeness Comments

===== REVIEW ON MAY 25, 2005 BY GLENDA L HILL =====  
NO COMMENT  
===== UPDATED ON NOVEMBER 16, 2005 BY STEVE D GUINEY =====  
NO COMMENT

Long Range Planning Miscellaneous Comments

===== REVIEW ON MAY 25, 2005 BY GLENDA L HILL =====  
Comments regarding compliance with SB 18 (Tribal Consultation) sent to project planner via e-mail,

Dpw Drainage Completeness Comments

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

===== REVIEW ON MAY 18, 2005 BY DAVID W SIMS =====  
General Plan policies: 7.23.1New Development 7.23.2Minimizing Impervious Surfaces  
7.23.3On-Site Stormwater Detention 7.23.4Downstream Impact Assessments 7.23.5Control Surface Runoff

A well engineered drainage plan was submitted with the application, and was reviewed for completeness of discretionary development, and compliance with stormwater management controls and County policies listed above. The plan was found to need the following additional information and revisions prior to approving discretionary stage Stormwater Management review.

1) The proposed plan relies exclusively on detention systems to control post-development runoff rates. This does not meet County requirements and is not accepted. The proposal must include other significant runoff controls prior to the Stormwater Management section giving any approval for the use of detention. Such other methods shall be effective in the control of development impacts caused by both smaller storms as well as the design flood storm. Please revise the proposal to fully meet policy 7.23.1.

2) This project has proposed a very large quantity of impervious surfacing, increasing coverage from 1.27acres to 5.53acres; a 434% increase. The legend on sheet C2 indicates impervious pavement. however a call to the engineer confirmed that there is no such proposal on the plan. Please revise the proposal to fully meet policy 7.23.2. Runoff control practices are available that address items 1 and 2 simul-

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taneously, and are fully compatible with the desired land use

3) Detention will be required only to the extent that predevelopment runoff rates cannot be maintained through other applied measures, and where drainage problems are not resolved. per policy 7.23.3.

4) The Kerby Method was used to compute time of concentration (Tc) of runoff. The equation is appropriate and approvable for use. The figure of 10 minutes used for pre-development Tc appears incorrect. A review check produced a Tc of 20 to 24 minutes for drainage area 1. This significantly affects the determined storage volumes. Please review for all areas, and submit all support calculations if retaining Tc near 10 minutes. There were some discrepancies in drainage area boundary determinations. The riparian area in the rear corner, the entrance drives, the southwest under-sidewalk drain, and perhaps some planters are areas of undetained runoff that should be subtracted from the computed allowable release rate, and otherwise accounted for in the detention calculations. Please revise. Other aspects of the calculation procedures looked good.

5) Please assess the erosional stability of the steep slope under an outfall located on Soquel Ave. at the entrance corner to APN 030-341-04, a mobile home park. If there is any present problem or significant future potential for such problem at this outfall, this project will be conditioned to make needed improvements. Document the outfall condition and show any needed improvements on the next plan submittal. If project frontage runoff does not route to this location please fully describe the actual routing.

6) A water quality treatment device is missing for the frontage release. Please provide an effective treatment method for both directions of release. Indicate the level of treatment for both locations on the plans such that it is clear that it will effectively treat the types of pollutants generated for the automotive site use.

7) It appears that the 6 foot masonry wall along the rear west property line could block receipt of small amounts of runoff from three adjoining properties. Please provide small ground level passages through the base of the wall and note this on the plans.

8) Indicate on the plans the manner in which building downspouts will be discharged. Proposing downspouts as discharged directly to the storm drain system is generally inconsistent with efforts to hold runoff to pre-development rates in the manner required by policy 7.23.1.

Because this application is incomplete in addressing County development policies, resulting revisions and additions will necessitate further review comment and possibly different or additional requirements. The applicant is subject to meeting all future review requirements as they pertain to the applicant's changes to the proposed plans. ===== UPDATED ON NOVEMBER 29, 2005 BY DAVID W SIMS =====  
2nd Routing:

Prior Item 1) Complete. The applicant has significantly changed the method of mitigation from structural chamber detention to a form of detention that relies on

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## Discretionary Comments - Continued

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flow lag through the voids of gravel media. This method is much better at meeting the intent of County policy requirements to control a wider range of storm events up through the County standard design storm.

Prior item 2) Complete. Pervious pavement has been proposed in modest amounts of coverage equaling about 0.91 acres. The remaining increase in impervious surfacing is still significant. However the project either connects drains or slopes impervious surfaces onto the pervious paving and into the gravel beds for most of the project area. See item 4 - uncontrolled drainage.

Prior item 3) Complete. The form of mitigation now proposed relies on increased lag time of flows through coarse gravel media as the first form of runoff control. The system also has the potential to provide further detention storage. A detention/infiltration trench is also noted at the west boundary of the project, and appears to be another method of runoff control for a portion of the project area. This approach satisfies policy requirements.

Prior item 4) Incomplete. Calculation package:

a) There are still discrepancies in drainage area boundary determinations for post-development calculations. The riparian area in the rear corner, the entrance drives, the southwest under-sidewalk drain (now deleted?), and perhaps some planters are areas of unmitigated runoff that should be subtracted from the computed allowable release rate, and otherwise accounted for in the detention calculations. A significant area of pavement extending from the SE drive entrance to midway alongside the Ocean Honda building is shown to enter an inlet and discharge directly to the street. Why isn't most of this area connected to the mitigation measures provided? It is also unclear where much of the runoff from the back side and south end of Store More building 1 is directed. Please clarify/revise.

b) Please provide reference to all equations, note all assumptions, and give definition of variables, terms and references used in the Darcy analysis. It appears that the configurations and assumptions used in the calculations do not match with the configurations apparent on the plans. The mechanism that would make the assumptions of a full and uniform flow area valid for the aquifer and Darcy analysis is not apparent. In general, the work couldn't be followed in review check because of inadequate definition of terms and missing explanation and reference.

c) The C-value (0.3) used in the calculations for the pervious pavement is not appropriate within the detention storage calculations. For the configuration made, the runoff for this surface is like normal pavement (0.9) since it drains into itself and immediately into the storage area. The design should not assume both a low C-value and a storage capability simultaneously for the same area. Assuming one or the other behavior, but not both, would be appropriate.

d) The SWM plan report is unclear on how the potential capability of additional detention, as discussed in the report, will be achieved. Is an outlet control restriction provided to more substantially back-up the system, or to act as a fail-safe if the intended lag time through the gravel media is not realized?

e) Required storage volumes of 2180 and 180 seem out of proportion based on respect-  
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tive areas and runoff coefficients. Please check the accuracy of calculations for the lower figure.

f) Size and density of perforations in the gravel bed pipes (in and out) needs to be determined and explained in the calculations and shown on the plans such that **it** is clear they provide adequate passage or restriction. The perforated pipes delivering water to the gravel beds are likely to be affected by plugging due to the concentrated delivery of surface water by pipe systems. A sediment and debris trap would seem to be needed at certain inlet locations to simplify maintenance and extend service life.

Prior item 5) Incomplete. The engineer's report has stated that there is no visible erosion at the outfall on Soquel Drive. **It** is not clear the extent of effort made to reach this conclusion. Please provide more substantial description and documentation of the slope and outfall condition, such that **it** is clear that this entire slope has been thoroughly assessed. Show any needed improvements on the next plan submittal.

Prior item 6) Incomplete. Water quality treatment within the gravel beds by mechanical and aerobic mechanisms may be an acceptable means of treatment. The submitted report makes reference to this means without any supporting information. Please provide supporting data or references demonstrating the level of effectiveness. Indicate the level of treatment for both locations on the plans such that **it** is clear that **it** will effectively treat the types of pollutants generated for the automotive site use.

Prior item 7) Incomplete. **It** appears that the 6 foot masonry wall along the rear west property line could block receipt of small amounts of runoff from three adjoining properties. Please provide small ground level passages through the base of the wall and note this on the civil plans.

Prior item 8) Incomplete. Indicate on the plans the manner in which building downspouts will be discharged. ===== UPDATED ON JANUARY 12, 2006 BY DAVID W SIMS

3rd Routing:

Prior Items 1, 2, 3) Complete

Prior item 4) Complete for discretionary stage. Additional work is needed for the design details and calculations. Related comment has been transferred to miscellaneous comments and is to be addressed with the building application submittal.

Prior item 5) Complete. Further description and photo documentation has been provided in the engineer's report documenting the condition of the off-site drainage outfall. No improvements are proposed.

Prior item 6) Complete. Designer has provided supporting data and references demonstrating potentially high water quality treatment capabilities for the proposed gravel beds. These reference studies presume that all runoff will be filtered via sub-soil percolation. The proposed design cannot achieve significant percolation, but does allow limited contact of stormwater with the sub-soil interface. The treatment levels shown in the references are unlikely to be fully attained, and the

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Discretionary Comments - Continued

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proposed design will be less effective than the references indicate. However, the designer is now adding several silt and grease traps to the site storm drain system and the gravel beds will only add more benefit to water quality treatment. This exceeds minimum County requirements for most much of the project surfacing.

Prior item 7) Complete. Notation for ground level passages through the base of the 6 foot masonry wall have been added to the civil plans.

Prior item 8) Complete. The manner in which building downspouts will be discharged has been indicated on plan sheet C2.

Dpw Drainage Miscellaneous Comments

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

===== REVIEW ON MAY 18, 2005 BY DAVID W SIMS =====  
Miscellaneous:

A) Please provide notation on the plans for permanent bold markings at each inlet that read: "NO DUMPING - DRAINS TO BAY".

B) Note 4, sheet C5: thru-curb drains are to be built per Fig. ST-4B of the County Design Criteria. Please note or detail this.

C) Sheet C6: please improve display of H:V ratio of the section views so that line work can be more easily seen.

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

A drainage impact fee will be assessed on the net increase in impervious area. The fees are currently \$0.85 per square foot, and are assessed upon permit issuance. Reduced fees are assessed for semi-pervious surfacing to offset costs and encourage more extensive use of these materials.

All resubmittals shall be made through the Planning Department. Materials left with Public Works may be returned by mail, with resulting delays.

Please call the Dept. of Public Works, Stormwater Management Section, from 8:00 am to 12:00 noon if you have questions. ===== UPDATED ON NOVEMBER 29, 2005 BY DAVID W SIMS =====

Prior item A) Please provide notation on the plans for permanent bold markings at each inlet that read: "NO DUMPING - DRAINS TO BAY".

Prior item B) Note 4, sheet C5: thru-curb drains are to be built per Fig. ST-4B of the County Design Criteria. Please note or detail this.

Environmental Review Initial Study

ATTACHMENT 9 16-04-10  
APPLICATION 05-0252



Discretionary Comments - Continued

Project Planner: Cathleen Carr  
Application No.: 05-0252  
APN: 030-061-18

Date: February 15, 2006  
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Page: 7

Prior item C) Complete.

D) Location of detail 9/C7 does not show on the plan sheets.

E) The curb with slotted openings needs to be detailed showing the size and frequency of the slot interval.

F) The detention/retention trench near the west boundary needs to be detailed

G) The cutslope shown on section B-B at the rear of the property will allow sediments to drain into the gravel bed and collector pipe area. Isolation of these sediments from the gravel bed is needed, such as with a curb.

H) The compacted sub-grade under the gravel beds is not drawn at the 1% slope that is noted. This should be corrected, to assure that elevation for the collector pipe is appropriate,

I) The detail for the level spreader does not show perforations along the entire pipe. Is a section of solid pipe intended? Please clarify.

J) Submit test data from Dees & Assoc. (8/31/05) as supporting info for design-report. ===== UPDATED ON JANUARY 12, 2006 BY DAVID W SIMS =====  
Miscellaneous:

Prior item A) Please provide notation on the plans for permanent bold markings at each inlet that read: "NO DUMPING - DRAINS TO BAY".

Prior item B) Corrected.

Prior item C) Corrected

Prior item D) Location of detail 9/C7 does not show on the plan sheets

Prior item E) The curb with slotted openings needs to be detailed showing the size and frequency of the slot interval.

Prior item F) The detention/retention trench near the west boundary needs to be detailed.

Prior item G) The cutslope shown on section B-B at the rear of the property will allow sediments to drain into the gravel bed and collector pipe area. Isolation of these sediments from the gravel bed is needed. such as with a curb.

Prior item H) The compacted sub-grade under the gravel beds is not drawn at the 1% slope that is noted. This should be corrected, to assure that elevation for the collector pipe is appropriate.

Prior item I) Corrected

Prior item J) Submit test data from Dees & Assoc. (8/31/05) as supporting info for design report.

Environmental Review Initial Study

ATTACHMENT 9, 3 & 10  
APPLICATION 05-0252

Discretionary Comments - Continued

Project Planner: Cathleen Carr  
Application No.: 05-0252  
APN: 030-061-18

Date: February 15, 2006  
Time: 14:07:44  
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Item K) This item transfers all issues and requirements from discretionary item 4, 2nd routing. The proposed mitigations generally appear conservative in extents and have the potential capability once refinements are made to adequately mitigate impacts to County standards. However, the stormwater mitigation design work and calculations still require corrections and more detailed development of both the methodology and the construction details. The applicant should understand that further changes will be needed to reach a final design. Selected pages from the design calculations have been marked up and returned to the designer. It is recommended that the designer meet to discuss the project design before proceeding with the 1st submittal of the building plans. More detailed comment will be given after the 1st building submittal.

Dpw Driveway/Encroachment Completeness Comments

===== REVIEW ON MAY 2, 2005 BY DEBBIE F LOCATELLI ===== Building permit application shall reflect details of sidewalk, driveway approach(s) and ADA requirements meeting the County of Santa Design Criteria, At the time of building permit application, an encroachment permit shall be required for all work within the County right-of-way.

Dpw Driveway/Encroachment Miscellaneous Comments

===== REVIEW ON MAY 2, 2005 BY DEBBIE F LDCATELLI =====  
Civil engineered plans required for curb, gutter and sidewalk at the time of building permit application submittal.

Dpw Road Engineering Completeness Comments

===== REVIEW ON MAY 12, 2005 BY GREG J MARTIN =====  
The comments for this review has been saved by Diane Thorsen 1/17/06. Please see Greg Martin for electronic copy.

Additional comments will be made once these comments are addressed. If you have any questions please contact Greg Martin at 831-454-2811.

===== UPDATED ON NOVEMBER 18, 2005 BY GREG J MARTIN ===== Comments on the traffic impact analysis shall be appended to these comments at a later date. Please contact Jack Sohriakoff if necessary regarding comments on the traffic study. Show the sawcut line on the plan view. Show a typical detail showing the sawcut line at the bike lane line. The detail should include the structural section. The 12 foot aisle which is apparently for trucks should be one-way and 16 feet in width. The direction of travel should be shown with pavement markers and should be in the northern direction. Please show details of the entrance to Store More #2. It is unclear how the gate will operate. Will there be push button key entry entry? There are several doors exiting the Ocean Honda directly into parking areas or aisles. We recommend 4.625 foot wide grade separated sidewalks along the front of the building where this occurs to improve pedestrian safety.

If you have any questions please call Greg Martin at 831-454-2811.

===== UPDATED ON NOVEMBER 30, 2005 BY GREG J MARTIN ===== -----Traffic Study Comments by Jack Sohriakoff----- The Ocean Honda and Store More America draft traffic impact analysis dated October 27, 2005. by Higgins Associates is not  
Environmental Review Initial Study

ATTACHMENT  
APPLICATION

7-8-28-11  
-0252

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Discretionary Comments - Continued

Project Planner: Cathleen Carr  
Application No.: 05-0252  
APN: 030-061-18

Date: February 15, 2006  
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Page: 9

accepted at this time, A supplemental analysis will be required to evaluate the 41st Avenue inter- sections at the Highway 1 southbound ramps and Gross Road. The current evaluation was not based upon the same baseline criteria as in the previous Safeway and Home Depot traffic studies. It is required that the analysis be done for purposes of consistency with the other reports. Additional comments will be submitted when the requested supplemental information has been reviewed. The Soquel Transportation Improvement Area (TIA) fees are based upon the net new daily trips expected to be generated by the project. The traffic impact analysis calculated the total net new daily trips to be 580 trips per day. The current Soquel TIA fee is \$200 per trip end for transportation improvement fees and \$200 per trip end per roadside improvement fees. Therefore, the total anticipated Soquel TIA fees are \$232,000  $((\$200 + \$200 \text{ per daily trip}) \times 580 \text{ daily trips} = \$232,000)$ . Ocean Honda is expected to generate 437 daily trips (\$174,800), and Store More is expected to generate 143-daily trips (\$57,200).

===== UPDATED ON JANUARY 12, 2006 BY GREG J MARTIN ===== Left and right flowline and centerline profiles should be provided with slope percentages shown along Soquel Drive. Actual cross sections for Soquel Drive should be provided which include the right-of-way.

Please number each space and identify the numeric range for Store More America and Honda. It is unclear whether the parking in front of the 1st two Store More America buildings consists of exclusive parking bays or whether there is a sidewalk in front of the Store More America which would allow the parking to be shared.

Access to the 3rd Store More America building is through a gate. the width of the aisle at this location is approximately 15 feet. Aisles are required to be 26 feet in width. Please show details of the entrance to Store More No. 2. It is unclear how the gate will operate. Will there be push button key entry entry? Santa Cruz Metro has recommended the bus stop on Soquel Drive just west of the intersection of 41st and Soquel Drive be improved in lieu of a bus stop within the Ocean Honda frontage. Public Works recommends this as well as a full turnout in order to alleviate any congestion result- ing from buses stopping in the travel lane. These improvements will be eligible for fee credit.

Comments on the traffic impact analysis shall be appended to these comments at a later date. Please contact Jack Sohriakoff if necessary regarding comments on the traffic study. ===== UPDATED ON FEBRUARY 8, 2006 BY JACK R SOHRIAKOFF ===== The Traffic Impact Analysis by Higgins Associates dated Oct. 27, 2005, and the supplemental memorandum dated January 23, 2006, has been reviewed and accepted by Public Works. The conclusion of the analysis was that the proposed project would not create a significant impact on the local study intersections during the peak hours. In addition, the memorandum verifies the need to utilize previous traffic volume data from the year 2000 and not the more recent data due to the decrease in volumes over the past several years for various segments of 41st Avenue. especially north of Highway 1 fronting the Redwood Shopping Center (Safeway. Home Depot). This is consistent with the previous Home Depot traffic analysis which utilized the basic parameters of the Safeway traffic analysis. This approach initiates a worst case scenario in determining potential traffic impacts. Transportation improvement area fees were previously calculated, but the final fees will be based upon the actual square footage identified in the building permit phase.

Environmental Review Initial Study-

ATTACHMENT 9, 9 of 10  
APPLICATION 05-0252

Discretionary Comments - Continued

Project Planner: Cathleen Carr  
Application No. : 05-0252  
APN: 030-061-18

Date: February 15, 2006  
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Dpw Road Engineering Miscellaneous Comments

===== REVIEW ON ~~MY~~ 12, 2005 BY GREG J MARTIN =====  
===== UPDATED ON NOVEMBER 18, 2005 BY GREG J MARTIN =====  
===== UPDATED ON NOVEMBER 30, 2005 BY GREG J MARTIN =====  
===== UPDATED ON JANUARY 12, 2006 BY GREG J MARTIN =====

Environmental Health Completeness Comments

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

===== REVIEW ON MAY 11, 2005 BY JIM G SAFRANEK ===== NO COMMENT.  
===== UPDATED ON NOVEMBER 15, 2005 BY JIM G SAFRANEK =====  
NO COMMENT

Environmental Health Miscellaneous Comments

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

===== REVIEW ON MAY 11, 2005 BY JIM G SAFRANEK =====  
**I**f hazardous materials or hazardous waste are to be used, stored or generated on site, contact the appropriate Hazardous Material Inspector in Environmental Health at 454-2728 to determine if a permit is required.  
===== UPDATED ON NOVEMBER 15, 2005 BY JIM G SAFRANEK ===== See May 11 comment.

Environmental Review Initial Study  
ATTACHMENT 9, 10 of 10  
APPLICATION 05-0252

## NEW WATER SERVICE INFORMATION FORM

## SANTA CRUZ MUNICIPAL UTILITIES

809 Center Street, Room 102  
Santa Cruz, CA 95060  
Telephone (831) 420-5210

Multiple APN? Y

AFN 030-061-18

Date: 11/13/2003

Revision Date 1 : 5/10/2005

Revision Date 2 :

PROJECT ADDRESS: 3711 &amp; 3715 Soquel Dr.

## APPLICANT INFORMATION:

Name: Store More America/Hamilton Swift Land Use  
Mail Street: 1509 Seabright Ave  
City/St/Zip: Santa Cruz CA 95062-  
Phone: (831) 459-9992 ; Fax: (831) 459-9998  
Cell:

## PROJECT DESCRIPTION:

Proposed lot line adjustment to create 2 lots from 3 for Ocean Honda Dealership and Store More America. Includes APN -19 & 20. Refer to 030-061-19 for auto dealership.

## SECTION 1 EXISTING MAIN AND SERVICES

Main Size/Type/Age: 10" CI/DI 1967

Elevation zone: N

| Sizes | Account #'s | Old SIO #'s | Status | Date Closed | Type |
|-------|-------------|-------------|--------|-------------|------|
| 1"    | 065-2155    |             | Active |             | SFD  |
| 5/8   | 065-2150    |             | Active |             | Bus  |
| 5/8   | 065-2145    |             | Active |             | Bus  |

No connection fee credit(s) for services inactive over 24 months

## SECTION 2 FIREFLOWS

Hyd # 4435 Size/Type: 6" Stmr Static 60 Res 42 Flow 999 Flow w/20# Res. 1367 FF Date 08/03  
Location: x fr 3801 Soquel Dr.

Hyd # 1652 Size/Type: 6" Stmr Static 55 Res 42 Flow 949 Flow w/20# Res. 1620 FF Date 04/03  
Location: 3645 Soquel Dr.

## SECTION 3 WATER SERVICE FEES

| Service Type | Service Size | Meter Size | Meter Type | # SIOs | Meter Eng Inst | Plan Review | Permit Insp | Rvw Fee | Eackflw Permit Type | Permit Fee | Water System Dev | Sewer Connection | Zone Capacity |
|--------------|--------------|------------|------------|--------|----------------|-------------|-------------|---------|---------------------|------------|------------------|------------------|---------------|
| Domestic     |              |            |            |        |                |             |             |         |                     |            |                  |                  |               |
| Dom/Fire     |              |            |            |        |                |             |             |         |                     |            |                  |                  |               |
| Irrigation   |              |            | Existing   |        |                |             |             | \$50    | RP                  | \$120      |                  |                  |               |
| Business     | 3/4          | 5/8        | Existing   |        |                |             |             |         |                     |            |                  |                  |               |
| Fire Svc     | 6            | 5/8        | Disc       | 1      | \$263          | \$50        | \$160       | 550     | DCDA                | \$120      |                  |                  |               |
| Hydrant      |              |            | Type       |        |                |             |             |         |                     |            |                  |                  |               |

WATER SERVICE FEE TOTALS \$263 \$50 \$180 \$100 \$240 \$ \$ \$ \$0.00

Street Opening Fee \$ Irr Plan Review Fee \$60 Total \$893 - Credits GRAND TOTAL \$893

## ADDITIONAL COMMENTS

Existing water Services to 3711 and 3715 are adequate for domestic and irrigation use for Store More America. Please confirm new fire service size per Centra Fire Protection District. Submit landscape irrigation plans for the storage facility parcel to determine meter size requirements. A reduced pressure type backflow prevention device must be installed on the irrigation service within 8' of the meter and double check detector assembly on 4" and larger fire service. Note that on Site fire hydrants will be private and not inspected by the Water Department and that water services may not be shared by the two parcels, per Santa Cruz Municipal Code.

## SECTION 4 QUALIFICATIONS

1. Service will be furnished upon:

(1) payment of the required fees due at the time service is requested (a building permit is required), and, (2) installation of the adequately sized water services, water mains and fire hydrants as required for the project under the rules and regulations of the Santa Cruz Water Department and the appropriate Fire District and any restrictions that may be in effect at the time application for service is made.

2. Fees and charges noted above are accurate as of the date hereof, and are subject to change at any time without notice to applicant.

BP# PLAN APP # 05-0252 PLANNER Cathleen Carr REVIEWED BY M. Fisher

NOTICE: This form does not in any way obligate the City. It is provided only as an estimate to assist you in your planning and as a record for the Water Department. The requirements set forth on this form may be changed or corrected at any time without prior notice. Fees collected by other agencies are not included on this form.

Environmental Review Initial Study  
ATTACHMENT 10, 1 of 2  
APPLICATION 05-0252

## SEW WATER SERVICE INFORMATION FORM

Multiple APN? **N**APN **030-061-19**

## SANTA CRUZ MUNICIPAL UTILITIES

Date: **5/10/2005**

Revision Date 1 :

809 Center Street, Room 102  
 Santa Cruz, CA 95060  
 Telephone (831) 420-5210

Revision Date 2 :

PROJECT ADDRESS: **3801 Soquel Drive**

## APPLICANT INFORMATION:

Name: **Ocean Honda/Hamilton Swift Land Use & Dev**  
 Mail Street: **1509 Seabright Ave**  
 City/St/Zip: **Santa Cruz CA 95062-**  
 Phone: **459-9992** Fax: **(831) 459-9998**  
 Cell:

## PROJECT DESCRIPTION:

Proposed lot line adjustment to create 2 lots from 3 for Store More America and Ocean Honda Dealership. Refer to APN 030-061-18 & 20 for storage facility.

## SECTION 1 EXISTING MAIN AND SERVICES

Main Size/Type/Age: **10" CI/DI 1967**Elevation zone: **N**

| Sizes     | Account #'s     | Old SIO #'s | Status          | Date Closed     | Type             |
|-----------|-----------------|-------------|-----------------|-----------------|------------------|
| <b>1"</b> | <b>065-2140</b> |             | <b>Inactive</b> | <b>8/2/2004</b> | <b>Multi Res</b> |
|           |                 |             |                 |                 |                  |
|           |                 |             |                 |                 |                  |
|           |                 |             |                 |                 |                  |

*No connection for credit(s) for services inactive over 24 months*

## SECTION 2 FIREFLOWS

Hyd # **1135** Size/Type: **6" stmr** Static **60** Res **42** Flow **888** Flow w/20# Her **1367** FF Date **08/03** **±**

Location: **x fr 3801 Soquel Or**

Hyd # **1652** Size/Type: **6" stmr** Static **55** Res **42** Flow **949** Flow w/20# Res. **1620** FF Date **04/03**

Location: **3645 Soquel Or**

## SECTION 3 WATER SERVICE FEES

| Service Type | Meter Size   | Meter #      | Meter Type      | Eng SIOs | Plan Inst    | Permit Review | Backflow Rvw Fee | Permit Fee  | Water System Dev | Sewer Connection | Zone Capacity   |
|--------------|--------------|--------------|-----------------|----------|--------------|---------------|------------------|-------------|------------------|------------------|-----------------|
| Domestic     |              |              |                 |          |              |               |                  |             |                  |                  |                 |
| Dom/Fire     |              |              |                 |          |              |               |                  |             |                  |                  |                 |
| Irrigation   | <b>1</b>     | <b>1</b>     | <b>Existing</b> |          |              |               | <b>\$50</b>      | <b>RP</b>   | <b>\$120</b>     |                  |                 |
| Business     | <b>1 1/2</b> | <b>1 1/2</b> | <b>Disc</b>     | <b>1</b> | <b>\$488</b> | <b>\$150</b>  | <b>\$180</b>     | <b>\$50</b> | <b>RP</b>        | <b>\$120</b>     | <b>\$32,650</b> |
| Fire Svc     | <b>6</b>     | <b>5/8</b>   | <b>Disc</b>     | <b>1</b> | <b>\$263</b> |               | <b>\$180</b>     | <b>\$50</b> | <b>DCDA</b>      | <b>\$120</b>     |                 |
| Hydrant      |              |              | <b>Type</b>     |          |              |               |                  |             |                  |                  |                 |

**WATER SERVICE FEE TOTALS** **\$751** **\$150** **\$360** **\$150** **\$360** **\$32,650** **\$** **\$00**

**Street Opening Fee** **\$** **Irr Plan Review Fee** **\$160** **Total** **\$34,581** **- Credits** **\$** **GRANDTOTAL** **\$34,581**

## ADDITIONAL COMMENTS

Fees listed above based on installation of flushometer valve water closets. IF tank style fixtures are installed, the existing 1" lateral would be adequate to branch into a 3/4" domestic and 3/4"x 5/8" irrigation meter, thus no additional Service installation would be required. Confirm new fire service size per Central Fire Protection District. Submit landscape/irrigation plans for the car dealership parcel to determine meter size requirement. Reduced pressure type backflow prevention devices must be installed on both domestic and irrigation services and double check detector assembly on 4" and larger fire service. Note that on Site fire hydrants are private and will not be inspected by the Water Department and that water Services may not be shared by the 2 parcels. per Santa Cruz Municipal Code.

## SECTION 4 QUALIFICATIONS

1. Service will be furnished upon:

(1) payment of the required fees due at the time service is requested (a building permit is required), and, (2) installation of the adequately sized water services, water mains and fire hydrants as required for the project under the rules and regulations of the Santa Cruz Water Department and the appropriate Fire District and any restrictions that may be in effect at the time application for service is made.

2. Fees and charges noted above are accurate as of the date hereof, and are subject to change at any time without notice to applicant.

BP# **PLAN APP # 05-0252** **PLANNER Cathleen Carr** **REVIEWED BY M. Fisher**

NOTICE: This form does not in any way obligate the City. It is provided only as an estimate to assist you in your planning and as a record for the Water Department. The requirements set forth on this form may be changed or corrected at any time without prior notice. Fees collected by other agencies are not included on this form.

Environmental Review Initial Study

**ATTACHMENT 10, 2082**  
**APPLICATION 05-0252**

# **SANTA CRUZ COUNTY SANITATION DISTRICT**

## **INTER-OFFICE CORRESPONDENCE**

DATE: NOVEMBER 18, 2005 (2)" Review)  
TO: PLANNING DEPARTMENT: CATHLEEN CARR  
FROM: SANTA CRUZ COUNTY SANITATION DISTRICT  
SUBJECT: CONDITIONS OF SERVICE FOR THE FOLLOWING  
PROPOSED DEVELOPMENT  
APN: 030-061-18, -19 & -20 APPLICATION NO.: 05-0252  
PARCEL ADDRESS: 3715, 3801 AND 3711  
PROJECT DESCRIPTION: CONSTRUCT THREE COMMERCIAL BUILDINGS  
(AN AUTO DEALERSHIP AND TWO STORAGE  
BUILDINGS), LOT LINE ADJUSTMENT THAT  
WILL RESULT IN TWO PARCELS

---

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

A complete engineered sewer plan, addressing all issues required by District staff and meeting County "Design Criteria" standards, is required. District approval of the proposed discretionary permit is withheld until the plan meets all requirements. The following revisions/additions shall be made to the plans or final map:

- Sheet CVR –Revise Note 19 ("Sanitation District Notes") by omitting reference to closed pick holes in manhole covers.
- Sheet C-3 – the connection of private 6-inch private laterals to the existing 6" public sewer main in Soquel Drive, for Store More and Honda, must include the construction of manholes. Provide elevations of proposed manhole rims and inverts (above shelf connection) for new manhole and label "To be constructed per Fig. SS-4."
- Show profile of proposed 6" lateral for Store More buildings and label "2% Min. Slope." Include clean out rim and invert elevations. If special backfill provisions per Fig. SS-11 are required, show on plans location and extent. Manholes and cleanouts shall be in traffic rated boxes and noted on plans in traffic areas. Note on plans that there is 100' maximum spacing between cleanouts.
- Show profile of proposed 6" lateral for Honda building and label "2% Min. Slope." Include clean out rim and invert elevations. If special backfill provisions per Fig. SS-11

Environmental Review Initial Study

ATTACHMENT 11, 1 of 3  
APPLICATION 05-0252

CATHLEEN CARR

Page -2-

are required, show on plans location and extent. Man holes and cleanouts shall be in traffic rated boxes and noted on plans in traffic areas. Note on plans that there is 100' maximum spacing between cleanouts. Trash enclosure must include a roof to prevent storm water from entering sewer. Show on plans and label 3-stage 1500 gallon clarifier for carwash wastewater (the plans do not show clarifier).

CATHLEEN CARR

Page -2-

- Each lateral shall require the construction of a sampling manhole per Fig. SS-22.

- \*Providesurveyed elevations for existing manhole rims and inverts

Provide surveyed rim elevation of manhole #47.

The sewer laterals serving APN: 030-061-18 & -19 were abandoned and inspected by the District Inspector. However, our records indicate that the lateral for APN: 030-061-20 (3711 Soquel Drive) was not found. The applicant is in the process of determining if the structure at 3711 Soquel Drive was connected to the sewer or served by a private septic system. This determination shall be made prior to the District's approval of a discretionary permit.

The proposed car dealership building shall include the installation of a water sub-meter per District policy to determine quantity of domestic and interior wash bay water for the purpose of calculating annual sewer service charges. All water used that enters the sewer system shall be measured by the submeter. The use of the submeter shall be a requirement and condition of approval for this permit application and shall be included with the Planning Department's permit conditions.

All questions regarding the following criteria should be directed to Jo Fleming of the Santa Cruz County Sanitation District Environmental Compliance Section (831) 464-5462. The Sanitation District must be allowed to inspect installation of the clarifier and wash bay. Please call a District inspector (either Amy Gross 462-8313 or Dan Chua 462-83 14) prior to pouring any concrete.

Car Wash/Trash Enclosure Discretionary Permit Requirements:

'No storm water is allowed to enter the car wash bay, mud basins or floor drain in trash enclosure area. All catch basins will be covered sufficiently to prevent storm water infiltration into the sanitary sewer. This shall be noted on the plans.

'Wastewater generated by car wash activities must be collected and treated before being discharged to the sanitary sewer.

Environmental Review initial Study

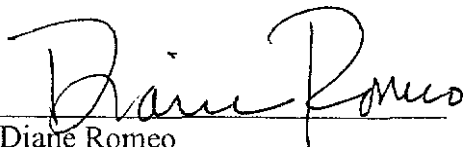
ATTACHMENT 11, 2 of 3  
APPLICATION 05-0252

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'Wastewater that is not recycled for additional car washing must be treated through a minimum 1500-gallon clarifiers, as specified in the Santa Cruz County Design Criteria. Mud catch basins must be cleaned out within an adequate time frame to prevent clogging of lines from the catch basins to the clarifier, and to prevent wastewater backups into the car wash. This is generally done every 1-3 months, depending on the number of vehicles washed.

•The clarifiers must be completely pumped out at least once a year or as often as deemed necessary by the County to prevent oil and grease from entering the sanitary sewer at concentrations greater than 50 mg/L.

  
Diane Romeo  
Sanitation Engineering

DR/dr

c: SCCSD Operations – Jo Fleming

Applicant: John Swift  
1509 Seabright Ave.  
Santa CNZ, Ca. 95060

Property Owner: Steven and Lesa John  
440 Auto Plaza Drive  
Capitola, CA 95010

Engineer: Bowman and Williams  
1011 Cedar Street  
Santa Cniz, CA 95060

Other: Rob Marani  
9055 Soquel Drive  
Aptos, CA 95003

Environmental Review Initial Study  
ATTACHMENT 14, 3 of 3  
APPLICATION 05-0252

George Avanesian  
400 Oyster Point Boulevard Su 115  
South San Francisco, CA 94080

10/25/05

TO: John Swift / Hamilton Swift

FROM: Kurt Fouts - Certified Arborist

SUBJECT: Ocean Honda Project

## EUCALYPTUS GROVE AT PROPOSED OCEAN HONDA

### OVERVIEW

The purpose of this report is to address the compatibility, of a grove of Blue Gum Eucalyptus (*Eucalyptus globulus*), with the proposed land use as an Ocean/Honda car dealership. The issues discussed, are those deemed important from an arborists point of view.

The quarter acre grove is located in the Northeast corner of the property. In general, the South and West perimeters of the grove are located on level ground. The interior trees are situated on a unevenly sloped grade. As this grade drains into the adjoining property, it becomes a riparian habitat composed primarily of willow trees.

The mixed age grove consists of approximately sixty Eucalyptus trees with trunk diameters ranging from 6" to 36". Tree heights range from forty to one hundred feet. The majority of trees in this grove (approx. 40), are less than 18" in diameter. At least twenty of these trees have trunk diameters of 18" or more and are considered heritage trees, under Santa Cruz County ordinance.

### ISSUES FOR MAINTAINING THE GROVE

This report will discuss three issues relating to the maintenance of the Eucalyptus grove.

#### #1 COMPATIBILITY OF EXISTING GROVE WITH PROPOSED RIPARIAN PLANTING

In order to establish a native riparian habitat, the developers have proposed to plant native trees, shrubs and grasses, on the same footprint as the existing Eucalyptus.

Understory establishment would be extremely limited. Blue Gum Eucalyptus produce alleopathic chemicals, which when released by Blue Gums in the form of seed pads and shredding bark, severely inhibits understory growth. In addition, Blue Gums create a physical barrier formed by high volumes of grove debris consisting of bark strips, limbs and branches.

A large percentage or all, of this grove would need to be removed if a successful native planting is attempted. Due partially to its incompatibility with native plants, the

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California Invasive Plant Council, includes Blue Gum Eucalyptus on its invasive plant list.

## #2 RELATIVE DECREE OF HAZARD THIS GROVE REPRESENTS

Hazard evaluation is the systematic process of assessing the potential for a tree or one of its parts to fail and injure people or damage property. With that in mind, this report makes only general observations about this grove of Eucalyptus. A complete hazard evaluation would require the individual inspection of each tree.

The targets related to tree failure on this property include stored cars on the proposed lot to the South of the grove and the existing motor homes to the North of the grove. The California Tree Failure Report lists the most common failure patterns for Eucalyptus to be branch failure (decay usually not present) and whole tree failure due to root rot.

The trees in this grove were observed to exhibit several structural defects that predispose trees to failure. These included: codominant stems (trunks) with included bark, stump sprouted trunks lacking connective tissue, bowing limbs due to heavy end weight and large (4" to 10") horizontal limbs with excessive end weight. None of the defects observed would be rated (on their own) as severe. Again, complete evaluation would require individual attention to each tree.

There is another factor that should be noted regarding the failure potential of these trees. If the decision is made to selectively thin this grove of trees, the remaining trees would become more susceptible to failure, both whole tree and branch. This is due to the protective effect groups of trees have for each other during wind storm events, when the largest percentage of failures occur.

## #3 NUISANCE IMPACTS

If the area under (or near) the canopy of these trees is utilized for car storage, there would be increased maintenance necessary for those cars. Blue Gum Eucalyptus trees shed on a continuous basis. The resins present in the seed pods and other tree parts will accumulate on the cars and require regular cleaning. Additionally, the large volume of small branch debris could potentially scratch the paint on cars.

Respectfully submitted,  
Kurt Fouts

Kurt Fouts

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ATTACHMENT 12, 2 of 2  
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# COUNTY OF SANTA CRUZ

## PLANNING DEPARTMENT

701 OCEAN STREET, SUITE 410, SANTA CRUZ, CA 95060  
(831) 454-2580 FAX (831) 454-2131 TDD (831) 454-2123  
ALVIN JAMES, DIRECTOR

---

October 2, 2003

Leilani Barnett

Hamilton Swift Land Use and Development Consultants, Inc.  
1509 Seabright Ave., Suite A1  
Santa Cruz, CA 95062

Re: Riparian Pre-Site for 3715, 3801, 3711 Soquel Drive, APN: 030-061-18, 19, 20

Dear Ms. Barnett:

I have performed a Riparian Pre-site study at your request in order to establish the location of riparian resources on the subject parcel. The study included doing background research on available files in the Planning Department and performing a site visit.

For this parcel, the watercourse that lies adjacent to the proposed development is an unnamed intermittent stream that drains into Soquel Creek to the west.

For parcels within the Urban Services Line that lie adjacent to an arroyo, the appropriate riparian buffer from an intermittent stream is determined by the character of the vegetation within the riparian corridor as well as the average slope of the land within 30 feet of the arroyo bank. The vegetation within the riparian corridor at this site is characterized by a eucalyptus grove, coast live oaks, willow, poison oak, Himalayan blackberry and non-native grasses. The slope adjacent to the stream bank is relatively flat and the buffer area has been historically developed. The riparian buffer for this site is twenty (20) feet, plus a ten (10) foot development setback, for a total riparian setback of thirty (30) feet, measured from the dripline of the willow adjacent to the bank of the arroyo. The riparian buffers and development setbacks have been added to the enclosed map *only for those areas where proposed development appears to be close to the riparian zone*; the riparian buffers and setbacks also extend upstream and downstream of the areas where measurements were taken. Please note that the riparian corridor is wholly located within the boundaries of the adjacent parcel and could not be observed at close range.

The proposed construction of a car dealership and outdoor sales lot constitutes development activity as defined in Section 16.30.030 of the County Ordinance. Therefore, any development that encroaches into the 30-foot riparian setback will require a Minor Riparian Exception. This includes, but is not limited to grading, removal of vegetation to bare soil, building and paving, and the topping or felling of any standing vegetation greater than 8 feet in height. While the property lines were not staked in the field at the time of the site visit, it appears that the 30-foot riparian setback will likely not affect the proposed development if it conforms to the standard rear and side setback to property lines.

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The question of whether or not the findings can be made for a Minor Riparian Exception cannot be fully addressed at this time. However, such findings **cannot** be made unless it is demonstrated that less environmentally damaging alternatives, such as relocation of the building envelope, are not feasible. Please review the enclosed copy of the Riparian Comdor Protection Ordinance paying particular attention to the highlighted section that addresses *all* of the required findings necessary for approval of a Minor Riparian Exception.

Before submitting an application for a Minor Riparian Exception, please consider design alternatives that may reduce and/or eliminate encroachment into the riparian corridor buffers/setbacks. Please include this analysis in the application.

***Please note: This letter does not address issues related to any Environmental Planning issues (e.g., grading, soils, geology) aside from the riparian pre-site.***

If you have questions regarding this riparian pre-site, please call me at (831) 454-3164 or e-mail me at [robin.bolster@co.santa-cruz.ca.us](mailto:robin.bolster@co.santa-cruz.ca.us)

Sincerely,



Robin M. Bolster  
Resource Planner

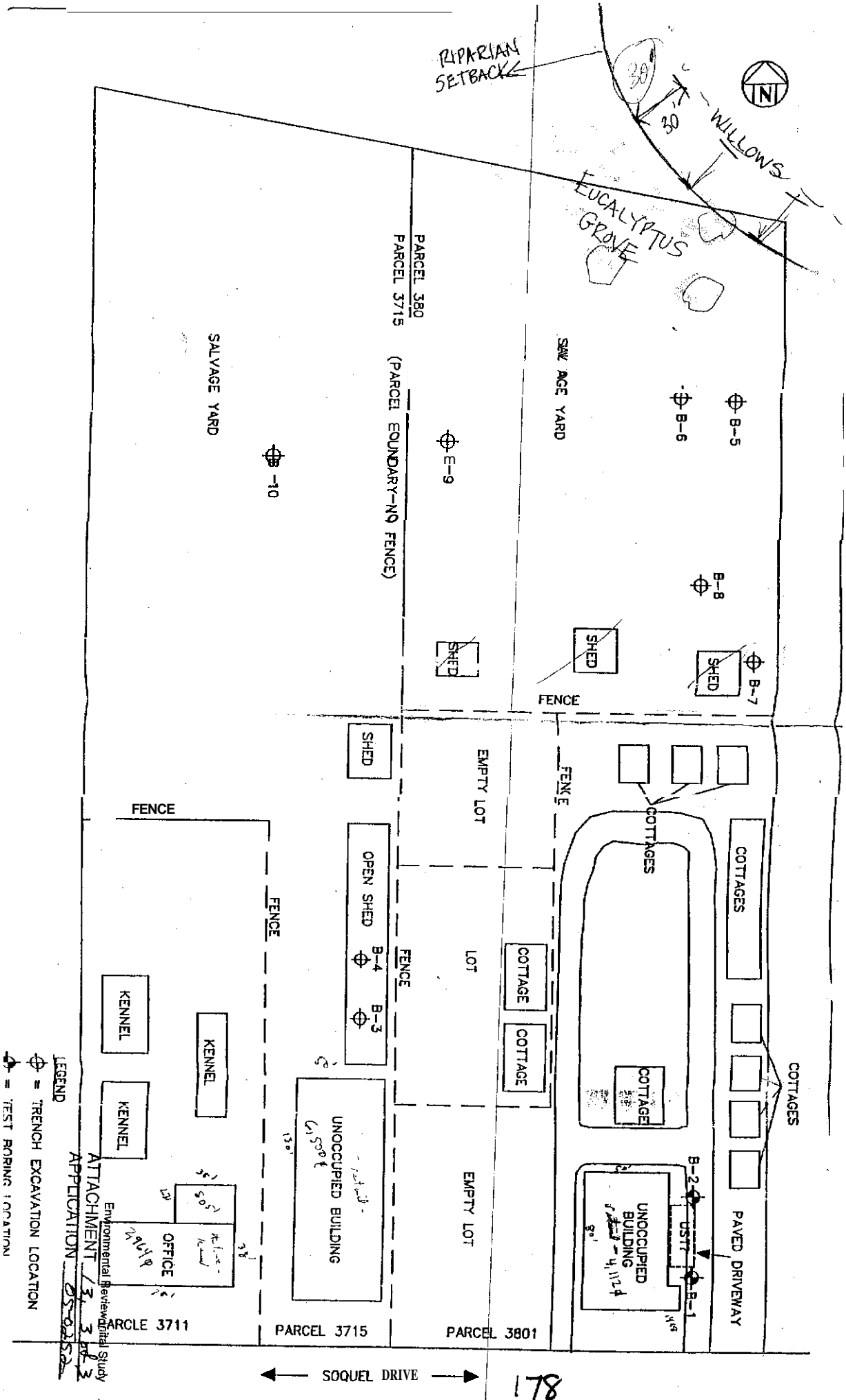
Enclosure

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DANIELSON ENGINEERING INC.  
 8 HANER VAL. SUITE C  
 WILSONVILLE, CALIFORNIA 95078

SITE PLAN  
 PARCELS 3711, 3715 & 3801  
 SOQUEL DRIVE  
 SOQUEL, CALIFORNIA

DATE 3/1/96  
 NTS  
 PROJECT NO. 9511201



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 APPLICATION 050252



HIGGINS ASSOCIATES

CIVIL & TRAFFIC ENGINEERS

# OCEAN HONDA AND STORE MORE AMERICA

SANTA CRUZ COUNTY, CALIFORNIA

## TRAFFIC IMPACT ANALYSIS

*Updated Draft Report*

Prepared For

Hamilton-Swift  
Santa Cruz, CA

October 27, 2005  
Updated December 12, 2005

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## EXECUTIVE SUMMARY

Traffic analysis has been prepared for the proposed Ocean Honda and Store More America development in unincorporated Santa Cruz County, California. The project site is located on Soquel Drive between 41<sup>st</sup> Avenue and Research Park Drive, near the City of Capitola.

The project is composed of a 38,300 square foot car dealership, a 99,735 square foot self-storage facility, and 1,850 square feet of general office space. The car dealership would be a relocation of an existing facility currently located on Auto Plaza Drive in Capitola. The self-storage facility and general office space would be new uses to the area. Existing uses on the project site would be removed as part of this project.

Analysis has been performed during the AM and PM peak periods, utilizing the *2000 Highway Capacity Manual* methodologies, for the following seven intersections:

1. Rodeo Gulch Road/Soquel Drive;
2. 41<sup>st</sup> Avenue/Soquel Drive;
3. Robertson Street/Soquel Drive;
4. Porter Street/Soquel Drive;
5. 41<sup>st</sup> Avenue/Northbound Highway 1 Off-Ramp;
6. 41<sup>st</sup> Avenue/Southbound Highway 1 Off-Ramp; and
7. 41<sup>st</sup> Avenue/Gross Road.

As recommended by County staff, the study analyzed traffic conditions under the following four development scenarios:

- 3 Existing Traffic Conditions;
- 3 Background (Existing Plus Approved) Traffic Conditions;
- 3 Background Plus Project Traffic Conditions;
- 3 Cumulative Traffic Conditions (Year 2020).

### **Existing Conditions:**

The intersection analysis is based upon traffic counts collected in 2000 by Fehr & Peers Transportation Consultants in its report *41<sup>st</sup> Avenue Safeway Shopping Center Expansion Traffic Impact Analysis*, January 2001. These older counts were utilized due to a recent historical drop in area traffic volumes, on-going construction within the study area, and the closure and construction occurring at the Safeway and former K-Mart on 41<sup>st</sup> Avenue.

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Most of the study intersections would operate within acceptable levels of service under Existing conditions. The following intersections would not, and would require improvements:

1. RobertsodSoquel – signalize intersection, add a westbound Soquel left turn lane with protected signal phasing
2. Porter/Soquel – add a southbound Porter right turn overlap signal phase, convert northbound and southbound Porter left turn signal phasing from protected to protected-permitted
3. 41<sup>st</sup>/Southbound Hwy. 1 Off-Ramp and 41<sup>st</sup>/Gross – add a southbound 41<sup>st</sup> right turn lane at Gross Road

### **Background Conditions:**

Trips generated by approved and short-term projects in the vicinity of the project site, and within the city of Capitola, were added to the Existing volumes to achieve Background condition volumes. Again, most of the study intersections would operate within acceptable levels of service. Those that would operate unacceptably are the following, which also operated unacceptably under Existing conditions:

1. RobertsodSoquel
2. Porter/Soquel
3. 41<sup>st</sup> Southbound Hwy. 1 Off-Ramp and 41<sup>st</sup>/Gross

The same improvements recommended under Existing conditions are again recommended under Background conditions. No additional improvements are recommended under Background conditions.

### **Background Plus Project Conditions:**

The project is estimated to generate a net 591 daily trips, with 35 trips (36 in, -1 out) during the AM peak hour, and 68 trips (25 in, 43 out) during the PM peak hour. This trip generation is based in part upon counts performed by Fehr & Peers in May 2000 in two locations – at the existing car dealership site on Auto Plaza Drive in Capitola (to estimate the car dealership's trip generation at the new site), and at the project site (to account for the existing uses of the site). The trip generation for the self-storage portion of the project was based upon trip rates within the Institute of Transportation Engineers' publication *Trip Generation*, 7<sup>th</sup> Edition, 2003.

The same intersections that operated unacceptably under Existing and Background conditions continued to operate unacceptably under Background Plus Project. However, no additional intersections would operate unacceptably. The study project would constitute a significant impact at just one of the deficient intersections – Robertson/Soquel. The project would be responsible for payment of the Santa Cruz County traffic impact fee for the study area, which covers the improvements at the RobertsodSoquel intersection, as well as payment of a fair-share contribution towards the improvements at the Porter/Soquel, 41<sup>st</sup>/Southbound Hwy. 1 Off-Ramp, and 41<sup>st</sup>/Gross intersections, based upon the number of trips generated by this project. *Final Project Review Initial Study*

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**Cumulative Conditions:**

Cumulative conditions reflect operations in the Year 2020, and were derived based upon two methods – trips from cumulative projects in the area, and a 2%-per-year growth rate in the existing volumes for 5 years. The same intersections that operated deficiently under the previous scenarios continued to operate deficiently. In addition to the previously mentioned intersection improvements, the following additional recommendations are made to Santa Cruz County in order to improve long-term operations at these intersections:

1. Consider coordination of the existing and future traffic signals along Soquel Drive in Soquel
2. Consider working with the Santa Cruz City Schools and Soquel Elementary School District, in order to encourage use of alternative forms of transportation when traveling to and from area schools
3. Consider improving pedestrian and bicycle infrastructure within the greater Soquel area, in order to encourage use of alternative forms of transportation
4. Consider pursuing construction of new roadways that would allow vehicular traffic to bypass the Porter/Soquel intersection
5. Consider supporting the efforts of the Santa Cruz County Regional Transportation Commission to improve east/west circulation improvements throughout Santa Cruz County
6. Consider working with Caltrans and the City of Capitola in an effort to widen the 41<sup>st</sup> Avenue bridge over Highway 1 from four to six lanes.

The study project would not be responsible for the implementation of these improvements

**Project Site Plan:**

The project site plan has been reviewed, both in terms of project access and internal circulation.

Due to the relatively low trip generation and the presence of a two-way left turn lane on Soquel Drive along the project frontage, operations at the two study project driveways would be within acceptable levels of service.

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The following changes are recommended to the project site plan:

1. In order to preserve sight distance at the two project driveways, the following changes to the landscaping and signing plans are recommended:
  - a. The proposed twin yucca palm and cypress trees, located approximately half way between the two driveways, should be relocated 3 to 5 feet further north into the project site; and
  - b. Maintain a clearance of at least 5 feet underneath the canopies of all trees along the project frontage; and
  - c. Limit the landscaping and project signing along the project frontage, for a distance of 10 feet into the project site, as measured from the street-side edge of the curb, to plants and signs that would not be more than 3 to 4 feet tall; and
  - d. Any new County street signing or lighting along the project frontage should be placed cognizant of its potential impacts on the driveway sight distance.
2. Add additional pavement striping and guide signing near the entry road to the northern self-storage building. This would include pavement arrows to indicate travel directions (northbound for the rightmost northern roadway, northbound and southbound for the leftmost northern driveway), and signing to indicate the correct travel route for visitors, customers, and employees.
3. Add striping and signing on the roadway around the northern self-storage building, in order to limit traffic circulation to one direction, in a counter-clockwise pattern around the building.
4. Signing should be added to dedicate individual parking areas for their respective businesses.

**Weekend Analysis:**

No weekend analysis is performed within this report. The aforementioned Safeway Shopping Center report notes that none of the intersections that operate acceptably under weekday conditions have any problems during existing Saturday conditions. Second, the project trip generation on a Saturday would be lower than the weekday PM peak hour. For those reasons, additional improvements would not be necessary under weekend conditions compared to weekday conditions at the study intersections.

**Freeway Analysis:**

The aforementioned Safeway Shopping Center report notes that Highway 1 currently operates deficiently in the vicinity of the project site. However, the study project would not represent a significant impact upon operations of the freeway.

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# 1 INTRODUCTION

This Traffic Impact Analysis (TIA) presents the results from an analysis of the traffic impacts from the proposed Ocean Honda and Store More America development in unincorporated Santa Cruz County, California. The project site is located on Soquel Drive between 41<sup>st</sup> Avenue and Research Park Drive, near the City of Capitola. Exhibit 1 shows the project location. The project site plan is included as Exhibit 2.

## 1.1 Project Description

The project is a mixed land use development consisting of a car dealership, a self-storage facility, and general office space. The car dealership portion of the property would be a relocation of the existing Ocean Honda into a new 38,300 square foot facility. Currently, Ocean Honda is located within the Santa Cruz County Auto Plaza, on Auto Plaza Drive in Capitola. The self-storage facility would be comprised of two buildings totaling 99,735 square feet adjacent to the car dealership under separate management. The office space would comprise 1,850 square feet, to be located within the southern self-storage building along its frontage with Soquel Drive. Existing uses on the project site, which include industrial shops and single-family homes, would be demolished in order to accommodate the proposed project.

## 1.2 Scope of Work

The scope of work for this traffic study was defined based on discussions with County staff. It was specifically developed to identify the potential traffic impacts that may be associated with the development of the project site. The traffic study includes a traffic impact analysis on intersection traffic operations during typical weekday AM and PM peak hours. In addition, a review of project access and on-site circulation has been performed, as well as a qualitative review of weekend and freeway operations.

The following intersections were included within the analysis:

1. Rodeo Gulch Road/Soquel Drive;
2. 41<sup>st</sup> Avenue/Soquel Drive;
3. Robertson Street/Soquel Drive;
4. Porter Street/Soquel Drive;
5. 41<sup>st</sup> Avenue/Northbound Highway 1 Off-Ramp;
6. 41<sup>st</sup> Avenue/Southbound Highway 1 Off-Ramp; and
7. 41<sup>st</sup> Avenue/Gross Road.

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As recommended by County staff, the study analyzed traffic conditions under the following four development scenarios:

- 3 Existing Traffic Conditions;
- 3 Background (Existing Plus Approved) Traffic Conditions;
- 3 Background Plus Project Traffic Conditions;
- 3 Cumulative Traffic Conditions (Year 2020).



### 1.3 Traffic Operation Evaluation Methodologies and Level of Service Standards

Intersection traffic operations were evaluated based on the Level of Service (LOS) concept. LOS is a qualitative description of an intersection and roadway's operation, ranging from LOS A to LOS F. Level of service "A" represents free flow un-congested traffic conditions. Level of service "F" represents highly congested traffic conditions with unacceptable delay to vehicles on the road segments and at intersections. The intermediate levels of service represent incremental levels of congestion and delay between these two extremes.

The County of Santa Cruz has established LOS C as the general threshold for acceptable overall traffic operations for both signalized and unsignalized intersections. County standards also allow for LOS D in locations where improvements cannot be made due to extreme environmental and topographical constraints. Santa Cruz County has jurisdiction over the following study intersections:

- a. Rodeo Gulch Road/Soquel Drive;
- b. 41<sup>st</sup> Avenue/Soquel Drive;
- c. Robertson Street/Soquel Drive;
- d. Porter Street/Soquel Drive;

The California Department of Transportation (Caltrans) has jurisdiction over Highway 1 and its ramps. The Caltrans level of service standard is the LOS C/D threshold – LOS C is acceptable in all cases, and LOS D is acceptable on a case-by-case basis. Caltrans has jurisdiction over the following study intersections:

- e. 41<sup>st</sup> Avenue/Northbound Highway 1 Off-Ramp;
- f. 41<sup>st</sup> Avenue/Southbound Highway 1 Off-Ramp; and

The City of Capitola also has a level of service standard of LOS C. The City of Capitola has jurisdiction over the following study intersection:

- g. 41<sup>st</sup> Avenue/Gross Road.

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Intersection operations were evaluated using technical procedures documented in the 2000 *Highway Capacity Manual* (HCM). For signalized and all-way stop controlled intersections, average control delay per vehicle is utilized to define intersection level of service. Delay is dependent on a number of factors including the signal cycle length, the roadway capacity (number of travel lanes) provided on each intersection approach and the traffic demand. *Appendices A1* and *A2* show the relationship between vehicle delay and the signalized and all-way stop controlled intersection level of service categories. The TRAFFIX 7.7 software program was utilized to calculate the intersection levels of service for most of the study intersections. The SYNCHRO 5.0 software program was utilized for level of service analysis at the 41<sup>st</sup> Avenue/Southbound Highway 1 Off-Ramp and 41<sup>st</sup> Avenue/Gross Road intersections, due to the interdependent operations of the traffic signals at those two intersections.

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## 2 EXISTING TRAFFIC CONDITIONS

This chapter presents a description of the existing traffic network, existing traffic volumes, intersection levels of service, and an overview of traffic flow conditions within the study area.

### 2.1 Existing Traffic Network

Regional access to the project site is provided by Highway 1. Major roadways in the vicinity of the project site are Soquel Drive, 41<sup>st</sup> Avenue, and Porter Street. Other area roadways include Rodeo Gulch Road, Robertson Street, and Gross Road.

Highway 1 is a state highway within Santa Cruz County, providing access to San Francisco to the north, and Monterey to the south, via Santa Cruz, Capitola, Aptos, and Watsonville. Within much of Santa Cruz County, it is oriented in an east-west alignment, although the interregional alignment of Highway 1 is designated north-south. In the vicinity of the project, it is a four-lane freeway west of the 41<sup>st</sup> Avenue interchange and west of Porter Street-Bay Avenue interchange, and a four-lane freeway with auxiliary lanes in each direction between the 41<sup>st</sup> Avenue and Porter Street-Bay Avenue interchanges. The speed limit on Highway 1 is 65 miles per hour (MPH).

It should be noted that due to the difference between the interregional and local alignment of Highway 1 in the project vicinity, the direction of travel at the study intersections is designated based upon the cardinal (or compass) direction of travel, rather than the signed direction. For example, at the 41<sup>st</sup> Avenue/Southbound Highway 1 Off-Ramp intersection, the Eastbound Southbound Highway 1 Off-Ramp left turn lane refers to the left turn lane on the Southbound Highway 1 off-ramp traveling in an easterly direction, although the signed Caltrans directionality of the roadway in this area is Southbound Highway 1 Off-Ramp.

**Soquel Drive** is an east-west arterial street within central Santa Cruz County, extending from the eastern outskirts of Santa Cruz to the far eastern edge of Aptos. In the vicinity of the project site, Soquel Drive is generally four lanes wide, with the sole exception of a one-block section immediately west of Porter Street, which has two eastbound through lanes and one westbound through lane. Left turn channelization is provided at all signalized intersections, but is sporadically present in other locations. Left turn channelization is provided, however, along the project frontage, in the form of a two-way left turn lane for one block west of 41<sup>st</sup> Avenue. Signalized intersections along Soquel Drive include Rodeo Gulch Road, 41<sup>st</sup> Avenue, and Porter Street. The RobertsodSoquel intersection is controlled by stop signs on all approaches. The speed limit on Soquel Drive is 35 MPH east of Robertson Street, and 25 MPH west of Robertson Street.

**41<sup>st</sup> Avenue** is a north-south arterial street within the City of Capitola and central Santa Cruz County. In the vicinity of the project site, 41<sup>st</sup> Avenue is a divided, four lane roadway between Soquel Drive and the Southbound Highway 1 ramps, and a six-lane divided roadway south of Highway 1. Signalized intersections along 41<sup>st</sup> Avenue include the Northbound and Southbound Highway 1 Off-Ramps, as well as Gross Road. The

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speed limit on 41<sup>st</sup> Avenue is 35 MPH south of the Northbound Highway 1 Ramps, and 25 MPH between the Northbound Highway 1 Ramps and Soquel Drive.

**Porter Street** is a north-south arterial street in the community of Soquel, within central Santa Cruz County. Further north of Soquel, Porter Street becomes Soquel-San Jose Road, and extends into the Santa Cruz Mountains towards the ridgeline, passing by Soquel High School. South of Highway 1, Porter Street becomes Bay Avenue, providing access to Capitola Village and the portions of Capitola east of Soquel Creek. In the vicinity of the project site, Porter Street is two lanes wide. The speed limit on Porter Street is 25 MPH.

**Rodeo Gulch Road** is a north-south roadway within central Santa Cruz County. North of Soquel Drive, it is a two-lane roadway that travels into the hills north of Capitola and Soquel, and is named "North Rodeo Gulch Road." Immediately south of Soquel Drive, Rodeo Gulch Road is a two-lane roadway that provides primary access into the Soquel Research Park, a business park, and is named "South Rodeo Gulch Road." The speed limit on Rodeo Gulch Road is 25 MPH.

**Robertson Street** is a north-south collector within central Santa Cruz County. Robertson Street is a two-lane roadway that serves as a connection between Wharf Road and Soquel Drive. The speed limit on Robertson Street is 25 MPH.

**Gross Road** is an east-west, two-lane collector street within the City of Capitola and central Santa Cruz County. The west leg of Gross Road provides access to Soquel Avenue, a frontage road along the southern side of Highway 1, as well as residential neighborhoods west of 41<sup>st</sup> Avenue. The east leg of Gross Road provides access to various commercial and retail businesses, including the Santa Cruz County Auto Plaza via a connection with Auto Plaza Drive. The speed limit on Gross Road is 25 MPH.

Bicycle lanes (Class 2) are provided on some of the roadways in the vicinity of the project. Both Soquel Drive and 41<sup>st</sup> Avenue have bicycle lanes in each direction through the study intersections, as well as along the project frontage. Bicycle lanes are also provided along Porter Street. However, no bicycle facilities are provided on any of the other study roadways.

The Santa Cruz Metropolitan Transit District (SCMTD) provides bus service to the area via Routes 53, 70, and 71. Route 53 traverses in a counter-clockwise loop around the Live Oak and western Capitola area, serving both Dominican Hospital and the Capitola Mall. Route 70 connects Cabrillo College and downtown Santa Cruz via Soquel Drive. Route 71 connects Santa Cruz and Watsonville, also via Soquel Drive. All three routes traverse Soquel Drive directly in front of the project site; however, Route 53 only travels westbound along Soquel Drive, while Routes 70 and 71 travel in both the eastbound and westbound directions. Bus stops in the vicinity of the project site are located on eastbound and westbound Soquel Drive at Research Park Drive, and on westbound Soquel Drive just west of 41<sup>st</sup> Avenue. Service to these bus stops varies depending upon the route – Route 53 only runs once every two hours and only on weekdays, Route 70

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runs every half hour but only on weekdays and only during the regular school year of Cabrillo College, and Route 71 runs every half hour on weekdays and weekends.

## 2.2 Existing Traffic Data

Traffic volumes at all seven study intersections were previously analyzed within the report *41<sup>st</sup> Avenue Safeway Shopping Center Expansion Traffic Impact Analysis*, January 2001, by Fehr & Peers Transportation Consultants. These volumes were collected in April and May 2000. These older traffic volumes were utilized in this analysis at the request of Santa Cruz County Public Works Department staff, for multiple reasons. First, it is our understanding from County staff that Fehr & Peers, in later traffic analysis work for both the above cited Safeway Shopping Center expansion and the proposed Home Depot in the same shopping center, found that traffic volumes in 2001 were substantially lower than those in 2000, specifically at the 41<sup>st</sup> Avenue/Hwy. 1 ramp intersections. Second, there is substantial construction activity currently on-going on the street network in the study area, including along Soquel Drive east of 41<sup>st</sup> Avenue, Robertson Street, the 41<sup>st</sup> Avenue/Gross Road intersection, and along 41<sup>st</sup> Avenue itself. Performing new traffic counts in construction areas is not a recommended practice, as the construction can add additional delays to those roadways and intersections, which can lead to some vehicles diverting off of these roadways during the construction period that would otherwise utilize those roadways. Finally, there is also reduced area traffic due to the closure of the K-Mart on 41<sup>st</sup> Avenue in 2001, and the improvements currently occurring at the aforementioned Safeway Shopping Center. For these reasons, the older traffic volumes would constitute a worst-case analysis scenario.

The existing peak hour traffic volumes are presented on Exhibits **3A** and **3B**.

## 2.3 Existing Conditions Intersection Operations

Intersection levels of service under existing conditions are summarized on Exhibit 4. Recommended intersection improvements are summarized on Exhibit 5. Most of the study intersections currently operate within acceptable levels of service. The Rodeo Gulch/Soquel intersection operates at LOS A during the AM and PM peak hours. The 41<sup>st</sup>/Soquel and 41<sup>st</sup>/Northbound Hwy. 1 Off-Ramp intersections operate at LOS B during the AM and PM peak hours. The 41<sup>st</sup>/Gross intersection operates at LOS C during the AM and PM peak hours. The LOS calculations can be found in *Appendix B*. The traffic control warrant worksheets are included as *Appendix F*.

Three of the study intersections currently operate at deficient levels of service. The Robertson/Soquel intersection operates at LOS C during the AM peak hour and LOS E during the PM peak hour. The Porter/Soquel intersection operates at LOS E during the AM peak hour and LOS D during the PM peak hour. The 41<sup>st</sup>/Southbound Hwy. 1 Off-Ramp intersection operates at LOS D during the AM and PM peak hours. The following paragraphs summarize the recommended improvements at each of these intersections.

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### **2.3.1 Recommended Improvements – Robertson Street/Soquel Drive**

The Robertson/Soquel intersection operates at a deficient LOS E during the PM peak hour under Existing conditions. The Caltrans peak hour signal warrant is met for this intersection during both the AM and PM peak hours, and the Santa Cruz County traffic impact fees for the area include signalization at this intersection. It is therefore recommended that the Robertson/Soquel intersection be signalized. In addition, left turn channelization is warranted in the westbound direction of Soquel Drive at Robertson, and therefore Santa Cruz County should consider including its construction as a part of signalization improvements. It is acknowledged, however, that right-of-way concerns may preclude such a lane from being constructed, and that Santa Cruz County should consider a preliminary engineering review of the feasibility of such a lane. If the westbound left turn lane is constructed, protected left turn phasing should be implemented for this movement. Exhibit 6 contains calculations of the cross-product rule for the Robertson/Soquel intersection, the results of which indicate that protected phasing should be implemented for this left turn movement. The combination of intersection signalization and a westbound left turn lane with protected signal phasing would improve operations to LOS A.

### **2.3.2 Recommended Improvements – Porter Street/Soquel Drive**

The Porter/Soquel intersection operates at a deficient LOS E during the AM peak hour, and LOS D during the PM peak hour. Due to right-of-way constraints, there are few, if any, sight-specific improvements that can improve operations at this intersection to within acceptable standards. One set of improvements that should be considered would be the conversion of the northbound and southbound Porter Street left turn signal phasing from protected to protected-permitted, and the addition of a southbound right turn overlap signal phase. The left turn signal phasing improvement would allow northbound and southbound left turning vehicles to turn both during the green arrow and green ball indications of the signal, thereby increasing the number of northbound and southbound left turning vehicles that can pass through the intersection in each signal cycle. The southbound right turn overlap signal phase would allow southbound right turning vehicles to turn right concurrently with the eastbound left turn movement, thereby increasing the number of vehicles that could make this movement during each signal cycle. Both improvements would reduce the overall intersection delay, but would not result in a change in level of service.

### **2.3.3 Recommended Improvements – 41<sup>st</sup> Avenue/Southbound Highway 1 Off-ramp and 41<sup>st</sup> Avenue/Gross Road**

As noted earlier, the traffic signal operations at the 41<sup>st</sup>/Southbound Highway 1 Off-Ramp and 41<sup>st</sup>/Gross intersections are interdependent upon each other. Both signals are controlled by the same signal controller, and therefore signal and capacity improvements at one intersection impact operations at the other. The 41<sup>st</sup>/Southbound Highway 1 Off-Ramp intersection currently operates at a deficient LOS D during both the AM and PM peak hours. To improve operations at the two intersections, it is recommended that a



southbound right turn lane be added on 41<sup>st</sup> Avenue at Gross Road. This improvement would provide additional storage space for vehicles on Southbound 41<sup>st</sup> between Highway 1 and Gross Road, as well as allow right turning vehicles to turn independently of the through traffic stream. These two effects of the implementation of the right turn lane would lead to a reduction in the necessary amount of green time for the southbound through movement, thereby lowering delays for the southbound movements and increasing the frequency in which the other traffic movements at both intersections would receive their respective green indications. Implementation of this improvement would result in slightly reduced delays at the intersections with no change in levels of service. It should be noted that this improvement may require the acquisition of a small amount of right-of-way right at the northwest corner of 41<sup>st</sup> Avenue and Gross Road, although the majority of the lane could be constructed within existing public right-of-way.

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### 3 BACKGROUND TRAFFIC CONDITIONS

This section of the report describes the analyses of the study road network under Background, or Existing Plus Approved Projects, traffic conditions. The section includes the analysis of traffic conditions with the opening of approved and short-term projects within the study area that would influence traffic conditions at the study intersections.

#### 3. Approved Projects

Exhibits 7A and 7B contain the locations and trip generation estimates for the approved and short-term projects, which are based in part upon trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation*, 7<sup>th</sup> Edition, 2003. This list includes the Safeway Shopping Center expansion, the reoccupation of the former K-Mart building with a Home Depot, and the Santa Cruz Medical Clinic medical offices at the corner of Research Park Drive and Soquel Drive, as well as other projects in Santa Cruz County and the city of Capitola.

In total, the approved and short-term projects would generate a net 4,507 daily trips; with 206 trips (102 in, 104 out) occurring during the AM peak hour, and 350 trips (172 in, 178 out) occurring during the PM peak hour. The distribution of project trips was taken from any applicable traffic analyses for those specific projects, as well as based upon the locations of land uses within the County of Santa Cruz and City of Capitola and traffic volumes at the study intersections.

Trips from the approved projects were added to the existing traffic volumes depicted in Exhibits 3A and 3B to create the Background condition traffic volumes shown in Exhibits 5A and 5B during the AM and PM peak hours, respectively.

#### 3.2 Improvements at 41<sup>st</sup> Avenue/Gross Road Intersection

Roadway and signalization improvements are currently under construction at the intersection of 41<sup>st</sup> Avenue and Gross Road. The City of Capitola, in conjunction with Caltrans, are modifying the eastbound Gross Road approach to 41<sup>st</sup> Avenue through the addition of a second eastbound left turn lane. In addition, the eastbound and westbound Gross Road left turn signal phasing is being converted from permitted phasing to split phasing. Starting under Background conditions, this improvement is anticipated to be fully constructed and operational, and replaces the existing lane configurations and signal phasing for this and all future scenarios within this report.

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### 3.3 Background Condition Intersection Operations

Intersection levels of service under Background conditions are shown on Exhibit 4. Most of the study intersections would experience no change in level of service between Existing and Background conditions. The only intersection that would change is RobertsodSoquel, which would change from LOS E to LOS F during the PM peak hour. This level of service under Background conditions would be below the LOS C standard. The LOS calculations can be found in *Appendix C*.

The previously recommended improvements at the RobertsodSoquel, Porter/Soquel, 41<sup>st</sup>/Southbound Highway 1 Off-Ramp, and 41<sup>st</sup>/Gross intersections would continue to improve operations at these intersections, and continue to be recommended for implementation. No additional improvements are recommended under Background conditions.

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## 4 BACKGROUND PLUS PROJECT TRAFFIC CONDITIONS

This section of the report describes the analyses of the study road network under Background Plus Project traffic conditions. The section includes the analysis of the study project trip generation, distribution and assignment.

### 4.1 Project Definition

The project is composed of a 38,300 square foot car dealership, a 99,735 square foot self-storage facility, and 1,850 square feet of general office space. The property is located on the north side of Soquel Drive, between Research Park Drive and 41<sup>st</sup> Avenue. The project would have direct access to Soquel Drive via two new driveways located at either end of the project's frontage. The car dealership would be a relocation of an existing facility currently located on Auto Plaza Drive in Capitola, approximately 0.5 miles southeast of the project site. The self-storage facility and general office space would be new uses to the area. Existing uses on the project site would be removed as part of this project.

### 4.2 Project Trip Generation

Exhibit 9 contains the trip generation estimate for the study project, which is based in part upon trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation*, 7<sup>th</sup> Edition, 2003, as well as on traffic counts performed near the current car dealership facility in May 2000. The project site has also had recent historical uses, which include single-family residences and industrial/office uses. Traffic counts performed at the existing site driveways in May 2000<sup>1</sup> were subtracted from the ITE trip generation estimates for the proposed site uses, in order to estimate the net change in trip generation at the project site. More information on the derivation of the trip generation for the project can be found in Appendix G. As indicated on Exhibit 9, the project would generate a net 591 daily trips, with 35 trips (36 in, -1 out) during the AM peak hour, and 68 trips (25 in, 43 out) during the PM peak hour.

It should be emphasized that the car dealership portion of this project is simply a relocation of an existing facility – no change in employment is anticipated with its relocation. Existing trips from employees and regular customers will therefore shift from traveling along 41<sup>st</sup> Avenue south of Highway 1 to 41<sup>st</sup> Avenue north of Highway 1. However, the future use of the current car dealership location is uncertain at this time, but will likely be utilized by the adjacent car dealership, which is under joint ownership with the Honda dealership. This analysis assumes a worst-case scenario, whereby the existing Ocean Honda dealership is relocated and the dealership's current location on Auto Plaza Drive becomes home to a similar type of use that generates the same number of trips that the sites generates today.

<sup>1</sup> May 2000 driveway counts at the project site taken from "Feasibility Analysis for Chevrolet/Hyundai Car Dealership on Soquel Drive," Fehr & Peers, February 25, 2002. The Fehr & Peers report is included as Attachment 1 within Appendix G of this report.



### 4.3 Project Trip Distribution and Assignment

Trip distribution and assignment for the project has been estimated, based upon the locations of land uses within the County of Santa Cruz and City of Capitola, as well as traffic volumes at the study intersections. The trip distribution for the residential project hips is indicated on Exhibit 10, and repeated below:

|   |             |
|---|-------------|
| <u>To/From the North:</u>                 | 5%          |
| via Porter Street/San Jose-Soquel Rd – 5% |             |
| <u>To/From the South:</u>                 | 20%         |
| via 41 <sup>st</sup> Avenue – 15%         |             |
| via Bay Avenue/Porter Street – 5%         |             |
| <u>To/From the East:</u>                  | 35%         |
| via Highway 1 -- 25%                      |             |
| via Soquel Drive – 10%                    |             |
| <u>To/From the West:</u>                  | 40%         |
| via Highway 1 – 30%                       |             |
| via Soquel Avenue/Soquel Drive – 10%      |             |
| <b>TOTAL:</b>                             | <b>100%</b> |

Trips to and from Highway 1 west of the project site would be split between the 41<sup>st</sup> Avenue interchange (24%) and the Soquel Drive interchange (8%). All 25% of the project trips traveling to and from Highway 1 east of the site would utilize the 41<sup>st</sup> Avenue interchange for access to the freeway.

Exhibits 11A through 11H contain the project hip assignment at the seven study intersections. These trips are broken down by each proposed site use (Ocean Honda car dealership, Store More America self-storage facility, and general office space), as well as totaled for the site as a whole. The project trips shown on these exhibits were added to the Background condition traffic volumes to create Background Plus Project traffic volumes. These traffic volumes are shown on Exhibits 12A and 12B.

### 4.4 Background Plus Project Conditions Intersection Operations

Intersection levels of service under Background Plus Project conditions are shown on Exhibit 4. All seven study intersections would operate at the same levels of service under Background Plus Project conditions as under Existing conditions. The LOS calculations can be found in *Appendix D*.

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The previously recommended improvements at the Robertson/Soquel, Porter/Soquel, 41<sup>st</sup>/Southbound Highway 1 Off-Ramp, and 41<sup>st</sup>/Gross intersections would continue to improve operations at these intersections, and continue to be recommended for implementation. No additional improvements are recommended under Background Plus Project conditions. The project would, however, be responsible for payment of the County traffic impact fee for the greater Soquel area. The signalization of the RobertsodSoquel intersection is included with the fee program, and the project's payment of the fee would constitute its fair-share contribution towards this improvement. The project would also be responsible for a fair-share contribution towards the other improvements recommended in the previous scenarios, at the intersections of Porter/Soquel and 41<sup>st</sup>/Gross, based upon the number of trips added by the project to the intersection under Background Plus Project conditions.

A review of the v/c, or volume-to-capacity ratios, was performed for the four study intersections that would have deficient levels of service under Background Plus Project conditions. Santa Cruz County has established a significance criteria, which states that a project's impact on the deficient operations of an intersection is significant if, by the addition of its **trips**, the v/c ratio of said intersection would increase by at least 1% (i.e. increase by 0.01 or more). Exhibit 13 contains the v/c ratios under Background and Background Plus Project conditions for the four study intersections that would operate deficiently under Background Plus Project conditions. *One* intersection, Robertson/Soquel, would experience a change in v/c of 0.01 between Background and Background Plus Project conditions, and thus the project would represent a significant impact on the operations of that intersection. As for the remaining deficient intersections, the changes in the v/c ratios from scenario to scenario varied from no change to a gain of 0.003; therefore, the project would not constitute a significant impact on the operations of these intersections.

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## 5 CUMULATIVE TRAFFIC CONDITIONS

This section reports on the analysis results of the long-term cumulative, or Year 2020, traffic conditions. Analysis of the long-term cumulative conditions includes the previously-discussed approved projects, as well as cumulative projects and additional future traffic volume growth on the area street system.

### 5.1 Long-Term Cumulative Growth

Additional traffic growth is anticipated over the next ten years beyond the previously-analyzed conditions. Two methods were utilized in projecting traffic volumes by the year 2020 – known area cumulative projects, and application of projected growth rates. Exhibits 14A and 14B contain the locations and trip generation estimates of cumulative projects within the study area, including Capitola. Trips ~~from~~ these projects were added to the area street system, resulting in a roughly Year 2015 forecast. To achieve Year 2020 volumes, a traffic volume growth rate of ~~2%~~ per-year over 5 years (for a total growth of 10%) was applied to the existing volumes. This growth rate is based upon the worst-case scenario of future traffic growth in the study area projected by the Santa Cruz County General Plan, as noted in the aforementioned Fehr & Peers report for the Safeway Shopping Center.<sup>2</sup>

The additional long-term cumulative growth was added to the Background Plus Project condition traffic volumes to create the Cumulative traffic volumes depicted on Exhibits 15A and 15B.

### 5.2 Cumulative Condition Intersection Operations

Intersection levels of service for the Cumulative traffic conditions are summarized on Exhibit 4. The Rodeo Gulch/Soquel intersection would remain at LOS A during both the AM and PM peak hours. The 41<sup>st</sup>/Soquel intersection would remain at LOS B during the AM peak hour, but would change to LOS C during the PM peak hour. The Robertsod/Soquel intersection would operate at a deficient LOS E during the AM peak hour, and LOS F during the PM peak hour. The Porter/Soquel intersection would operate at a deficient LOS F during the AM peak hour, and LOS E during the PM peak hour. The 41<sup>st</sup>/Northbound Highway 1 Off-Ramp intersection would operate at LOS B during the AM and PM peak hours. The 41<sup>st</sup>/Southbound Highway 1 Off-Ramp intersection would operate at a deficient LOS E during the AM peak hour, and LOS D during the PM peak hour. The 41<sup>st</sup>/Gross intersection would operate at LOS C during the AM peak hour, and a deficient LOS D during the PM peak hour. The LOS calculations can be found in *Appendix E*.

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<sup>2</sup> 41<sup>st</sup> Avenue Safeway Shopping Center Expansion Traffic Impact Analysis, Fehr & Peers Transportation Consultants, January 2001



### 5.2.1 Recommended Improvements –Robertson Street/Soquel Drive

Signalization and westbound left turn warrants would continue to be met at the RobertsodSoquel intersection, and the implementation of both improvements at the intersection continue to be recommended to improve operations. The intersection would operate at LOS B with the implementation of the improvements.

### 5.2.2 Recommended Improvements –Porter Street/Soquel Drive

The two previously recommended improvements at this intersection, a southbound right turn overlap signal phase and conversion of the northbound and southbound left turn phasing from protected to protected-permitted, are again recommended to improve operations of the intersection. However, in the long term, the effectiveness of these improvements will be minimized due to future traffic growth – both improvements would only result in LOS E operations at the intersection under Cumulative conditions.

As noted earlier, right-of-way constraints severely limit the types and level of improvements that can be implemented at the intersection. To achieve an acceptable level of service at this intersection, only two improvement methods can be pursued – signal operations improvements, and vehicular travel demand reduction. With respect to the signal operations, Santa Cruz County should consider coordinating the existing and future traffic signals along the Soquel Drive corridor though Soquel, roughly between Robertson Street and Capitola Avenue. Some of the necessary infrastructure and equipment for this improvement is already in place, yet additional infrastructure, equipment, and signal timing improvements would be necessary to complete this improvement. Second, the County should also consider pursuing ways decrease travel demand along Porter Street and Soquel Drive, including the following four items:

1. Work with the Santa Cruz City Schools and Soquel Elementary School District, in order to help encourage parents, students, and staff to use alternative forms of transportation when traveling to and from area schools, especially Soquel High School.
2. Improve pedestrian and bicycle infrastructure in the greater Soquel area, in order to encourage local residents to use alternative forms of transportation en route to shopping and work within the area.
3. Consider pursuing the construction of new roadways that would allow vehicular traffic to use other routes to travel though the Soquel area. This could include, for example, a new road over Soquel Creek connecting Main Street and Porter Street (Soquel-San Jose Road) north of Soquel Drive. Such a road would allow residential and school-based traffic to also use Main Street en route to Soquel Drive or Highway 1.

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4. Santa Cruz County should support the Santa Cruz County Regional Transportation Commission's (SCCRTC) efforts to improve east/west circulation improvements through the county. Soquel Drive is currently utilized as a bypass of congestion along Highway 1 in the Capitola-Soquel area, especially during the PM peak hour, and any transportation improvements that would encourage use of east/west roadways other than Soquel Drive through the Soquel area should be pursued. This could include such varied improvements as widening Highway 1 from four to six lanes, passenger service along the existing Union Pacific rail line, and implementation of additional express and standard bus service.

These additional improvements should be pursued by the Santa Cruz County as part of regional improvements for the area. The study project would not be responsible for the implementation of these improvements.

#### **5.2.3 Recommended Improvements – 41<sup>st</sup> Avenue/Northbound Highway 1 Off-ramp, 41<sup>st</sup> Avenue/Southbound Highway 1 Off-Ramp, and 41<sup>st</sup> Avenue/Gross Road**

The previously recommended improvement at the 41<sup>st</sup>/Gross intersection, the addition of a southbound right turn lane, would reduce delays at both the 41<sup>st</sup>/Southbound Hwy. 1 Off-Ramp and 41<sup>st</sup>/Gross intersections, but would only result in an improvement in level of service at the 41<sup>st</sup>/Southbound Hwy. 1 Off-Ramp intersection. It is recommended that Caltrans and Santa Cruz County also consider working with the City of Capitola in pursuing the widening of the 41<sup>st</sup> Avenue bridge over Highway 1 from four to six lanes. This improvement is included within the SCCRTC's 2005 Regional Transportation Plan, although funding for the improvement is not secured at this time. The combination of the southbound right turn lane on 41<sup>st</sup> Avenue at Gross Road, combined with the widening of the 41<sup>st</sup> Avenue bridge to six lanes, would result in LOS B operations at the 41<sup>st</sup>/Northbound Hwy. 1 Off-Ramp intersection, LOS D at the 41<sup>st</sup>/Southbound Hwy. 1 Off-Ramp intersection, and LOS D (AM) and LOS C (PM) at the 41<sup>st</sup>/Gross intersection.

Caltrans, Santa Cruz County, and the City of Capitola should consider implementing the 41<sup>st</sup> Avenue bridge widening, as a part of regional improvements for the area. The study project would not be responsible for the implementation of this improvement.

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## 6 PROJECT ACCESS AND ON-SITE CIRCULATION

This section documents a review of the project site access and on-site circulation. The project site plan is shown on Exhibit 2.

### 6.1 Project Access

The project will have two driveways onto Soquel Drive, one at the western end of the property, and one at the eastern end of the property. A two-way left turn lane currently exists along the median of Soquel Drive along the project frontage. This lane would allow both left turns into the project driveways, as well as provide a refuge space for vehicles turning left out of the driveways. Due to the combination of the two-way left turn lane and the relatively low project trip generation, these driveways would operate acceptably through Cumulative conditions.

Sight distance at the two project driveways has been reviewed. Sight distance is the distance necessary for a vehicle along a roadway to stop, during a situation where another vehicle attempts to cross or turn onto that street. Santa Cruz County standards call for line of sight of 250 feet between the cross street and main street, as measured 6 feet back from the edge of pavement. A review of the sight plan found that the *trunks* of the twin yucca palm and cypress trees, to be located midway between the two project driveways, would be located within the line of sight for vehicles exiting the western project driveway. It is recommended that the proposed location of these trees be relocated 3 to 5 feet further north into the project site, in order to preserve adequate sight distance. The westernmost tree of a group of three cypress trees proposed to be located closer to the eastern driveway could have its foliage clip *the* line of sight. For that reason, it is also recommended that all of the frontage trees be regularly maintained, in order to allow at least 5 feet of clearance between the top of the sidewalk and the bottom of the tree canopy. Any additional landscaping or project signing along the project frontage that is less than 10 feet away from *the* street-side edge of the curb should be limited to low-lying vegetation (i.e. vegetation that is no more than 3 to 4 feet above the roadbed along Soquel Drive). Also, any new County street signing or lighting that would be placed along the project frontage should also be placed cognizant of its potential impacts on the driveway sight distance.

ATTACHMENT 11  
APPLICATION 11-225235

### 6.2 Bicycle and Pedestrian Circulation

Bicycle lanes are present along the project frontage on Soquel Drive. Due to the nature of the uses of this development (car dealership and self-storage facility), little to no bicycle traffic is anticipated to be generated by the project.

The project frontage along Soquel Drive currently lacks sidewalks. The project site plan would add a sidewalk across the entire project frontage, thereby extending the existing sidewalk further eastward towards 41<sup>st</sup> Avenue. The project site plan also proposes a masonry walkway between the sidewalk and the main entrance to the car dealership, thereby providing direct pedestrian access to this portion of the development. A concrete



walkway is proposed along the eastern frontage of the southern self-storage building, which would also extend south to the sidewalk. A concrete walkway is also proposed along *the* southern side of the northern self-storage building.

### 6.3 Internal Vehicular Circulation

The project site plan proposes two driveways off of Soquel Drive. The eastern driveway would be the primary customer driveway for the car dealership portion of the project, and would provide access to the customer parking area and the service drop-off area. The western driveway would serve both the car dealership and the self-storage facility. Both the car dealership customer and employee parking areas can be accessed via the western driveway, as well as the for-sale outdoor vehicle display area. The self-storage parking and loading areas would have sole access off of the western driveway.

#### Entrance to Northern Self-Storage Building

At the northeastern corner of the southern self-storage building, the western access roadway is split into three separate roadways. One roadway continues to and from the east, leading into the employee and vehicle storage parking areas for the car dealership. Two separate roadways continue to and from the north, separated by a narrow median – the rightmost roadway, 12 feet in width, proceeds north into the car dealership vehicle storage area, while the leftmost roadway, 23 feet in width, continues towards the northern self-storage building. The leftmost roadway would be gated at the intersection, limiting vehicular access to the northern building. The gate would be open during the normal business hours of the self-storage facility, and closed during the remainder of the day.

The close proximity of the two northern roadways would not be an ideal situation, for multiple reasons. The narrowness of *the* rightmost roadway would not allow two-way travel on it, which would create ambiguity about the correct direction of travel along its length. The alignment of the two roadways is also not optimal, as the rightmost roadway lines up with the northbound direction of travel on the western access road, the northbound direction of travel on the *leftmost* roadway lines up with the southbound direction of travel on the western access road, and travel into and out of the *leftmost* roadway requires a slight adjustment in travel direction in order to access the western access road.

The purpose of the rightmost road is to improve truck circulation en route to the car dealership vehicle storage area. Removal of this road would require a major revision of the site plan, in order to accommodate the truck turning movements through the use of alternative routes into the vehicle storage area. The situation of the two northern roadways is also partially mitigated due to the fact that a low amount of vehicle traffic would be traveling in this area – on the average, roughly one vehicle every 6 minutes throughout the day, with a maximum average frequency of one vehicle every 1.5 minutes during the highest one-hour period during any given week. Therefore, the likelihood of vehicle conflict at this portion of the site plan is relatively low, since the likelihood of



more than one vehicle being present in that area at any one time is low. It is instead recommended that, as an alternative to revision of the project site plan in this area, the project applicant consider additional signing and striping be added to the area, in order to better inform and guide drivers. This would include pavement arrows on both the rightmost and leftmost northern roadways (northbound only for the rightmost road, and one northbound and one southbound arrow for the leftmost road), as well as signing that would point out the correct direction of travel for visitors to the self-storage building, car dealership vehicle delivery, car dealership employee parking, etc.

#### Circulation Around Northern Self-Storage Building

The roadway surrounding the northern self-storage building is narrow, with a curb on the outside and a loading zone on the inside (i.e. up against the building). The traffic portion of the road would only be about 12 feet wide, which is not wide enough for two-way traffic. It is recommended that this roadway around the northern self-storage building be signed and striped (i.e. pavement arrows) for one-way traffic, with a counter-clockwise circulation pattern around the building.

## 6.4 Parking

Parking is provided for both the customers and employees of the car dealership and the self-storage facility. The car dealership customer parking area is in the south-central portion of the project site, while the car dealership employee parking is in the north-central portion of the project site. A total of 33 spaces are allotted for customers and employees of the car dealership, with 13 customer spaces (4 ADA and 9 standard), 10 employee spaces, and another 10 spaces along the western side of the car dealership that site plan lacks definition as to if they are employee or customer spaces. The self-storage facility parking is split between the gated and ungated areas. A total of 19 spaces (2 ADA and 17 standard) are provided on the eastern edge of the southern self-storage building, along the western access road, while another 23 spaces plus four loading zones are provided behind the gate. The office space will have the first 9 spaces (1 ADA and 8 standard) on the western entry assigned to it.

The proximity of the car dealership and self-storage facility to each other could create the potential for visitors to one facility parking at the parking area for the other facility, especially during busier periods of the year. It is recommended that signing be added dedicating the individual parking areas for their respective businesses, such as "Ocean Honda Customer Parking Only," "Store More America Customer Parking Only," or "Office Parking Only."

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## 7 WEEKEND TRAFFIC CONDITIONS

This traffic analysis does not include operations on weekends at the study intersections. Due to the presence of commercial and retail shopping in the project area, 41<sup>st</sup> Avenue can experience higher traffic activity on weekends compared to weekdays. However, it should be noted that this traffic analysis has noted that improvements are necessary at the Robertson/Soquel, Porter/Soquel, 41<sup>st</sup> Avenue/Southbound Hwy. 1 Off-Ramp, and 41<sup>st</sup> Avenue/Gross Road intersections during the weekday peak hours. As shown on Exhibit 16, the aforementioned Safeway Shopping Center Expansion traffic analysis report found that levels of service at the other study intersections within this study, as well as at Robertson/Soquel, are all within acceptable limits on Saturdays, and that the other intersections would continue to be deficient. In addition, Exhibit 17 displays an expanded trip generation table for the project that includes Saturday activity for the project. Although the project trip generation during the Saturday peak hour would exceed the number of trips during the weekday AM peak hour, the Saturday peak hour would generate fewer trips than the weekday PM peak hour. Based upon these findings, the project would not require additional improvements on a Saturday compared with a weekday.

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## 8 FREEWAY ANALYSIS

Exhibit 18 summarizes a review of the project trips that would travel via Highway 1 in the project vicinity. As noted in the aforementioned Safeway Shopping Center traffic analysis, Highway 1 in the project vicinity currently operates at a deficient level of service. The Santa Cruz County Regional Transportation Commission is currently working on plans to widen Highway 1 between Santa Cruz and Aptos from four to six lanes through the addition of a high-occupancy vehicle (HOV) lane in each direction of the freeway. The additional trips generated by the study project would not exceed more than 1% of the existing freeway capacity of the highway, as noted on Exhibit 18. The project would therefore not represent a significant impact on operations of Highway 1.

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## 9 SUMMARY OF RECOMMENDATIONS

Improvements recommended under one scenario are also recommended in all chronologically following scenarios; these improvements are not repeated below for the purpose of brevity. In addition, please note that the referenced directionality of Highway 1 is based upon the cardinal (or compass) direction of travel, rather than the signed interregional direction.

### 9.1 Improvements Recommended for Existing Conditions

1. Implement the following improvements at the Robertson Street/Soquel Drive intersection:
  - a. Signalize the intersection; and
  - b. Construct a westbound Soquel Drive left turn lane, and construct the signal such that this westbound left turn movement would operate under protected signal phasing.
2. Implement the following improvements at the Porter Street/Soquel Drive intersection:
  - a. Add a southbound Porter Street right turn overlap signal phase; and
  - b. Convert the northbound and southbound Porter Street left turn phasing from protected to protected-permitted.
3. Add a southbound right turn lane on 41<sup>st</sup> Avenue at the 41<sup>st</sup> Avenue/Gross Road intersection. This improvement may require the acquisition of additional public right-of-way near the northwest corner of 41<sup>st</sup> Avenue and Gross Road.

### 9.2 Improvements Recommended for Background Conditions

No additional improvements are recommended under Background conditions.

### 9.3 Improvements Recommended for Background Plus Project Conditions

In addition to the improvements recommended under Existing and Background conditions, the following improvements are recommended under Background Plus Project conditions:

1. The project would be responsible for payment of the applicable Santa Cruz County traffic impact fees for the study area, based upon the estimated trip generation for the project. Payment of this fee would fully cover the project's contributions towards the improvements at the Robertson/Soquel intersection. The project would represent a significant impact at this intersection.



2. The project would be responsible for a fair-share payment of the costs associated with the previously recommended improvements at the Porter/Soquel and 41<sup>st</sup>/Gross intersections, based upon the number of trips added by the project to those intersections. The project would not represent a significant impact at these intersections.
3. The following improvements should be made to the project site plan:
  - a. In order to preserve sight distance at the two project driveways, the following changes to the landscaping and signing plans are recommended:
    - i. The proposed twin yucca palm and cypress trees, located approximately half way between the two driveways, should be relocated 3 to 5 feet further north into the project site; and
    - ii. Maintain a clearance of at least 5 feet underneath the canopies of all trees along the project frontage; and
    - iii. Limit the landscaping and project signing along the project frontage, for a distance of 10 feet into the project site, as measured from the street-side edge of the curb, to plants and signs that would *not* be more than 3 to 4 feet tall.
    - iv. Any new County street signing or lighting along the project frontage should be placed cognizant of its potential impacts on the driveway sight distance.
  - b. Add additional pavement striping and guide signing near the entry road to the northern self-storage building. This would include pavement arrows to indicate travel directions (northbound for the rightmost northern roadway, northbound and southbound for the leftmost northern driveway), and signing to indicate the correct travel route for visitors, customers, and employees.
  - c. Add striping and signing on the roadway around the northern self-storage building, in order to limit traffic circulation to one direction, in a counter-clockwise pattern around the building; and
  - d. Signing should be added to dedicate individual parking areas for their respective businesses; and

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#### 9.4 Improvements Recommended for Cumulative Conditions

In addition to the improvements recommended under Existing, Background, Background Plus Project conditions, the following improvements are recommended under Cumulative conditions:

1. Santa Cruz County should consider pursuing the following five items, in order to improve circulation and reduce traffic demand at the Porter Street/Soquel Drive intersection:
  - a. Coordination of the existing and future traffic signals along Soquel Drive in the Soquel area; and
  - b. Work with the Santa Cruz City Schools and Soquel Elementary School District, in order to help encourage parents, students, and staff to use alternative forms of transportation when traveling to and from area schools, especially Soquel High School; and
  - c. Improve pedestrian and bicycle infrastructure in the greater Soquel area, in order to encourage local residents to use alternative forms of transportation en route to shopping and work within the area; and
  - d. Pursue the construction of new roadways that would allow vehicular traffic to bypass the Porter/Soquel intersection; and
  - e. Support the efforts of the Santa Cruz County Regional Transportation Commission to improve east/west circulation improvements throughout Santa Cruz County.

The project would not be responsible for the implementation of these improvements.

2. Caltrans and Santa Cruz County, and the City of Capitola should consider widening the 41<sup>st</sup> Avenue bridge over Highway 1 from four to six lanes. The project would not be responsible for the implementation of *this* improvement.

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HIGGINS ASSOCIATES

CIVIL & TRAFFIC ENGINEERS

MEMORANDUM

Date: December 9, 2005

To: John Swift, Hamilton-Swift

From: Jeff Waller, Higgins Associates

Re: Ocean Honda and Store More America Traffic Report – Summary of Revisions to Traffic Report

This is a *summary* of the changes that have been made to the earlier Ocean Honda and Store More America traffic report,<sup>1</sup> based upon a slightly revised site plan, updated project definition, County of Santa Cruz comments, and additional review by Higgins Associates:

1. At the request of Mr. Jack Sohriakoff, County of Santa ~~Cruz~~ Public Works Department, analysis has been revised for the 41<sup>st</sup> Avenue/Southbound Highway 1 Off-Ramp and 41<sup>st</sup> Avenue/Gross Road intersections, in order to take into account the geometric and signalization improvements currently under construction at the 41<sup>st</sup>/Gross intersection. These improvements include a second eastbound Gross left turn lane, and conversion of the Gross Road approaches from permitted to split phasing. This improvement was incorporated into the analysis starting at Background conditions.
2. The analysis has also been updated to take into account the addition of general office space within one of the self-storage buildings, and the resulting reduction in the size of the self-storage space within that building. Both Background Plus Project and Cumulative conditions have been re-analyzed. This change in project definition did not result in the need for any new improvements, nor any changes to previously-recommended improvements. However, one study intersection that previously did not represent a significant impact, Robertson Street/Soquel Drive, now does represent a significant impact under Background Plus Project conditions.
3. Minor typographical and grammatical errors were corrected for a couple of intersections on the Background conditions traffic volume exhibits, as well within the text of the report.
4. Additional project trip assignment exhibits have been added to the report, in order to better differentiate between trips to and from the three different uses within the project site (i.e. the Ocean Honda car dealership, the Store More America self-storage facility, and the general office space). Exhibits are also included that depict the trip assignment for the project as a whole.

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<sup>1</sup> Ocean Honda and Store More America Traffic Impact Analysis, Higgins Associates, October 27, 2005.  
1300-B First Street · Gilroy, California · 95020-4738 · VOICE/408 848-3122 · FAX/408 848-2202 · m,kbhiggins.com  
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Memorandum

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5. Updated description of on-site parking layout and number of spaces, **per** the newly revised site plan.
6. Additional text has been added with regard requirements for project signing, County street signing, and County street lighting, in order to preserve the required sight distance at the project driveways.
7. The Executive *Summary* has been updated to reflect all of the above changes to the analysis and report text.

Please contact either myself or Keith Higgins at (408) 848-3122 if you have any further questions regarding the revised report or this memorandum.

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HIGGINS ASSOCIATES  
CIVIL & TRAFFIC ENGINEERS

05-0252

MEMORANDUM

Date: January 23, 2006

To: John Swift, Hamilton-Swift

From: Jeff Waller, Higgins Associates

JW

Re: Ocean Honda and Store More America Traffic Report – Additional Responses to Santa Cruz County Comments

This memorandum responds to two additional issues raised by Mr. Jack Sohriakoff, Santa Cruz County Public Works Department, regarding the updated Ocean Honda and Store More America traffic report.<sup>1</sup> These comments were made directly to Higgins Associates via a phone conversation with Mr. Sohriakoff on January 13, 2005. These two issues are the following:

1. Verification of the Fehr & Peers contention that traffic volumes have not increased along the 41<sup>st</sup> Avenue corridor since 2000.
2. Review of the volume-to-capacity ratio calculations in determining the significance of project impacts at the Robertson Street/Soquel Drive intersection.

A discussion of each issue follows below.

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41<sup>st</sup> Avenue Traffic Volumes:

Traffic volumes at all seven study intersections of the traffic report were taken from the report *41<sup>st</sup> Avenue Safeway Shopping Center Expansion Traffic Impact Analysis*, January 2001, by Fehr & Peers Transportation Consultants. These volumes were collected in April and May 2000. These older traffic volumes were utilized in this analysis at the request of Santa Cruz County Public Works Department staff. This decision was based in part upon the contention of Fehr & Peers, in its later traffic analysis work for both the above cited Safeway Shopping Center expansion and the proposed Home Depot in the same shopping center, that traffic volumes in 2001 were substantially lower than those in 2000, specifically at the 41<sup>st</sup> Avenue/Hwy. 1 ramp intersections.

Independent partial confirmation of the Fehr & Peers finding is shown in Attachment 1. Daily traffic volumes collected by the Santa Cruz County Regional Transportation Commission (SCCRTC) over the past seven years were utilized in evaluating the recent historical variations in traffic volumes along 41<sup>st</sup> Avenue. The two most recent SCCRTC traffic volumes on four different segments of 41<sup>st</sup> Avenue are shown in Attachment 1, along with the net change in volumes between the counts. The segments of 41<sup>st</sup> Avenue north of Brommer Street and north of Capitola Road show a slight decrease in daily volumes of approximately two to three hundred vehicles, between 2001 and 2004, and 2000 and 2003, respectively. For 41<sup>st</sup> Avenue south of Soquel Drive, daily traffic

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<sup>1</sup> *Ocean Honda and Store More America Traffic Impact Analysis (Updated Draft Report)*, Higgins Associates, December 12, 2005.

volumes have decreased by over 3,000 vehicles between 2001 and 2005. These results show that on these three segments, daily traffic volumes have not increased along 41<sup>st</sup> Avenue between roughly 2000 and 2005, and that the use of the older count would represent a reasonable worst-case analysis scenario.

It should be noted, however, that there was one segment that showed an increase in daily traffic volumes. The segment of 41<sup>st</sup> Avenue north of Clares Street experienced an increase of over 1,000 daily vehicles between 1999 and 2003. On a peak-hour basis, this could represent a volume increase of approximately 100 vehicles. However, this increase in traffic volumes is likely due to increased patronage at the Capitola Mall and other shopping centers along 41<sup>st</sup> Avenue south of Gross Road. In that situation, most of this increase would be in the northbound and southbound through directions of 41<sup>st</sup> Avenue, where the volumes would have the least effect on the overall operations of the intersection.

Based upon these findings, it is believed that the older traffic volumes would constitute a worst case analysis scenario.

#### Volume-to-Capacity Ratio Calculations

Higgins Associates has reviewed the volume-to-capacity, or v/c, ratios for the Robertson Street/Soquel Drive intersection in the earlier traffic report. The v/c ratio is the basis that Santa Cruz County uses in order to determine whether or not a project's traffic impact on an intersection is significant. This significance criteria states that a project's impact on the deficient operations of an intersection is significant if, by the addition of its trips, the v/c ratio of the sum of the critical movements of said intersection would increase by at least 1% (i.e. increase by 0.01 or more).

in the earlier report, it was stated that the increase in the v/c ratio of the sum of the critical movements for the Robertson Street/Soquel Drive intersection due to the study project was exactly 0.01, and therefore the project would represent a significant impact at *this* location. After submittal of the report to the County, Mr. Sohriakoff subsequently requested Higgins Associates review the v/c calculation for this intersection. This review found that the v/c ratio for this intersection had been incorrectly calculated, and was actually much lower than presented in the report. A revised v/c exhibit, including the corrected v/c ratios, is included as Attachment 2. The revised v/c ratios under Background and Background Plus Project conditions only vary by +0.003, much less than the 0.01 increase required for significance. Therefore, the project would not constitute a significant impact on the operations of the Robertson Street/Soquel Drive intersection, nor, as stated in the earlier report, any of the other study intersections.

Please contact either myself or Keith Higgins at (408) 848-3122 if you have any further questions regarding this memorandum.

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| Location                           | Traffic Volume Data |        |            |                   |
|------------------------------------|---------------------|--------|------------|-------------------|
|                                    | Year                | Volume | Difference | Trend             |
| 1. 41st Avenue, N. of Brommer      | 2001                | 20,001 |            |                   |
|                                    | 2004                | 19,818 | -183       | Decrease (Slight) |
| 2. 41st Avenue, N. of Capitola Rd. | 2000                | 29,138 |            |                   |
|                                    | 2003                | 28,831 | -307       | Decrease (Slight) |
| 3. 41st Avenue, N. of Clares St.   | 1999                | 45,136 |            |                   |
|                                    | 2003                | 46,180 | 1044       | Increase          |
| 4. 41st Avenue, S. of Soquel Dr.   | 2001                | 19,150 |            |                   |
|                                    | 2005                | 16,089 | -3061      | Decrease          |

**Notes:**

- Traffic volumes are daily traffic counts performed and published by the Santa Cruz County Regional Transportation Commission, as taken from the 2005 Regional Transportation Plan for Santa Cruz County. The cited volumes are from the two most recent traffic counts available for that segment.
- "Trend" = overall direction of historical traffic volumes. The direction is classified here as one of the following:
  - Increase -- volumes increase from count to count
  - Decrease -- volumes decrease from count to count
  - Decrease (Slight) -- volumes decrease from count to count by less than a couple of hundred vehicles.

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ATTACHMENT 1  
 Historical Volume  
 Trends on  
 41st Avenue



**Determination of Significance for Project Impacts at  
Intersections with Deficient Operations under  
Background Plus Project Conditions**

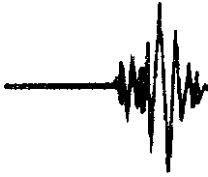
| Intersection          | Deficient Levels of Service |    |                      |    | Volume-To-Capacity Ratios |       |                      |       |            |       | Impact<br>Significant?<br>(change ≥ 0.01?) |
|-----------------------|-----------------------------|----|----------------------|----|---------------------------|-------|----------------------|-------|------------|-------|--|
|                       | Background                  |    | Background + Project |    | Background                |       | Background + Project |       | Difference |       |  |
|                       | AM                          | PM | AM                   | PM | AM                        | PM    | AM                   | PM    | AM         | PM    |  |
|                       |                             |    |                      |    |                           |       |                      |       |            |       |  |
| 3. Robertson/Soquel   | -                           | F  | -                    | F  | -                         | 0.555 | -                    | 0.558 | -          | 0.003 | No   |
| 4. Porter/Soquel      | E                           | D  | E                    | D  | 1.015                     | 0.890 | 1.018                | 0.893 | 0.003      | 0.003 | No   |
| 6. 41st/SB 1 Off-Ramp | D                           | D  | D                    | D  | 0.72                      | 0.87  | 0.72                 | 0.87  | 0.00       | 0.00  | No   |

## Notes:

- "Deficient Operations" are defined as a level of service of LOS D, E, or F under both Background and Background + Project conditions.
- Volume-to-Capacity, or v/c ratios, are taken directly from level of service calculations in Appendices C and D for intersections #4 and #6, and are calculated based upon the aforementioned level of service calculations for intersection #3.
- County of Santa Cruz in this intersection is a change in the critical v/c ratio of 1% (0.01) or more.
- "-" = level of service for this intersection under this scenario and during this peak hour is acceptable and not deficient.

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ATTACHMENT 2  
 Revised  
 Project Impact  
 Significance



## EDWARD L. PACK ASSOCIATES, INC.

1975 HAMILTON AVENUE  
SUITE 26  
SAN JOSE, CA 95125

*Acoustical Consultants*

TEL 408-371-1195  
FAX 408-371-1196  
www.packassociates.com

July 14, 2005  
Project No. 36-019-1

Mr. Steve John  
Ocean Chevrolet  
400 Auto Plaza Drive  
Capitola, CA 95010

Subject: Noise Assessment Study for the Planned "Store More America" and "Ocean Chevrolet" Auto Dealership, Soquel Drive, Santa Cruz County

Dear Mr. John:

This report presents the results of a noise assessment study for the planned "Store More America" and "Ocean Chevrolet" automobile dealership at 3711 Soquel Drive in Santa Cruz County, as shown on the Site Plan, Ref. (a). The noise exposures at the site were evaluated against the standards of the Santa Cruz County Noise Element, Ref. (b), and the Santa Cruz County Noise Ordinance, Ref. (c). The results of this analysis reveal that the project-generated noise exposures and noise levels will be within the limits of the Santa Cruz County Noise Element and Noise Ordinance standards with the possible exception of noise from large truck activity at the Store More America facility that may occur near the western property line common with the Carriker Drive residences.

Sections I and II of the report contain a summary of our findings and recommendations, respectively. Subsequent sections contain the site and project descriptions, analyses, and evaluations. Attached hereto are Appendices A, B and C, which include the list of references, descriptions of the applicable standards, definitions of terminology, descriptions of the acoustical instrumentation used for the field survey, and the on-site noise measurement data.

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## I. Summary of Findings

The noise assessment results presented in the findings were evaluated against the standards of the Santa Cruz County Noise Element. The Noise Element uses the Day-Night Level (DNL) 24-hour noise descriptor to define community noise impacts, and specifies a noise exposure of 60 decibels (dB) DNL at residential land uses. These standards are typically applied to exterior living spaces of the residential use. The Noise Element standards also have limits for stationary noise sources, such as the tools used within the auto dealership service bays, the unloading of belongings and the idling of vehicles. The standards specify limits of 50 dBA  $L_{eq}$  (equivalent energy level) from 7:00 a.m. to 10:00 p.m., and 45 dBA  $L_{eq}$  from 10:00 p.m. to 7:00 a.m. The  $L_{eq}$  is a 1-hour average noise level. In addition to the  $L_{eq}$  limits, the standard specify maximum noise level limits of 70 dBA from 7:00 a.m. to 10:00 p.m. and 65 dBA from 10:00 p.m. to 7:00 a.m. The maximum noise level is a 1 second rms value.

The Santa Cruz County Noise Ordinance, Section 8.30.010, restricts noise created between 10:00 p.m. and 7:00 a.m. that is within 100 ft. of a sleeping space. As the auto dealership service bays will be more than 100 ft. from any sleeping spaces, Section 8.30.010 of the Noise Ordinance is not applicable. The hours of operation for the Store More America facility will be from 7:00 a.m. to 7:00 p.m. and will be outside of the time restrictions of the Noise Ordinance. The Noise Ordinance is not applicable to the project.

The noise levels shown below are without the application of mitigation measures and represent the ambient and project-generated noise environments under unmitigated conditions, but includes the noise reduction provided by the 6 ft. high property line barriers along the north and west property lines of the site.

### A. Existing Ambient Noise

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Table I. below, provides the existing ambient noise levels and noise exposures at the most impacted property lines of the Rodeo Mobile Estates residences to the north of the site and the Carriker Lane residences to the west of the site.

TABLE I

Existing Ambient Noise Levels

|                          |             | <u>Rodeo MHP</u>       | <u>Carriker Lane</u> |                        |
|--------------------------|-------------|------------------------|----------------------|------------------------|
|                          |             | <u>L<sub>max</sub></u> | <u>Leq</u>           | <u>L<sub>max</sub></u> |
| 6:00 - 7:00 a.m.         | 45.5        | 71.4                   | 47.4                 | 70.5                   |
| 7:00 - 8:00 a.m.         | 45.8        | 59.9                   | 45.5                 | 64.8                   |
| 8:00 - 9:00 a.m.         | 47.7        | 58.7                   | 49.7                 | 75.3                   |
| 9:00 - 10:00 a.m.        | 47.1        | 61.4                   | 46.0                 | 68.7                   |
| 10:00 - 11:00 a.m.       | 48.2        | 59.7                   | 47.8                 | 67.7                   |
| 11:00 a.m. - 12:00 p.m.  | 51.0        | 62.5                   | 45.1                 | 67.6                   |
| <b>12:00 - 1:00 p.m.</b> | <b>53.0</b> | 64.4                   | 45.1                 | 75.1                   |
| 1:00 - 2:00 p.m.         | 53.2        | 62.5                   | 48.8                 | 70.4                   |
| 2:00 - 3:00 p.m.         | 52.6        | 65.1                   | 48.4                 | 69.4                   |
| 3:00 - 4:00 p.m.         | 52.6        | 64.6                   | 47.9                 | 82.8                   |
| 4:00 - 5:00 p.m.         | 51.8        | 64.6                   | 47.1                 | 69.7                   |
| 5:00 - 6:00 p.m.         | 52.8        | 69.8                   | 45.8                 | 64.1                   |
| 6:00 - 7:00 p.m.         | 51.5        | 65.2                   | 49.0                 | 70.6                   |
| 7:00 - 8:00 p.m.         | 49.5        | 61.1                   | 45.4                 | 70.3                   |
| 8:00 - 9:00 p.m.         | 46.1        | 60.0                   | 40.2                 | 78.3                   |
| 9:00 - 10:00 p.m.        | 42.6        | 68.0                   | 34.8                 | 55.8                   |
| 10:00 - 11:00 p.m.       | 43.8        | 57.8                   | 36.0                 | 56.7                   |
| 11:00 p.m. - 12:00 a.m.  | 41.4        | 56.7                   | 38.9                 | 64.7                   |
| 12:00 - 1:00 a.m.        | 37.1        | 54.8                   | 36.5                 | 69.1                   |
| 1:00 - 2:00 a.m.         | 36.1        | 56.2                   | 36.2                 | 69.9                   |
| 2:00 - 3:00 a.m.         | 36.3        | 63.7                   | 36.7                 | 69.6                   |
| 3:00 - 4:00 a.m.         | 40.3        | 56.9                   | 39.9                 | 71.9                   |
| 4:00 - 5:00 a.m.         | 45.3        | 63.2                   | 42.6                 | 69.0                   |
| 5:00 - 6:00 a.m.         | 46.8        | 62.6                   | 44.3                 | 70.5                   |
| DNL=                     | 52          |                        | 50                   |                        |

Noise Levels Corresponding to the Service Dept. Operational Hours Shown in Bold

As shown above, the existing hourly  $L_{eq}$ 's during the service bay operational hours of 6:00 a.m. to 5:00 p.m. range from 47.1 to 53.2 dBA at the Rodeo Mobile Estates MHP and from 45.5 to 47.9 dBA at the Carriker Lane residences. The existing maximum sound levels during the service bay operational hours range from 58.7 to 65.1 dBA at the Rodeo Mobile Estates MHP and from 67.6 to 82.8 dBA at the Carriker Lane residences.

The existing noise exposure at the Rodeo Mobile Estates MHP property line is 52 dB DNL. The existing noise exposure at the Carriker Lane residential property line is 50 dB DNL.

**B. Project-Generated Noise from Ocean Chevrolet**

- The project-generated noise exposure at the most impacted property line to the north of the site (Rodeo Mobile Home Park) will be 45 dB DNL and will be 7 dB lower than the existing noise exposure. When combined with the existing noise exposure, the existing + project noise exposure will be 53 dB DNL. Thus, the project-generated noise exposure will be within the limits of the Santa Cruz County Noise Element standards and will add 1 dB to the existing noise environment. A 1 dB increase in the noise environment is insignificant.
- The project-generated noise exposure at the most impacted residential property to the west of the site (Carriker Lane) will be 41 dB DNL. The project-generated noise exposure will be 9 dB lower than the existing noise exposure. When combined with the existing noise exposure, the existing + project noise exposure will be 51 dB DNL. Thus, the project-generated noise exposure will be within the limits of the Santa Cruz County Noise Element standards and will add 1 dB to the existing noise environment. A 1 dB increase in the noise environment is insignificant.

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- The project-generated highest hourly  $L_{eq}$  at the most impacted property to the north of the site will be 40 dBA. Thus, the  $L_{eq}$  noise levels will be within the 50 dBA  $L_{eq}$  daytime limit of the Santa Cruz County Noise Element standards.
- The project-generated highest hourly  $L_{eq}$  at the most impacted property to the west of the site will be 35 dBA. Thus: the  $L_{eq}$  noise levels will be within the 50 dBA  $L_{eq}$  daytime limit of the Santa Cruz County Noise Element standards.
- The project-generated maximum noise levels at the most impacted property to the north of the site will be 55 dBA and will be due to vacuums and closing of car doors in the prep area. Maximum noise levels of starting cars that parked along north property line may be up to 63 dBA. Thus, the maximum noise levels will be within the 70 dBA  $L_{max}$  daytime limit of the Santa Cruz County Noise Element standards.
- The project-generated maximum noise levels at the most impacted property to the west of the site will be 50 dBA and will be due to hammering of automobile components inside the service building. Thus, the maximum noise levels will be within the 70 dBA  $L_{max}$  daytime limit of the Santa Cruz County Noise Element standards.

**C. Project-Generated Noise from Store More America**

Because of the relatively benign levels of activity at a self-storage facility, the hourly  $L_{eq}$ 's and the Day-Night Levels are typically low. Loading or unloading of belongings usually takes no more than 30 minutes to 1 hour and there is usually no noisy equipment on the site. However, there is potential for maximum noise level excesses if loud vehicles are brought near the property line or if someone generates loud noises during a loading or unloading process.

- Automobiles generate sound levels in the range of 56-66 dBA at the distance of 20 ft. from the closest access road to the property line. Thus, automobiles will typically be in compliance with the standards provided that engines are not left idling for extended periods of time.
- Gasoline engine trucks that are greater than 10 tons Gross Vehicle Weight and diesel engine trucks typically generate sound levels ranging from 72-81 dBA at the 20 ft. distance from the access road to the property line. These vehicles will usually generate noise levels that will exceed the limits of the standards if the engines are not turned off when not in motion.
- In addition to noise from large gasoline trucks or diesel engine trucks, noise excesses could occur from people playing audio equipment (car stereos) while loading or unloading belongings.

Although the project-generated noise exposures and noise levels from Ocean Chevrolet will be in compliance with the standards, and that normal activities at the Store More America facility will also be in compliance with the standards, there is a potential for noise excesses under certain circumstances. Mitigation measures to eliminate these potential noise excesses are recommended. The recommended measures are described in Section II, below.

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## II. Recommendations

To ensure that potential, but unforeseen, noise remains within the limits of the standards from activity at Ocean Chevrolet, the following noise control measures are recommended:

- Prohibit the playing of music that is audible at the property boundaries.
- Use personal pagers for the sales/service staff rather than a P.A. paging system.

To ensure that potential, but unforeseen, noise remains within the limits of the standards from activity at the Store More America facility, the following noise control measures are recommended:

- **All** vehicles shall turn engines off while vehicles are on the site, with the exception of driving in and out. Post signs to enforce this recommendation.
- **All** patrons shall turn audio equipment (car stereos, boom boxes, etc.) off while on the site. Post signs to enforce this recommendation.

The implementation of the above recommended measures will reduce excess noise from the prep bays and related activities at Ocean Chevrolet and from loading and unloading activity at Store More America to comply with the noise standards of the Santa Cruz County Noise Element.

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### III. Site and Project Descriptions

The proposed development site is located at 3711 Soquel Drive in Santa Cruz County. The site is relatively level and at-grade with the surrounding land uses. The site is currently occupied by a dog kennel, several unoccupied buildings and two cottages. The existing buildings are near the front of the site along Soquel Drive. The rear of site is vacant. Surrounding land uses include vacant property and commercial uses adjacent to the east, the Rodeo Mobile Estates mobile home park adjacent to the north, the Carriker Lane residences and an auto service facility adjacent to the west and commercial uses across Soquel Drive to the south.

The proposed project includes the construction of a new automobile dealership, including a vehicle storage lot, an auto parts department and a service facility. The service facility will be divided *into* two sections. The interior of the service building will contain 20 main service bays with ingress and egress via small doors on each side of the building. There will be 10 vehicle prep bays that will be open and will face north toward the vehicle storage lot. The doorway facing west will be 260 ft. from the west (residential) property line. The mobile home park property line will be 300 ft. from the rear of the service building.

The service department operational hours will be 7:30 a.m. to 6:00 p.m. weekdays and 9:00 a.m. to 6:00 p.m. Saturdays. Vehicle sales hours will be 8:00 a.m. to 8:00 p.m. weekdays, 9:00 a.m. to 8:00 p.m. Saturdays and 10:00 a.m. to 7:00 p.m. Sundays.

The compressor equipment will be housed inside the building.

The sales staff will use personal pagers instead of a public address type paging system.

The project will also include the construction of a self storage facility which will contain two buildings. The building closest to Soquel Drive will be 3 stories high and will be built in the first phase. The rear building will be 2 stories high and will be built in the second phase. The operational hours of the storage facility will be 7:00 a.m. to 7:00 p.m. The project operational information was provided by Hamilton Swift, Ref. (d).

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#### IV. Analysis of the Noise Levels

##### A. Existing Noise Levels

To determine the existing noise exposures at the north and east (residential) property boundaries, continuous recordings of the sound levels were made at two locations. Location 1 was at the north property line contiguous with the Rodeo Mobile Estates mobile home park, 315 ft. from the planned service bays. Location 2 was in the adjacent to the property line fence in the rear yard of the Carriker residence, 260 ft. from the planned auto service building door. The noise measurements at Location 1 were made on April 20-21, 2004 and the noise measurements at Location 2 were made on May 6-7, 2004. The noise level data were recorded and processed using Larson-Davis LDL 812 Precision Integrating Sound Level Meters. The meters yield, by direct readout, a series of descriptors of the sound levels versus time, as described in Appendix B, and included the  $L_1$ ,  $L_{10}$ ,  $L_{50}$ , and  $L_{90}$ , i.e., those levels exceeded for 1%, 10%, 50%, and 90% of the time. Also measured were the maximum and minimum levels and the continuous equivalent-energy levels ( $L_{eq}$ ), which are used to calculate the DNL. The measured  $L_{eq}$ 's and  $L_{max}$  values are shown in Table I, herein, and in the data tables in Appendix C.

As shown in the tables, the  $L_{eq}$ 's for survey Location 1 ranged from 42.6 to 53.2 dBA during the daytime and from 36.3 to 46.8 dBA at night. At survey Location 2, the  $L_{eq}$ 's ranged from 34.8 dBA to 38.8 dBA during the daytime and from 36.2 to 47.4 dBA at night.

During the operational hours of 7:30 a.m. to 6:00 p.m., the measured maximum sound levels at Location 1 ranged from 53.6 dBA to 71.4 dBA. The measured maximum sound levels at Location 2 ranged from 64.8 to 82.2 dBA. The field survey revealed that the primary sources of noise at the site are local street traffic, Soque! Drive traffic and Highway 1 traffic as the main background source.

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V. Project Generated Noise Levels

A. Ocean Chevrolet

The proposed Ocean Chevrolet automobile dealership consists of new vehicles sales, parts sales and vehicle service. The service area will contain 20 service bays enclosed in the building and 10 prep bays along the northerly facade. The primary noise sources that would result from implementation of the project are the auto repair equipment used in the service bays, equipment used in the prep area and cars starting that are parked along the north property line.

To determine the noise levels that would be generated by the project, sound level recordings were made at the existing Ocean Chevrolet facility in Capitola. Continuous recordings of the sound levels were made 50 ft. from the side doorway of the service shop using a Larson Davis LDL 812 Precision Sound Level Meter. Sound measurements were made for a continuous 24-hour period on April 20-21, 2004 and included background noise created by Highway 1 traffic. Additional short-term measurements were made at 50 ft. and 100 ft. from the front bays of the service building. The results of the measurements are shown in Appendix C.

The long-term data collected at the side of the service bays included noise from Highway 1. Therefore, to segregate traffic noise from the service bay noise, the noise levels generated during non-operational hours of the service department were used to extract the traffic only noise levels. The hourly distribution of Highway 1 traffic noise levels measured at the planned project site were applied to the existing service department Location 1 noise level data set and adjusted to the actual noise measurements. The traffic noise levels were then subtracted from the total measured noise levels to yield service department noise alone. The segregated  $L_{eq}$ 's are shown in the data tables in Appendix C.

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The total measured  $L_{eq}$ 's at Location 1 ranged from 50.1 to 58.4 dBA during the daytime and from 42.9 to 58.5 dBA at night. The traffic noise levels ranged from 48.1 to 52.0 dBA during the daytime and from 42.9 to 51.6 dBA at night. The service department noise levels were 51.0 to 59.1 dBA during the daytime hours of 7:00 a.m. to 6:00 p.m. and 57.5 dBA during the nighttime hour of 6:00 - 7:00 a.m.

In addition to the continuous sound level measurements, measurements of individual sources were made, as shown in Table II, below. Also shown are the individual noise source levels extrapolated to the most impacted adjacent residential properties to the north of the project site (300 ft. from the nearest prep bay) and to the west of the site (260 ft. from the service building doorway). The residential property sound levels include a 4 dB reduction at the properties to the north provided by the planned 6 ft. high property line barrier and a 5 dB reduction at the properties to the west provided by the property line barrier.

**TABLE II**

**Maximum Noise Levels Generated by Service/Prep Bay Activity**

| <u>Noise Source</u> | Measured                   | Distance<br>(ft.) | Sound Level<br><u>@ Res. Properties</u> |             |
|---------------------|----------------------------|-------------------|---|-------------|
|                     | Maximum Noise<br>Level dBA |                   | <u>North</u>                            | <u>West</u> |
| Air Wrench          | 70-73                      | 50                | na                                      | 45-48       |
| Car at Idle         | 53                         | 50                | 36                                      | 28          |
| Engine Run-up       | 63                         | 50                | 46                                      | <b>38</b>   |
| Car Exit            | 54                         | 50                | 37                                      | 29          |
| Voices              | 62                         | 50                | 45                                      | 37          |
| Paging              | 51                         | 50                | 34                                      | 26          |
| Compressor          | 56                         | 50                | na                                      | 31          |
| Engine Dolly        | 66                         | 50                | na                                      | 41          |
| Hammering           | 76                         | 50                | na                                      | <b>50</b>   |
| Tire Changing       | 68                         | 50                | na                                      | 43          |
| Floor Jack          | 62-68                      | 50                | na                                      | 37-43       |
| General Noise       | 52                         | 50                | 35                                      | 27          |
| Vacuum              | 72                         | 50                | 55                                      | 41          |

na = noise will be limited to inside building and to areas that have a view to the building interior

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As shown by the levels in the table, there is a wide variation in noise levels depending on the source. It should also be noted that *the* values in the table represent the maximum noise levels recorded for any individual piece of equipment or noise event. The actual noise levels produced by any one source at any given instant may vary considerably. The data also reveal that noise from the service bays diminishes at a rate of 5 dB per doubling of the distance, or  $17 \log_{10}(r_1/r_2)$ .

**B. Store More America**

Because of the relatively quiet nature of self storage facilities, no noise data exist for the analysis of noise from people loading and unloading their vehicles. However, vehicles driving in and out of the facility and possibly left idling while being loaded or unloaded, or the possibility of people playing their car stereos or other audio equipment while *on* the site may produce noise levels that exceed the limits of the standards and may cause annoyance to nearby residents.

Automobiles idling or driving slow (5-10 mph) will usually generate sound levels ranging from 51-61 dBA at 20 ft. and behind a 6 ft. soundwall. Large gasoline trucks and diesel engine trucks usually generate sound levels of 69-78 dBA at 20 ft. and behind a 6 ft. soundwall. Automobile noise will be within the limits of the standards at the north and west property lines. Truck noise will be within *the* limits of the standards if the truck engines are turned off while the truck is stationary as the standards do not apply to moving vehicles. Vehicle, loading and unloading noise will typically be inaudible for operations that occur on the east side of the front building. Potential noise impacts would occur only at the north end of the front building or along the west and north side of the rear building.

Noise from car stereos is difficult to quantify **as** there are wide variations in equipment types and musical styles. Car stereos can generate sound levels up to 85 dBA at 20 ft. with excessive low frequency noise that is not attenuated well by shielding or building shell components.

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**VI. Evaluations of the Noise Levels**

**A. Existing Noise Exposures**

To evaluate the existing noise exposures at surrounding residential areas, the DNL's for the survey locations were calculated by decibel averaging of the measured  $L_{eq}$ 's as they apply to the daily time periods of the DNL index. A nighttime weighting factor was applied and the DNL was calculated using the mathematical formula shown in Appendix B.

The results of the calculations indicate that the existing noise exposures are 52 dB DNL at the property line of the Rodeo Mobile Estates mobile home park to the north of the site and 50 dB DNL at the property line of the Carriker Lane residence to the west of the site.

**B. Project-Generated Noise Levels**

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**Ocean Chevrolet**

To evaluate the project-generated noise levels against the Santa Cruz County Noise Element standards, the hourly  $L_{eq}$ 's measured at the existing service department were adjusted down by 20 dB to account for the increased distance to the measurement location of 50 ft. from the side door to the property line location at 260 ft. from the side door. The measured noise exposure at the existing facility was calculated to be 59 dB DNL. Of this 59 dB, 55 dB was due to Highway 1 traffic. Thus, the service department noise exposure was calculated to be 56 dB DNL at 50 ft. from the side door.

At the property line to the west of the service bay door (260 ft.), the noise exposure is expected to be 41 dB DNL. Thus, the project-generated noise exposure will be within the 60 dB DNL limit of the Santa Cruz County Noise Element standards.

At the property line to the north of the auto prep bays (300 ft.), the noise exposure is expected to be 44 dB DNL. Thus, the project-generated noise exposure will be within the 60 dB DNL limit of the Santa Cruz County Noise Element standards.

The highest daytime hourly  $L_{eq}$  generated by the service department was measured to be 59 dBA at 50 ft. At the property line to the west the noise level will be 35 dBA and will be within the 50 dBA  $L_{eq}$  daytime limit of the Santa Cruz County Noise Element.

At the property line to the north, the highest daytime  $L_{eq}$  from auto prep (50 dBA @ 50 ft.) will be 39 dBA. Thus, the hourly noise levels will be in compliance with the 50 dBA  $L_{eq}$  standard.

The highest maximum noise level was measured to be 76 dBA at 50 ft. At the property line to the west, the noise level will be 50 dBA and will be within the 70 dBA  $L_{max}$  daytime limit of the Santa Cruz County Noise Element.

At the property line to the north, the noise level will be 54 dBA and will be within the 70 dBA daytime limit of the Santa Cruz County Noise Element.

The results of the evaluations reveal that the project-generated noise exposures and noise levels from Ocean Chevrolet will be within the limits of the standards. Mitigation measures will not be required, however, recommendations to preclude potential noise annoyance are provided in Section II of this report.

#### **Store More America**

Hourly  $L_{eq}$  and 24-hour average noise exposures produced by intermittent and short duration activity at the Store More America facility will be low and will be within the limits of the standards.

Short-term maximum noise levels from noisy vehicles or noisy activity within close proximity to the property lines have potential to exceed the limits of the Santa Cruz County Noise Element standard of 70 dBA  $L_{max}$  by up to 15 dB, depending on the source. As noise level excesses may occur, mitigation measures are recommended to preclude maximum noise excesses. The recommended measures are described in Section II herein.

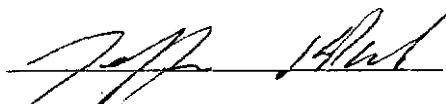
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The above report presents the results of the noise assessment study for the planned "Ocean Chevrolet" and "Store More America" at 3711 Soquel Drive in Santa Cruz County. The study findings and recommendations for predicted conditions are based on field measurements and other data and are correct to the best of our knowledge. Project-generated noise levels were calculated from noise measurements made the existing Ocean Chevrolet facility, and information provided by the project sponsor. Significant changes in operating conditions at the planned project may produce noise results different from our estimates.

If you have any questions or would like an elaboration of this report, please call me

Sincerely,

EDWARD L. PACK ASSOC., INC

  
Jeffrey K. Pack  
President

Attachments: Appendices A, B and C

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## APPENDIX A

### References:

- (a) Site Plan With Grading and Drainage, Store More America Soquel, by Streeter Group, Inc. April 5, 2005
- (b) Santa Cruz County General Plan, Noise Element, Adopted December 19, 1994
- (c) Santa Cruz County Code, Ordinance No. 4001, Chapter 8.30, Section 8.30.010, "Curfew-Offensive Noise", July 18, 1989
- (d) Information on Planned Ocean Chevrolet and Store More America Operations Provided by Mr. John Swift, Hamilton Swift, by Telephone to Edward L. Pack Associates, Inc., May 3, 2005

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## APPENDIX B

### Noise Standards, Terminology, Instrumentation

#### 1. Noise Standards

##### A. Santa Cruz County Noise Element

The Noise Element standards of the County of Santa Cruz General Plan identify a “Normally Acceptable” exterior noise exposure compatibility level of 60 dB Day-Night Level (DNL) for residential, hotel, motel, school, library, museum, hospital, church, office, commercial and professional business land use. Outdoor sports, recreation, parks and playgrounds are limited to 65 dB DNL. Industrial, manufacturing and agriculture land uses are limited to 70 dB DNL.

In addition to the above, commercial and industrial developments are limited to the following:

|                               | Daytime<br>(7 a.m. - 10 p.m.) | Nighttime<br>(10 p.m. - 7 a.m.) |
|-------------------------------|-------------------------------|---------------------------------|
| Hourly $L_{eq}$               | 50                            | 45                              |
| Maximum Level                 | 70                            | 65                              |
| <b>Max.</b> Level (impulsive) | 65                            | 60                              |

Allowable levels shall be raised to the ambient noise levels where the existing ambient levels exceed the allowable levels. Allowable levels shall be reduced 5 dB if the ambient hourly  $L_{eq}$  is at least 10 dB lower than the allowable level.

Residential interiors are limited to 45 dB DNL.

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## 2. Terminology

### A. Statistical Noise Levels

Due to the fluctuating character of urban traffic noise, statistical procedures are needed to provide an adequate description of the environment. A series of statistical descriptors have been developed which represent the noise levels exceeded a given percentage of the time. These descriptors are obtained by direct readout of the Community Noise Analyzer. Some of the statistical levels used to describe community noise are defined as follows:

- $L_1$  - A noise levels exceeded for 1% of the time.
- $L_{10}$  - A noise level exceeded for 10% of the time, considered to be an "intrusive" level.
- $L_{50}$  - The noise level exceeded 50% of the time representing an "average" sound level.
- $L_{90}$  - The noise level exceeded 90 % of the time, designated as a "background" noise level.
- $L_{eq}$  - The continuous equivalent-energy level is that level of a steady-state noise having the same energy as a given time-varying noise. The  $L_{eq}$  represents the decibel level of the time-averaged value of sound energy or sound pressure squared, and is used to calculate the DNL and CNEL.

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**B. Day-Night Level (DNL)**

Noise levels utilized in the standards are described in terms of the Day-Night Level (DNL). The DNL rating is determined by the cumulative noise exposures occurring over a 24-hour day in terms of A-Weighted sound energy. The 24-hour day is divided into two subperiods for the DNL index, i.e., the daytime period from 7:00 a.m. to 10:00 p.m., and the nighttime period from 10:00 p.m. to 7:00 a.m. A 10 dBA weighting factor is applied (added) to the noise levels occurring during the nighttime period to account for the greater sensitivity of people to noise during these hours. The DNL is calculated from the measured  $L_{eq}$  in accordance with the following mathematical formula:

$$DNL = [(L_d + 10 \log_{10} 15) \& (L_n + 10 + 10 \log_{10} 9)] - 10 \log_{10} 24$$

Where:

- $L_d$  =  $L_{eq}$  for the daytime (7:00 a.m. to 10:00 p.m.)
- $L_n$  =  $L_{eq}$  for the nighttime (10:00 p.m. to 7:00 a.m.)
- 24 indicates the 24-hour period
- & denotes decibel addition.

**C. A-Weighted Sound Level**

The decibel measure of the sound level utilizing the "A" weighted network of a sound level meter is referred to as "dBA". The "A" weighting is the accepted standard weighting system used when noise is measured and recorded for the purpose of determining total noise levels and conducting statistical analyses of the environment so that the output correlates well with the response of the human ear.

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### 3. Instrumentation

The on-site field measurement data were acquired by the use of one or more of the sound analyzer listed below. The instrumentation provides a direct readout of the L exceedance statistical levels including the equivalent-energy level ( $L_{eq}$ ). Input to the meters were provided by microphones extended to a height of 5 ft. above the ground. The “A” weighting network and the “Fast” response setting of the meters were used in conformance with the applicable standards. The Larson-Davis meters were factory modified to conform with the Type 1 performance standards of ANSI S1.4. All instrumentation was acoustically calibrated before and after field tests to assure accuracy.

Bruel & Kjaer 2231 Precision Integrating Sound Level Meter

Larson Davis LDL 812 Precision Integrating Sound Level Meter

Larson Davis 2900 Real Time Analyzer

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## APPENDIX C

### On-Site Noise Measurement Data and Calculation Tables

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| DNL CALCULATIONS |                               |                        |      |           |  |  |  |  |  |
|------------------|-------------------------------|------------------------|------|-----------|--|--|--|--|--|
| CLIENT:          | OCEAN CHEVROLET               |                        |      |           |  |  |  |  |  |
| FILE:            | 36-019                        |                        |      |           |  |  |  |  |  |
| PROJECT:         | AUTO DEALERSHIP               |                        |      |           |  |  |  |  |  |
| DATE:            | 4/20-21, 5/6-7/2004           |                        |      |           |  |  |  |  |  |
| SOURCE:          | AMBIENT                       |                        |      |           |  |  |  |  |  |
| LOCATION 1       | Mobile Home Park Prop. Line   |                        |      |           |  |  |  |  |  |
|                  | AMBIENT SOUND LEVELS          |                        |      |           |  |  |  |  |  |
| TIME             | Leq                           | 10 <sup>4</sup> Leq/10 |      |           |  |  |  |  |  |
| 7:00a.m.         | 45.8                          | 38414.7                |      |           |  |  |  |  |  |
| 8:00 a.m.        | 47.7                          | 59335.0                |      |           |  |  |  |  |  |
| 9:00a.m.         | 47.1                          | 51732.8                |      |           |  |  |  |  |  |
| 10:00a.m.        | 48.2                          | 65423.9                |      |           |  |  |  |  |  |
| 11:00 a.m.       | 51.0                          | 127281.2               |      |           |  |  |  |  |  |
| 12:00noon        | 53.0                          | 200920.4               |      |           |  |  |  |  |  |
| 1:00p.m.         | 53.2                          | 206563.6               |      |           |  |  |  |  |  |
| 2:00 p.m.        | 52.6                          | 183146.0               |      |           |  |  |  |  |  |
| 3:00 p.m.        | 52.6                          | 181093.3               |      |           |  |  |  |  |  |
| 4:00 p.m.        | 51.8                          | 152169.6               |      |           |  |  |  |  |  |
| 5:00 p.m.        | 52.8                          | 190294.4               |      |           |  |  |  |  |  |
| 6:00 p.m.        | 51.5                          | 142678.6               |      |           |  |  |  |  |  |
| 7:00 p.m.        | 49.5                          | 90085.0                |      |           |  |  |  |  |  |
| 8:00 p.m.        | 46.1                          | 40407.8                |      |           |  |  |  |  |  |
| 9:00 p.m.        | 42.6                          | 18338.2                | SUM= | 1747884.5 |  |  |  |  |  |
| 10:00 p.m.       | 43.8                          | 23828.7                | Ld=  | 50.7      |  |  |  |  |  |
| 11:00 p.m.       | 41.4                          | 23828.7                |      |           |  |  |  |  |  |
| 12:00mdnt        | 37.1                          | 13937.3                |      |           |  |  |  |  |  |
| 1:00 a.m.        | 36.7                          | 5136.6                 |      |           |  |  |  |  |  |
| 2:00 a.m.        | 36.3                          | 4218.5                 |      |           |  |  |  |  |  |
| 3:00 a.m.        | 40.3                          | 10609.7                |      |           |  |  |  |  |  |
| 4:00 a.m.        | 45.3                          | 33725.9                |      |           |  |  |  |  |  |
| 5:00 a.m.        | 46.8                          | 47810.3                |      |           |  |  |  |  |  |
| 6:00 a.m.        | 45.5                          | 35562.0                | SUM= | 198657.7  |  |  |  |  |  |
|                  |                               |                        | Ln=  | 43.4      |  |  |  |  |  |
|                  |                               |                        |      |           |  |  |  |  |  |
|                  | Daytime Level=                | 62.5                   |      |           |  |  |  |  |  |
|                  | Nighttime Level=              | 62.9                   |      |           |  |  |  |  |  |
|                  | DNL=                          | 52                     |      |           |  |  |  |  |  |
|                  | 24-Hour Leq=                  | 49.1                   |      |           |  |  |  |  |  |
| LOCATION 2       | Carriker Residence Prop. Line |                        |      |           |  |  |  |  |  |
|                  | AMBIENT SOUND LEVELS          |                        |      |           |  |  |  |  |  |
| TIME             | Leq                           | 10 <sup>4</sup> Leq/10 |      |           |  |  |  |  |  |
| 7:00a.m.         | 45.5                          | 35481.3                |      |           |  |  |  |  |  |
| 8:00 a.m.        | 49.7                          | 93325.4                |      |           |  |  |  |  |  |
| 9:00a.m.         | 46.0                          | 39810.7                |      |           |  |  |  |  |  |
| 10:00a.m.        | 47.8                          | 60256.0                |      |           |  |  |  |  |  |
| 11:00 a.m.       | 48.1                          | 64565.4                |      |           |  |  |  |  |  |
| 12:00noon        | 48.1                          | 64565.4                |      |           |  |  |  |  |  |
| 1:00p.m.         | 48.8                          | 75857.8                |      |           |  |  |  |  |  |
| 2:00 p.m.        | 48.4                          | 69183.1                |      |           |  |  |  |  |  |
| 3:00 p.m.        | 47.9                          | 61659.5                |      |           |  |  |  |  |  |
| 4:00 p.m.        | 47.1                          | 51286.1                |      |           |  |  |  |  |  |
| 5:00 p.m.        | 45.8                          | 38018.9                |      |           |  |  |  |  |  |
| 6:00 p.m.        | 49.0                          | 79432.8                |      |           |  |  |  |  |  |
| 7:00 p.m.        | 45.1                          | 32359.4                |      |           |  |  |  |  |  |
| 8:00 p.m.        | 40.2                          | 10471.3                |      |           |  |  |  |  |  |
| 9:00 p.m.        | 34.8                          | 3020.0                 | SUM= | 779293.1  |  |  |  |  |  |
| 10:00 p.m.       | 36.0                          | 3981.1                 | Ld=  | 47.2      |  |  |  |  |  |
| 11:00 p.m.       | 38.9                          | 3981.1                 |      |           |  |  |  |  |  |
| 12:00mdnt        | 36.5                          | 7762.5                 |      |           |  |  |  |  |  |
| 1:00 a.m.        | 36.2                          | 4466.8                 |      |           |  |  |  |  |  |
| 2:00 a.m.        | 36.7                          | 4677.4                 |      |           |  |  |  |  |  |
| 3:00 a.m.        | 39.9                          | 9772.4                 |      |           |  |  |  |  |  |
| 4:00 a.m.        | 42.6                          | 18197.0                |      |           |  |  |  |  |  |
| 5:00 a.m.        | 44.3                          | 26915.3                |      |           |  |  |  |  |  |
| 6:00 a.m.        | 47.4                          | 54954.1                | SUM= | 134707.6  |  |  |  |  |  |
|                  |                               |                        | Ln=  | 41.8      |  |  |  |  |  |
|                  |                               |                        |      |           |  |  |  |  |  |
|                  | Daytime Level=                | 59.0                   |      |           |  |  |  |  |  |
|                  | Nighttime Level=              | 61.3                   |      |           |  |  |  |  |  |
|                  | DNL=                          | 50                     |      |           |  |  |  |  |  |
|                  | 24-Hour Leq=                  | 45.8                   |      |           |  |  |  |  |  |

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ENVIRONMENTAL HEALTH

# County of Santa Cruz

## HEALTH SERVICES AGENCY

701 OCEAN STREET, ROOM 312, SANTA CRUZ, CA 95060-4073  
(831) 454-2022 FAX: (831) 454-3128 TDD: (811) 4644123

RECEIVED 2 6 2005

May 24, 2005

Environmental Investigation Services, Inc.  
Peter Littman, Project Manager  
15466 Los Gatos Blvd., ste. 109-062  
Los Gatos, CA. 95032

RE: Report of Asbestos and Lead Confirmation Soil Sampling, dated April 22, 2005 for  
3711, 3715 and 3801 Soquel Drive, Santa Cruz, CA. EIS Project # 520-2

Dear **Mr.** Littman:

This department has received and reviewed the above referenced report. Based on the analytical results of the soil samples, this department concurs with the conclusions and recommendations of the above referenced report.

Please note this determination does not relieve you of other agencies' requirements, nor does it relieve your or future owners or operators of having to perform additional work. should future information indicate that a contamination/pollution problem exists or should assessment or clean-up standards change.

If you have any questions regarding this letter. you may contact me at (831) 454-2756 between 8:00 and 9:30 a.m.. Tuesday through Friday.

Sincerely,

Rolando Charles, R.E.H.S.  
Environmental Health Specialist III

|             | Environmental Review | Initial Study |
|-------------|----------------------|---------------|
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| APPLICATION | <u>05</u>            | <u>0252</u>   |

cc: John Swift-1509 Seabright Ave, Santa Cruz. CA 93062



# Environmental Investigation Services, Inc.

---

April 22, 2005

Santa Cruz County Health Department  
Mr. Rolando Charles  
701 Ocean Street Room 312  
Room B-301  
Santa Cruz, CA 95060

**Subject: Report of Asbestos and Lead Confirmation Soil Sampling  
3711, 3715, and 3801 Soquel Drive, Santa Cruz, CA  
EIS Project # 520-2**

Dear Mr. Charles,

Environmental Investigation Services, Inc. (EIS) has prepared this report documenting the procedures and results of asbestos and lead confirmation soil sampling at the subject site.

## **SITE BACKGROUND**

The subject site is located at 3711, 3715, and 3801 Soquel Drive in Santa Cruz, California (Figures 1). In August 2004, EIS completed an asbestos and lead survey at the site. The purpose of the asbestos and lead survey was to identify asbestos-containing materials (ACMs) and lead-containing paints in preparation for planned development at subject property. The following property descriptions are from the August 2004 EIS asbestos and lead survey:

*3711 Soquel Drive - Formerly a dog kennel. The property currently consists of a main building (office and residence), a wood-frame shed located behind the residence, three wood and masonry block structures that served as the kennels and a dilapidated wood-frame shed. These structures were built circa the 1930s/1940s.*

*3715 Soquel Drive - This property contains two buildings at present. One masonry block retail/warehouse structure located at the Soquel Drive side of the property. This building is approximately 6,500 square feet in size and was in use as both a warehouse and a residence during the time of this survey. Estimated date of construction is the 1950s. One small wood-framed shed was identified located at the back of this property during this survey. This shed was measured to be approximately 220 square feet in size.*

*3801 Soquel Drive - There were 12 wood frame structures located on this property. This site was originally developed as a motor court, probably at some time in the late 1930s to early 1940s. The site consists a main wood-frame structure, about 4,100 square feet in size; seven single-room, single-story wood-framed cottages (Cottages 1-4 & 9-11) each measuring approximately 400 square feet; one multi-room, wood-framed building with*

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*four cottages (Cottages 5-8) roughly 2,000 square feet; and three single-story, wood-framed cottages that are approximately 700 to 900 square feet in size.*

Subsequent to EIS' asbestos and lead survey, demolition of approximately 17 site structures occurred without completion of the necessary asbestos abatement and lead paint work. The main buildings that front Soquel Drive at 3711, 3715 and 3801 Soquel Drive (Figure 1) remained. ACMs in these three remaining buildings were scheduled to be abated prior to demolition of these structures.

Demolition of the other 17 buildings without asbestos abatement has presumably resulted in contamination of the demolition debris and underlying soil with asbestos; therefore, the construction debris and affected soil were presumed to be a hazardous asbestos waste. In addition to asbestos, EIS' August 2004 asbestos and lead survey identified lead-containing paints on buildings that were subsequently demolished; therefore, the demolition debris and underlying soil were suspected to be contaminated with lead in addition to the asbestos.

Prior to the collection of confirmation soil samples, First Complete Decon Incorporated completed (1) removal of ACMs from the three remaining buildings to prepare them for demolition, (2) the removal of delaminating lead-containing paints from the exterior surfaces of the three remaining buildings to prepare them for demolition, (3) the removal of the existing demolition debris as a Regulated Asbestos-Containing Material (RACM), and (4) the removal of the upper 2 inches of soil in areas of concern affected by the existing demolition debris. Soil excavation extended approximately 5 feet beyond the previous building foundations, and/or approximately 5 feet beyond the extent of existing demolition debris on the ground surface.

## **METHODS**

### **Soil Sample Collection**

On April 14 and 15, 2005 Mr. Marvin Snap, a certified asbestos and lead consultant, collected confirmation soil samples. The confirmation soil sample locations are shown on Figure 1. All of the sampling locations were within areas affected by the former demolition debris. At each soil sample location four discrete soil samples were collected using a decontaminated shovel. The discrete soil samples were homogenized into a composite sample and a portion of the homogenized composite soil sample was placed into a plastic bag. Composite soil samples were sealed, labeled, logged onto chain-of-custody forms, and shipped to the analytical laboratory.

### **Laboratory Analyses**

All soil samples were submitted to Asbestos TEM Laboratories, Inc. of Berkeley, California. Asbestos TEM is California-certified for asbestos and hazardous waste analyses. The soil samples were analyzed for asbestos using California Air Resources Board (CARB) Method 435 and for total lead using Environmental Protection Agency (EPA) Method 3050. Analytical results are summarized in Table 1. Laboratory analytical reports and chain-of-custody documentation are included in Attachment A.

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## **FINDINGS**

As summarized on Table 1, asbestos was not detected in the confirmation soil samples. Lead concentrations reported in the confirmation soil samples did not exceed EPA preliminary remediation goals of 400 parts per million (ppm), or ten times the 5 ppm soluble threshold limit concentration.

## **CONCLUSIONS AND RECOMMENDATIONS**

Confirmation soil samples contained no asbestos and consistently low concentrations of lead. Based on the analytical data from the confirmation soil samples, EIS recommends no further investigation at this site.

If you have any questions or comments regarding this report, please do not hesitate to call Mr. Peter Littman of EIS at (408) 395-7674.

Sincerely,

Environmental Investigation Services, Inc.

Peter Littman  
Project Manager

Peter J. Castro, C.E.G. #1993  
Project Geologist

Attachments:

Table 1 – Confirmation Soil Sample Analytical Data

Figure 1 – Site Plan Layout

Attachment A – Laboratory Analytical Reports and Chain of Custody

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ENVIRONMENTAL HEALTH

# County of Santa Cruz

## HEALTH SERVICES AGENCY

701 OCEAN STREET, ROOM 112, SANTA CRUZ, CA 95060-4073  
(831) 454-3122 FAX: (831) 484-3123 TDD: (831) 454-4123

August 19, 2005

Steve John  
ocean Honda Chevrolet  
4400 Auto Plaza Drive  
Capitola, CA 95010

RE: Proposed Work Plan, Dated August 05, 2005, for Underground Storage Tank  
Site Cleanup and Closure at Former Markovich Property  
Located at 3801 Soquel Dr., Soquel, CA Submitted by Weber, Hayes & Assoc.

Dear Mr. John:

This department has received and reviewed the above referenced work plan.

We are approving the proposed work plan as submitted. You are responsible for the coordination of the required over site or field activities proposed in the plan.

Santa Cruz County Code Chapter 7.100.340(B) -- Unauthorized Release and Clean-Up Responsibility allows the Health Officer to recover costs, including administrative, incurred as a result of the release. Therefore, this department will be billing for all time spent on this project.

If you have any questions regarding this letter, you may contact me at (831) 454-2736.

Sincerely,

Rolando Charles  
EHS III

RC: cl

Cc: Pat Hoban, Weber, Hayes &amp; Associates

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ATTACHMENT 17.1 of 38  
\*APPLICATION 05-0252



**Weber, Hayes & Associates**  
Hydrogeology and Environmental Engineering  
120 Westgate Dr., Watsonville, CA 95076  
(831) 722-3580 (831) 662-3100  
Fax: (831) 722-1159

FORMER UST **SITE** MONITORING WELL CLOSURE  
&  
REMEDIAL EXCAVATION REPORT

Former Markovich Property  
3801 Soquel Drive,  
Soquel, California

November 23, 2005

Prepared for:

John ~~Swift~~  
Hamilton Swift  
1509 Seabright Avenue, Suite # A-1  
Santa Cruz, California 95062

&

Steve John  
Ocean Hooda Chevrolet  
4400 Auto Plaza Drive  
Capitola, California 95010

For submittal to:

Mr. Rolando Charles, Case Officer  
County of Santa Cruz Health Services Agency  
Division of Environmental Health  
701 Ocean Street, Room 312  
Santa Cruz, California 95060

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Table 1: Summary of Soil Sample Analytical Data - Remedial Excavation & Driven Probes

Figure 1: Location Map

Figure 2: Site Map showing Former Monitoring Well Locations & Existing Abandoned Water Supply Well Locations

Figure 3: Driven Probe and Remedial Excavations Results - August / September 2005

Appendix A: Photo Sheets

Appendix B: SC-HSA Approved Monitoring Well Destruction Permits & Standard Field Notes

Appendix C: Field Methodology - Hydraulic Driven Probes & Geologic Logs (DP-I through 6)

Appendix D: Laboratory Certificate of Analysis and Chain of Custody Forms - Driven Probes

Appendix E: Landfill Tags - Remedial Excavation Soil Disposal

Appendix F: Laboratory Certificate of Analysis and Chain of Custody Forms - Remedial Excavation



**Weber, Hayes & Associates**  
**Hydrogeology and Environmental Engineering**  
120 Westgate Dr., Watsonville, CA 95076  
(831) 722-3580 (831) 662-3100  
Fax: (831) 722-1159

## 1.0 EXECUTIVE SUMMARY

The following summary report documents the completed work designed to address all site specific environmental issues remaining from a fuel leak related to a former underground storage tank (UST) at 3801 Soquel Drive, Soquel, CA (see Figure 1). These work tasks were outlined in our regulatory approved *Workplan for UST Site Cleanup and Closure*, dated August 3, 2005. This report includes a tabular summary of analytical lab data, figures, photo sheets, geologic logs, and appendices describing field methods of the work performed.

This report documents 1) the proper closure of three groundwater monitoring wells, 2) soil borings to define the extent of contamination in the vicinity of a previously closed UST system, and 3) remedial excavation at the closed UST to remove soil contamination, 4) our systematic search for abandoned water supply wells on the property which could be conduits for groundwater contamination, and our investigation of two discovered wells. Abandonment plans for these wells are presented in this report. These tasks were completed in August and September 2005.

**1.1 Monitoring Well Destruction:** A confirmation sampling round of monitoring of wells MW-1, 2, and 3 was completed by WHA on July 28, 2005 to confirm the groundwater flow direction and water quality data produced in 1996 (*Weber, Hayes and Associates*, August 3, 2005). Analytical data from this event confirmed that groundwater at the site is not impacted with gasoline hydrocarbons. On August 15, 2005 all three monitoring wells were properly destroyed by method of pressure grout under permit for the County of Santa Cruz Health Services Agency (SC-HSA). Well destruction was completed by Exploration Geoservices of San Jose (C-57 484-288).

**1.2 Soil Borings:** On August 30, 2005, with drilling company Enprob of Oroville, CA, we drilled 6 closely-spaced borings around the tank pit to define the approximate limits of soil contamination, and for landfill acceptance profiling of soil prior to excavating. Soil borings were advanced to depths ranging 31 to 40 feet below the ground surface (bgs). Soil samples selected for laboratory testing were analyzed for: Total Extractable Hydrocarbons as diesel, motor oil, and kerosene (TEPH-d/mo/k), and Total Petroleum Hydrocarbons as Gasoline (TPH-g) by EPA Method 8015M, the volatile organic constituents Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) and Methyl-tert-Butyl-Ether (MTBE) by EPA Method 8020. Select soil samples composited for landfill profiling were additionally analyzed for Total Lead. Results of this drilling program indicated the following:

- Soils to the south and southeast of the UST pit (DP-3 and DP-6, respectively) were observed to be impacted to a depth of approximately 27 feet bgs. Soil sample analytical results from these two borings at depths below 25 feet bgs yielded no to trace detections of contaminants.
- Soils to the northwest, southwest, and northeast of the UST pit (DP-1, DP-5 and DP-2, respectively) were observed to have little to no contamination.
- Boring DP-4 (farthest east of the UST pit; approximately 11 feet from center) was observed to have little to no contamination.

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- Based on the apparent vertical and lateral extent of soil contamination, one 4-point soil composite sample was analyzed from borings DP-2 and 3, and one 4-point soil composite sample from DP-4 and 6. These representative composite samples profiled soils to depths of 32 to 33.5 feet bgs. Both soil composite samples yielded no trace detections of contaminants, however field observations (soil discolorations and odor) indicated that some hydrocarbon impacted soils could be encountered during excavation. Acceptance of this soil for disposal at a Class III landfill (Marina Landfill) was obtained.

**1.3 Remedial Excavation:** On September 19<sup>th</sup> and 20<sup>th</sup>, 2005 a total of approximately 750 yds<sup>3</sup> of impacted soils were removed from the subsurface at the former UST location. Earthwork was conducted by an excavation contractor licensed to work with hazardous materials (Triton Construction of Santa Cruz). Based on the driven probe sampling results, an approximate area of 600 square feet was targeted for source removal. Excavation extended to a maximum depth of 32 feet bgs, where soil contamination was absent. All extracted soils were loaded directly onto waiting trucks and hauled directly to Marina landfill. During remedial excavation activities, the two previously closed-in-place inerted gasoline USTs were removed from the subsurface and hauled to Marina landfill where they were accepted as "scrap" metal. Under the direction of SC-HSA personnel, base and sidewall samples were collected from the excavation and analyzed for: Total Extractable Hydrocarbons as diesel, motor oil, and kerosene (TEPH-d/mo/k) by EPA Method 8015M, and Total Petroleum Hydrocarbons as Gasoline (TPH-g) by GC/MS, and for the volatile organic constituents Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) and Methyl-tert-Butyl-Ether (MTBE) by EPA Method 8260. A total of ten sidewall samples were collected from the excavation at depths of 10 and 20 feet bgs on each side wall. Four sidewall sample locations were targeted on the south side of the excavation, as some residual contamination appeared to be left in place which could not be excavated due to excavation safety limits. The laboratory analytical results indicate:

- Only trace level concentrations of petroleum hydrocarbons, (less than 2 ppm TPH, well below SC-HSA Soil Action Levels), were detected in the sidewall and base samples collected from the excavation. **Remedial soil excavation operations were successful in removing the impacted soils from the subsurface.**

**1.4 Abandoned Water Supply Well Closure:** As outlined in our *Workplan* we have completed the following steps towards properly closing two abandoned water supply wells at the site, located on parcel 3801 and parcel 3715:

- Hired a professional underground locator to aid in locating two wells reported to be buried and constructed of steel casing. The metal finder mobilization was unsuccessful in locating these wells, as the site is littered with metallic debris left over from demolition operations.
- Conducted extensive grading to depth of three and half feet to expose any buried wells. This uncovered an 8" diameter well casing constructed of steel on parcel 3801. Grading and ground search also uncovered a 5" plastic well on parcel 3715. A similar extensive grading effort and search on Parcel 3711 did not uncover any wells.
- Subcontracted with Maggiora Bros. Drilling Inc. to extract pumps/ debris from the two former water supply wells on October 18, 2005.

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- Subcontracted with Newman Well Survey to video log the two supply wells on October 2005 to check for perforation intervals, total depth, and to check for casing damage and / or obstructions in the well column.

8" Steel Well - Parcel 3801: Approximately 120 feet of "screw jack" pump column was extracted from this well. No pump was attached to the extracted column. Upon video inspection, this well was discovered to be blocked with debris (i.e. soil) at approximately 7 feet bgs. The well casing was observed to be very old and decrepit. In light of the video log, Maggiora Bros Drilling proposed that the best method for well abandonment will be to clear the debris from within the casing via air rotary drill-out to below the water table, and then pressure grout the casing through the drill pipe from bottom to top in one continuous pour.

5" PVC Well - Parcel 3735: Approximately 160 feet of **PVC** pump column and pump were extracted from this well. Video inspection of this well showed "saw cut" perforations to start at 112 feet below the top of well casing (btoc). The perforations continued to the base of the well which was tagged at 162.5 btoc. Based on casing joint intervals (20 feet) the total depth of this well was determined to be 170.9 feet btoc, as the last joint was observed at 150.9 feet btoc. Based on this observation, there may be up to 8.4 feet of sediment at the base of this well. The well casing did not appear to be damaged. We plan to use air development to attempt to remove the 8 feet of sediment, then destroy the well by pressure grouting.

We have discussed these well abandonments with regulatory staff from Santa Cruz County Environmental Health Services, and have obtained County well destruction permits to complete this work. A C-57 licensed driller will conduct the well abandonments with observation and direction by Weber, Hayes and Associates staff.

Parcel 3711: No pre existing wells located: A potential third water supply well was supposedly located on parcel 3711, and has not been located, despite multiple search efforts. There is no regulatory record of this well, no Water Well Drillers Report, no well log and no visible or magnetic evidence of the well, despite excavation to a depth of 3.5 feet in a broad area around the suggested well location. In an effort to find this well we had our subcontracted backhoe operator grade a 70 feet long by 20 feet wide swath to 3.5 feet bgs in the area of the reported well location (i.e. depicted on the SEI Site Map from 1996). No evidence of any concrete, steel, plastic or subsurface infrastructure was encountered at this location. Only clean, native materials were encountered during excavation.

The only record of this well existing on parcel 3711 comes from an interview with Mr. Tom Markey presented by Sampson Engineering Inc (SEI) in their *Phase I Environmental Site Assessment* report dated December 28, 1995. In this interview, Mr. Markey explains that his family had owned parcel 3711 since 1951. Mr. Markey also indicated that the only possible well known to exist on either the 3801 or 3711 parcel was thought to be on parcel 3711 (note that we actually found an old steel well on parcel 3801). Mr. Markey explained that the well had **not been** used while under his family's ownership (i.e. since before 1951) and he was **unsure** if the well had **been** grouted closed. Based on this, a 1996 *Underground Storage Tank Closure* report Site Map generated by Sampson shows an abandoned well on parcel 3711. However, no field reconnaissance of this particular well was conducted by Sampson (it was never seen by them). It is unclear whether or not Mr. Markey had mistakenly stated that the buried well on Parcel 3801 was located on Parcel 3711, or whether a well ever existed on Parcel 3711. There is no use record of a well on Parcel 3711, with information going back

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to the purchase of this parcel by Mr. Markey's family in 1951, and no well record in the Santa Cruz County files for **this** parcel.

Based on our physical search by grading and magnetic locators, and our review of the information regarding this parcel and well, we find no reliable evidence that a water well is present on the parcel.

#### 1.5 Conclusions:

- Three groundwater monitoring wells at the site were properly destroyed on August 15, 2005. Groundwater at the site was confirmed to be free of contamination during WHA confirmation sampling event conducted on July 28, 2005 Weber, Hayes and Associates on (August 3, 2005).
- A significant remedial excavation was completed in the removal of approximately 750 yds<sup>3</sup> of petroleum hydrocarbon impacted soils from the vicinity of a former UST system at the site. Based on analytical results of base and sidewall **soil** sample collected **from** the excavation, we conclude that this remedial **effort** was successful **in** removing all significant source soil contamination from **the** subsurface.
- Two abandoned water supply wells have been located, video logged, and permitted for proper abandonment, sealing and destruction. This work is scheduled to be completed in 2005.

#### 1.6 Recommendations:

- Complete the proper closure of two abandoned water supply wells at the site, under Santa Cruz County permit.
- Upon well abandonment, request written notification from the Regional Water Quality Control Board and Santa Cruz County Health Services Agency that the UST ~~Tank~~ investigation at the site is closed and no further action is required.

This concludes the Executive *Summary* portion of this report.

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## 2.0 PURPOSE AND SCOPE

This report documents the completion of work proposed in our regulatory approved *Workplan for UST Site Cleanup and Closure* dated August 3, 2005. These tasks were designed to address all site specific environmental issues remaining from a fuel leak related to a former underground storage tank (UST) system at the site, 3801 Soquel Drive, Soquel, CA (see Figure 1). **This** report includes a tabular summary of analytical data, figures, photo sheets, geologic **logs**, and appendices describing field methods of the work performed,

- We obtained Monitoring Well Destruction Permits from SC-HSA and properly destroyed three groundwater monitoring wells.
- We completed a drilling program to define the horizontal and vertical extent of residual soil contamination in the vicinity of the former UST system, and to profile soils for landfill acceptance.
- We obtained landfill acceptance of contaminated soils at a Class III landfill (Marina Landfill)
- We completed the remedial excavation of approximately 750 yds' of residual soil contamination from beneath the former gasoline USTs, and collected soil samples to confirm that cleanup goals were achieved.
- We conducted an extensive search to find abandoned water supply wells and successfully found wells on the 3715 and the 3801 parcel.
- We submitted applications to SC-HSA for water supply well closure at the site.
- We attempted to have the pump columns, pumps, and debris removed from the two existing abandoned water supply wells on the parcels 3801 and 3715.
- We video logged the two existing water supply wells
- We discussed appropriate water supply well closure techniques with Maggiora Brothers Drilling and regulatory staff, based on the video inspection results, and applied for and received well abandonment permits.
- We completed this summary report which includes boring logs, tabulation of analytical results, a complete explanation of the work conducted, and our recommendations for obtaining regulatory closure of this site.

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### 3.0 SITE DESCRIPTION AND BACKGROUND

This section provides an overview of known site conditions, including a brief description of the subject parcel layout, an overview of shallow hydrogeology, and a summary of previous investigations.

3.1 Site Description: The subject site is a rectangular, commercial property located in an area of commercial use on Soquel Drive, Soquel, CA. All structures at the property have been demolished and the site has been

recently graded to bare earth. The subject property is bounded to the north by a mobile home park, to the east, and west by commercial facilities, and to the south by Soquel Drive (see Site Map, Figure 2).

3.2 Local Hydrogeology: Surficial deposits at the subject site consist of the lowest emergent coastal terrace deposits of Pleistocene age. These deposits consist of semiconsolidated, generally well sorted (poorly graded) sand with a few thin, relatively continuous layers of gravel. The thickness of these terrace deposit sediments at the site is 32-40 feet, based on monitoring well logs. These materials are interpreted to have been deposited in a near shore, high energy marine environment, and may locally exhibit areas of fluvial and colluvial silt, sand, and gravel, particularly at or near old wave-cut cliffs. The terrace deposits are underlain by sandstone bedrock the Pliocene and upper Miocene age Purisima Formation consisting of very thick bedded yellowish-gray tuffaceous and diatomaceous siltstone containing thick interbeds of blueish-gray, semifriable, fine-grained andesitic sandstone (Brabb, 1989).

Previous boring logs completed by SEI generally indicate medium dense, fine grained materials are present to depths of approximately 20 to 25 feet below ground surface (bgs). These materials consist of silty sands to silty clays underlain by sandy clays to clayey sands. These finer grained materials are generally underlain by dense to very dense, poorly graded sands to thinner deposits of silty sands, with some minor gravelly sands. Contact with the Purisima bedrock is marked by hard, very dense fine sands and siltstones, at 32 feet (MW-1) to 40 feet (MW-2, MW-3). The current round of subsurface exploration generally confirms the previous subsurface exploration completed by SEI. First groundwater at this site is encountered at approximately 95 feet bgs, in the Purisima bedrock. The groundwater flow direction at the site is to the southeast, towards Soquel Creek (approximately 1,700 feet to the east of the site).

3.3 Previous Environmental Assessment Work: March 1996, Environmental Investigation (by Sampson Engineering, Inc.), which documented subsurface drilling and soil testing. The presence of an Underground Storage Tank (UST) was discovered using a magnetometer and borings were drilled either side of the suspected tank to depths of 20 and 29 feet. The drilling of boring B-1, contained strong gasoline odors encountered from ground surface to the bottom of the boring (29.5 ft.). Lab testing confirmed the field observations.

June 1996, Underground Storage Tank Closure Report, (Sampson Engineering, Inc.). Two USTs were uncovered by backhoe and found to underlie the foundation of one of the site structures. It was determined that removal of the 2 tanks would be unfeasible so the residual gasoline/water was pumped out (1,425 gallons) and the tanks were closed-in-place under County permit, by filling them with a pumpable sand-cement mix. Of note, was the observation that strong gas odor was noted in the 3 feet of soils covering the USTs which suggests the source could be from overfilling or the dispenser, rather than from a tank leak below ground.

September 1996 Groundwater Installation and Sampling Report, (Sampson Engineering, Inc.): Three wells were installed to depths of up to 115 feet and sampled, including one downgradient monitoring well MW-1, positioned approximately 25 feet south of the USTs. One round of water-level gauging determined groundwater to flow towards the southeast and one round of water testing showed no contamination. Environmental Review Init. Study

February 10, 1997: Corrective Action Plan (Remediation Testing and Design, RTD). RTD completed a modeling exercise to assess whether residual benzene or gasoline previously detected in the upper 29.5 feet

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of soil (B-1, drilled Feb-1996) could significantly impact groundwater encountered at 97 feet below ground surface. RTD concluded there was no risk and no further action was warranted,

July 28, 2005 : Confirmation Groundwater Sampling of Monitoring Wells: A confirmation round of monitoring as completed by WHA on July 28, 2005 to confirm groundwater flow direction and water quality data produced in 1996. Groundwater samples were collected from the three existing monitoring wells MW-1 through 3 at the site and delivered to a State-certified laboratory (Entech Analytical Labs, Inc. CA ELAP# 2346) under proper chain-of-custody documentation. The groundwater samples were analyzed for Total Petroleum Hydrocarbons as gasoline (TPH-g) by GC/MS, for benzene, toluene, ethylbenzene, and xylenes (BTEX) and the fuel oxygenate methyl tert butyl ether (MTBE) by EPA Method 8260.

The analytical data produced during this confirmation round of groundwater sampling indicated that groundwater in the vicinity of the former fuel leak has not been impacted. Only trace detections of xylenes were detected in all three monitoring wells are well below Water Quality Objectives (WQO's) and are considered negligible.

The groundwater gradient measured on July 28, 2005 was approximately 0.04 feet/foot in a southeasterly direction. This data confirmed the groundwater flow direction measured by SEI in 1996.

In summary, elevated soil contamination identified as gasoline and some "unidentified hydrocarbons" had migrated vertically downward from the tank-dispenser infrastructure (source) down to depths of approximately 30 feet. The upper 23 feet of soil contains relatively low permeability silty-to-clayey sands and sandy clays. Underlying these units are very dense sands. First encountered groundwater is found at a depth of approximately 95 feet below ground surface. Groundwater sampling of the three monitoring wells in 1996 and again in 2005 found that no significant hydrocarbon contamination was present in water.

#### 4.0 CURRENT FIELD WORK

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The following work tasks were designed to address site specific environmental liabilities associated with a former fuel leak from an underground storage tank system at the site, and to complete a limited interim remedial action plan designed to remove accessible soil source contamination in the vicinity of the former UST location. Photo Sheets documenting all field work activities have been included as Appendix A. Specifically, the following tasks were completed:

4.1 Monitoring Well Destruction: A confirmation round of monitoring of wells MW-1, 2, and 3 was completed by WHA on July 28, 2005 to confirm the groundwater flow direction and water quality data produced in 1996 (*Weber, Huges and Associates*, August 3, 2005). Analytical data from this event confirmed that groundwater at the site is not impacted with gasoline hydrocarbons. On August 15, 2005 all three monitoring wells were properly destroyed by method of pressure grout under permit from SC-HSA. Well destruction was completed by Exploration Geoservices of San Jose (C-57484-288). Approved permits and field notes have been included in Appendix B. See Figure 1 for former monitoring well locations. Each well was properly destroyed according to the following methodology:

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- Prior to destroying each well, the depth to groundwater and total depth of each well was determined, and checked against the original completion details. Any loose material or obstructions which are present and can be removed from the well will be cleared.
- Cement grout, an approved sealing material, was used to seal the wells. This was a mix of Portland cement and water, at a ratio of approximately five to six gallons of water per 96 pound sack of Portland cement.
- Each well was grouted in one continuous pour, ensuring the annular space and casing for each well were completely sealed and free of any voids or bridges of the sealing material. The volume of grout placed into each well was monitored and checked to verify that the volume required to completely seal the annular space and the well casing to ground surface was placed in the well. The sand pack interval for each monitoring well extended to approximately 2 feet above the well screens.
- Once grouted, each well was placed under approximately 30 pounds per square inch (psi) pressure for 5 minutes. Then the sealing material was checked for drop or decline and additional cement grout will be added as needed.
- Following pressure grout operations, the Christy box was removed from each well, and each well casing was drilled out to 5 feet below ground surface.

4.2 Soil Borings: On August 30, 2005, along with our subcontracted drilling company (Enprob of Oroville) we completed the drilling of 6 closely-spaced boring around the tank pit to define the approximate limits of soil contamination, and for landfill acceptance profiling of soil prior to excavating. Field work followed our methodology for Hydraulic Driven Probes which is included in Appendix C. Soil boring were advanced to depths ranging from 31 to 40 feet below the ground surface (bgs).

Relatively undisturbed soil samples were retrieved by driving a 1.5-inch sampling barrel into native soils through hollow-stem steel probes. Soil samples were retrieved in acetate liners and were regularly checked for discoloration and chemical odor. Once the sampling barrel was brought to the surface, soil targeted for laboratory analysis was immediately protected at both ends with Teflon tape, sealed with non-reactive caps, taped, and stored in an insulated container cooled with blue ice. A portion of the retained soil core was then placed in a plastic baggie to check for the presence of volatile organic compounds using a photoionization field meter calibrated to benzene. Boring logs from this field work are included in Appendix C

Soil samples selected for laboratory testing were analyzed for: Total Extractable Hydrocarbons as diesel, motor oil, and kerosene (TEPH-d/mo/k), and Total Petroleum Hydrocarbons as Gasoline (TPH-g) by EPA Method 8015M, the volatile organic constituents Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) and Methyl-ter Butyl-Ether (MTBE) by EPA Method 8020. Select soil samples composited for landfill profiling were additionally analyzed for Total Lead. The laboratory Certificate of Analysis is included in Appendix D. Analytical results are tabulated in Table 1. Boring locations and analytical results area presented on Figure

2.

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Results of this drilling program indicated the following:

- Boring DP-3 was continuously cored to a depth of 40 feet (bgs) just south of the USTs. This boring was the only continuously cored boring completed during this field mobilization and was done so to gain a representative map of subsurface lithology and a sense of the extent of contaminant migration. All other borings were advanced to discrete sample depths. The lithology of the subsurface generally consisted of fine grained materials to a depth of approximately 24 feet bgs, underlain by well graded sands with gravel to poorly graded sands. Specifically, sandy clay to clayey sand was encountered to a depth of approximately 11 feet bgs. Below this depth these deposits were interbedded with poorly graded sands with clay to Jean clay to a depth of approximately 24 feet bgs. Below 24 feet bgs the lithology consisted of apparently very dense well graded sands with gravel to approximately 39 feet bgs. An apparently dense poorly graded sand was observed in the last one foot of boring DP-3.
- Soils to the south and southeast of the UST pit (DP-3 and DP-6, respectively) were observed to be impacted to a depth of approximately 27 feet bgs. Soil sample analytical results from these two specific borings at depths below 25 feet bgs yielded no to trace detections of contaminants.
- Soils to the northwest, southwest, and northeast of the UST pit (DP-1, DP-5 and DP-2, respectively) were observed to have little to no contamination.
- Boring DP-4 (farthest east of the UST pit; approximately 11 feet from center) was observed to have little to no contamination.
- Based on the apparent vertical and lateral extent of soil contamination, one 4-point soil composite sample was analyzed from boring DP-2 and 3, and one from 4-point soil composite sample DP-4 and 6. These representative composite samples profiled soils to depths of 32 to 33.5 feet bgs. Both soil composite samples yielded no to trace detections of contaminants, however field observations (soil discolorations and odor) indicated that impacted soils would be encountered during excavation. Acceptance of these impacted soils at a Class III landfill (Marina Landfill) was obtained.

4.3 Remedial Excavation: On September 19<sup>th</sup> and 20<sup>th</sup>, 2005 a total of approximately 750 yds<sup>3</sup> of impacted soils were removed from the subsurface at the former UST location. Earthwork was conducted by an excavation contractor licensed to work with hazardous materials (Triton Construction of Santa Cruz). Based on the driven probe sampling results, an approximate area of 600 square feet was targeted for source removal (see Figure 3). Excavation extended to a total depth of 32 feet bgs where soil contamination was observed to be absent. All extracted soils were "hot" loaded directly onto trucks and hauled directly to Marina landfill. Landfill tags documenting the proper disposal of all excavated soils at Marina Landfill have been included in Appendix E.

During remedial excavation activities, the two previously inerted gasoline USTs were removed from the subsurface and hauled to Marina Landfill where they were accepted as "scrap" metal. Both USTs appeared to have smooth undersides and no apparent pits or corrosion. Based on this observation, the likely source of

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the former fuel leakage was the result of overfilling and/or leaky product dispensers / piping. The landfill tag documenting the proper disposal of these USTs is also included in Appendix E.

Field observations made during the excavation confirmed that the majority of contaminated soils were confined to the area directly beneath and south to southeast of the UST locations. Some limited near surface soil contamination was encountered from approximately 1 to 5 feet bgs to the south and southeast of the USTs. Soil discoloration was again encountered at approximately 10 to 14 feet bgs below and to the southeast of the removed USTs. At depths of 17 to 19 feet bgs in the center of the excavation a "hot zone" of soil contamination was encountered which persisted to a depth of approximately 27 - 30 feet bgs. At a depth of approximately 31 feet bgs in the center of the excavation soils were no longer observed to be discolored. Soils at this depth exhibited only a trace odor of hydrocarbons. Excavation was advanced one more foot to bring the total depth of the excavation to 32' bgs. At this depth, native soils being extracted from the excavation exhibited no odors nor discoloration. The side walls of the excavation were observed to be dominantly free of soil contamination. Due to the proximity of the excavation to Soquel Drive, some limited and localized residual soil contamination was left in place along the southern sidewall of the excavation.

Under the direction of SC-HSA personnel, base and sidewall samples were collected from the excavation to confirm that remedial excavation efforts were successful in removing the majority of contaminated soils from the subsurface. A total of ten sidewall samples were collected from the excavation at depths of 10 and 20 feet bgs on each side wall. Four sample locations were targeted on the southern sidewall of the excavation as some inaccessible residual soil contamination appeared to be left in place due to safety limits as mentioned above. 4 single soil sample was collected at the base of the excavation at 33' bgs. All soil samples were collected in clean brass liners. The soils were obtained with aid of the on-site backhoe. The soil was collected by driving the liner completely into the soil at the teeth of the backhoe bucket with a wooden mallet. Each liner was then removed and the ends of the liner were lined with Teflon, capped with air-tight plastic lids, and taped around the caps to prevent possible moisture and chemical loss. Head space in the sample tubes was kept to a minimum. All samples were then placed in a blue-ice chilled cooler for transport to the laboratory (Entech Analytical Labs of Santa Clara) with the appropriate chain of custody documentation.

All soil samples were analyzed for: Total Extractable Hydrocarbons as diesel, motor oil, and kerosene (TEPH-d/mo/k) by EPA Method 8015M, and Total Petroleum Hydrocarbons as Gasoline (TPH-g) by GC/MS, and for the volatile organic constituents Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) and Methyl-ten-Butyl-Ether (MTBE) by EPA Method 8260. The laboratory Certificate of Analysis is included in Appendix F. These results have been tabulated on Table 1, and are also presented on Figure 3. The laboratory analytical results indicate:

- Only trace level concentrations of petroleum hydrocarbons, well below SC-HSA Soil Action Levels, were detected in the sidewall and base samples collected from the excavation. Remedial soil excavation operations were successful **in removing the majority impacted soils from the subsurface.**

Immediately following remedial excavation activities, the excavation pit was completely backfilled and compacted with clean fill sands imported to the site from Marina Landfill.

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## 5.0 ABANDONED WATER SUPPLY WELL CLOSURE

As outlined in our *Workplan for UST Site Cleanup and Closure*, we have completed the following steps towards properly closing two abandoned water supply wells at the site, located on parcel 3801 and parcel 3715:

- Hired a professional underground locator to aid in locating two wells reported to be buried and constructed of steel casing. The field mobilization was unsuccessful in locating these wells, as the site is littered with metallic debris left over from demolition operations.
- Uncovered an 8" diameter well casing constructed of steel on parcel 3801 in an extensive effort with aid of a backhoe in a 400 foot area by 3.5 foot deep swath. We were extremely lucky in finding this well.
- Subcontracted with Maggiora Bros Drilling Inc. to extract pumps / debris from the two known supply wells on October 18, 2005.
- Subcontracted with Newman Well Surveys to video log the two known supply wells on October 2005 to check for perforation intervals, total depth, and to check for casing damage and / or obstructions in the well column.

5.1 8" Steel Well - Parcel 3801: Approximately 120 feet of "screwjack" pump column was extracted from this well on October 18, 2005. No pump was attached to the extracted column. Upon video inspection, this well was discovered to be blocked with debris (i.e. soil) at approximately 7 feet bgs. The well casing was observed to be very old and decrepit.

5.2 5" PVC Well - Parcel 3715: Approximately 160 feet of PVC pump column and pump were extracted from this well on October 18, 2005. Video inspection of this well revealed "saw cut" perforations to start at 12 feet below the top of well casing (btoc). The perforations continued to the base of the well which was tagged at 162.5 btoc. Based on casing joint intervals (20 feet) the total depth of this well was determined to be 170.9 feet btoc, as the last joint was observed at 150.9 feet btoc. Based on this observation, there may be up to 8.4 feet of sediment at the base of this well. The well casing did not appear to be damaged.

## 6.0 CONCLUSIONS

- Three groundwater monitoring wells at the site were properly destroyed on August 15, 2005. Groundwater at the site was confirmed to be free of contamination during WHA confirmation sampling event conducted on July 28, 2005 (*Weber, Hayes and Associates*, August 3, 2005).
- A significant remedial excavation was completed in the removal of approximately 750 yds' of petroleum hydrocarbon impacted soils from the vicinity of a former UST system at the site. Based on

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analytical results of base and sidewall soil sample collected from the excavation, we conclude that this remedial effort ~~was~~ successful in removing soil contamination from the subsurface. **All base and sidewall soil samples showed hydrocarbons absent or far below regulatory action levels (see Table 1).**

- **Two** abandoned water supply wells have been located, video logged for inspection, and permitted for proper sealing and abandonment.

## 7.0 RECOMMENDATIONS

- Complete the proper closure of two abandoned water supply wells at the site, with inspection and approval by Santa Cruz County staff.
- Upon well abandonment, request written notification from the Regional Water Quality Control Board and Santa Cruz County Health Services Agency that the UST Tank investigation at the site is closed, and that no further action is required.

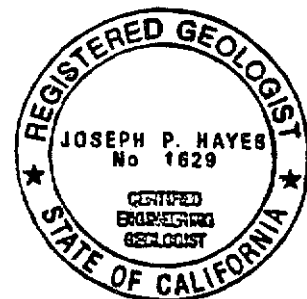
## 8.0 LIMITATIONS

Our service consists of professional opinions and recommendations made in accordance with generally accepted geologic principles and practices. This warranty is in lieu of all others, either expressed or implied. The analysis and conclusions in this report are based on sampling and testing which are necessarily limited. Additional data from future work may lead to modifications of the options expressed herein.

If you have any questions or comments regarding this workplan, please contact us at our office (722-3580).

Respectfully submitted,

WEBER, HAYES AND ASSOCIATES  
A California Corporation



Joseph Hayes

Certified Hydrogeologist #373

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Daniel Chaloy  
Staff Geologist

Former UST Site  
3801 Soquel Drive, Soquel, CA  
November 23, 2005

## 9.0 REFERENCES

Brabb, E.E., 1989, *Geologic map of Santa Cruz County, California*: US Geological Survey Miscellaneous Investigations Series Map 1-1905, scale 1:62,500

### **County of Santa Cruz -Health Services Agency Letters far 3801 Soquel Dr., Soquel CA**

Proposed Work Plan, Dated August 3, 2005, for Underground Storage Tank Cleanup and Closure at Former Markovich Property (*Workplan* approval letter) dated August 19, 2005.

### **Reports by Remediation Testing and Design**

Corrective Action Plan for the Markovich Property Located at 3801 Soquel Drive, Soquel, California, February 10, 1997

Environmental Compliance and Activities Required for Development at 3711, 3715, & 3801 Soquel Drive, Soquel, California. December 18, 2002

### **Reports by Sampsan Engineering, Inc., 3715 & 3801 Soquel Drive, Santa Cruz County, California**

Environmental Investigation, March 5, 1996

Workplan for Underground Storage Tank Removal, April 26, 1996

Underground Storage Tank Closure Report, June 5, 1996

Workplan for Installation of Groundwater Monitoring wells, June 27, 1996

Groundwater Monitoring Well Installation and Sampling Report, September 5, 1996

Workplan for a Corrective Action Plan and to Remove and Incinerate Stockpiled Soils, November 22, 1996

### **Reports by Weber, Hayes and Associates, 3801 Soquel Drive, Soquel, California**

Workplan for UST Site Cleanup and Closure, August 3, 2005

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**Table 1**  
**Summary of Soil Sample Analytical Data - Remedial Excavation & Driven Probes**  
Former Markovich Property - 3801 Soquel Drive, Soquel, California  
All soil results in parts per million (mg/kg or mg/L)

| Consultant, Investigation & Date  | Sample Identification  | Sample Depth (ft. bgs)   | Total Extractable Petroleum Hydrocarbons |                  |                  | Total Petroleum Hydrocarbons as GASOLINE | Volatile Organic Compounds |         |              |         |        |     | Total Lead |
|---|--|--|--|------------------|------------------|--|----------------------------|---------|--------------|---------|--------|-----|------------|
|   |  |  | Diesel                                   | Motor Oil        | Kerosene         |  | Benzene                    | Toluene | Ethylbenzene | Xylenes | MTBE   |     |            |
| Weber, Hayes and Associates<br>Remedial Excavation<br>(September 18th & 20th, 2005)                         | East Sidewall  | 10   | ND                                       | ND               | ND               | ND                                       | ND                         | ND      | ND           | ND      | ND     | ND  |            |
|   | East Sidewall  | 20   | ND                                       | ND               | ND               | ND                                       | ND                         | ND      | ND           | ND      | ND     | ND  |            |
|   | North Sidewall   | 10   | ND                                       | ND               | ND               | ND                                       | ND                         | ND      | ND           | ND      | ND     | ND  |            |
|   | North Sidewall   | 20   | ND                                       | ND               | ND               | ND                                       | ND                         | ND      | ND           | ND      | ND     | ND  |            |
|   | West Sidewall  | 10   | ND                                       | ND               | ND               | ND                                       | ND                         | ND      | ND           | ND      | ND     | ND  |            |
|   | West Sidewall  | 20   | ND                                       | ND               | ND               | 0.082                                    | ND                         | ND      | ND           | ND      | ND     | ND  |            |
|   | South Sidewall West  | 10   | ND                                       | ND               | ND               | 0.55                                     | ND                         | 0.0079  | ND           | 0.021   | ND     | ND  |            |
|   | South Sidewall West  | 17   | ND                                       | ND               | ND               | 0.34                                     | ND                         | ND      | ND           | ND      | ND     | ND  |            |
|   | South Sidewall East  | 10   | ND                                       | ND               | 5.6              | 1.5                                      | ND                         | ND      | ND           | ND      | ND     | ND  |            |
|   | South Sidewall East  | 20   | ND                                       | ND               | ND               | 0.069                                    | ND                         | ND      | ND           | ND      | ND     | ND  |            |
| Weber, Hayes and Associates<br>Limited Soil Definition & Landfill Acceptance Profiling<br>(August 29, 2005) | Base   | 32   | ND                                       | ND               | ND               | 0.14                                     | ND                         | ND      | ND           | ND      | ND     | ND  |            |
|   | DP-3   | 25   | ND                                       | ND               | ND               | ND                                       | ND                         | ND      | ND           | ND      | ND     | ND  |            |
|   |  | 31   | ND                                       | ND               | ND               | ND                                       | ND                         | ND      | ND           | ND      | ND     | ND  |            |
|   |  | 36   | ND                                       | ND               | ND               | ND                                       | ND                         | ND      | ND           | ND      | ND     | ND  |            |
|   |  | 28   | ND                                       | ND               | ND               | ND                                       | ND                         | ND      | ND           | ND      | ND     | ND  |            |
|   | DP-6   | 31.5   | ND                                       | ND               | ND               | ND                                       | ND                         | ND      | ND           | ND      | ND     | ND  |            |
|   |  | 35.5   | ND                                       | ND               | ND               | ND                                       | ND                         | 0.056   | ND           | ND      | ND     | ND  |            |
|   |  | 11 - 37  | ND                                       | ND               | ND               | ND                                       | ND                         | 0.035   | ND           | ND      | ND     | ND  | 4.7        |
|   |  | Landfill Comp #1 ?<br>(DP-4-D15, DP-4-D37, DP-6-D11, & DP-6-D15) | ND                                       | ND               | ND               | ND                                       | ND                         | 0.033   | ND           | ND      | ND     | ND  | 4.2        |
|   | Landfill Comp #2 ?<br>(DP-2-D15, DP-2-D33, DP-3-D11, & DP-3-D11) | 11 - 33.5'   | ND                                       | ND               | ND               | ND                                       | ND                         | 0.033   | ND           | ND      | ND     | ND  | 4.2        |
| Regulatory Action Levels <sup>1</sup> :   |  |  | 100 <sup>3</sup>                         | 100 <sup>3</sup> | 100 <sup>3</sup> | 100 <sup>3</sup>                         | 0.1                        | 15      | 30           | 175     | 0.05   | 150 |            |
| Laboratory's Practical Quantitation Limits (PQL's):   |  |  | 2.5                                      | 10               | 2.5              | 0.050                                    | 0.0050                     | 0.0050  | 0.0050       | 0.010   | 0.0050 | 1.0 |            |

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**NOTES:**

Units: = All values are in parts per million (ppm) equivalent to milligram per kilogram (mg/kg), unless indicated otherwise.

**Bold Print** = Bold Print indicates concentrations are above regulatory Action Levels

**1** = Action Levels are based on 10 times the MCL for MTBE, VOCs & Solvents, and 100 times the MCL for other contaminants.

**2** = These samples are 4 point composites from 4 soil cores obtained at depths of 11-33.5 feet, (proposed depth of excavation). For landfill acceptance testing.

**3** = Santa Cruz County Health Services Agency (SCCHSA) does not have regulatory action levels for Total Petroleum Hydrocarbons (TPH) in soil, and generally determining whether or not soil remediation should occur is on a case by case basis, based on health and safety issues, potential receptors, future or current land use and site conditions (soil type, depth to groundwater, contaminant leaching potential, transport pathways, etc.). The Action Levels used for TPH-gasoline in this Table are based on the document entitled:

Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater - Interim Final, July 2003 (updated September 4, 2003).

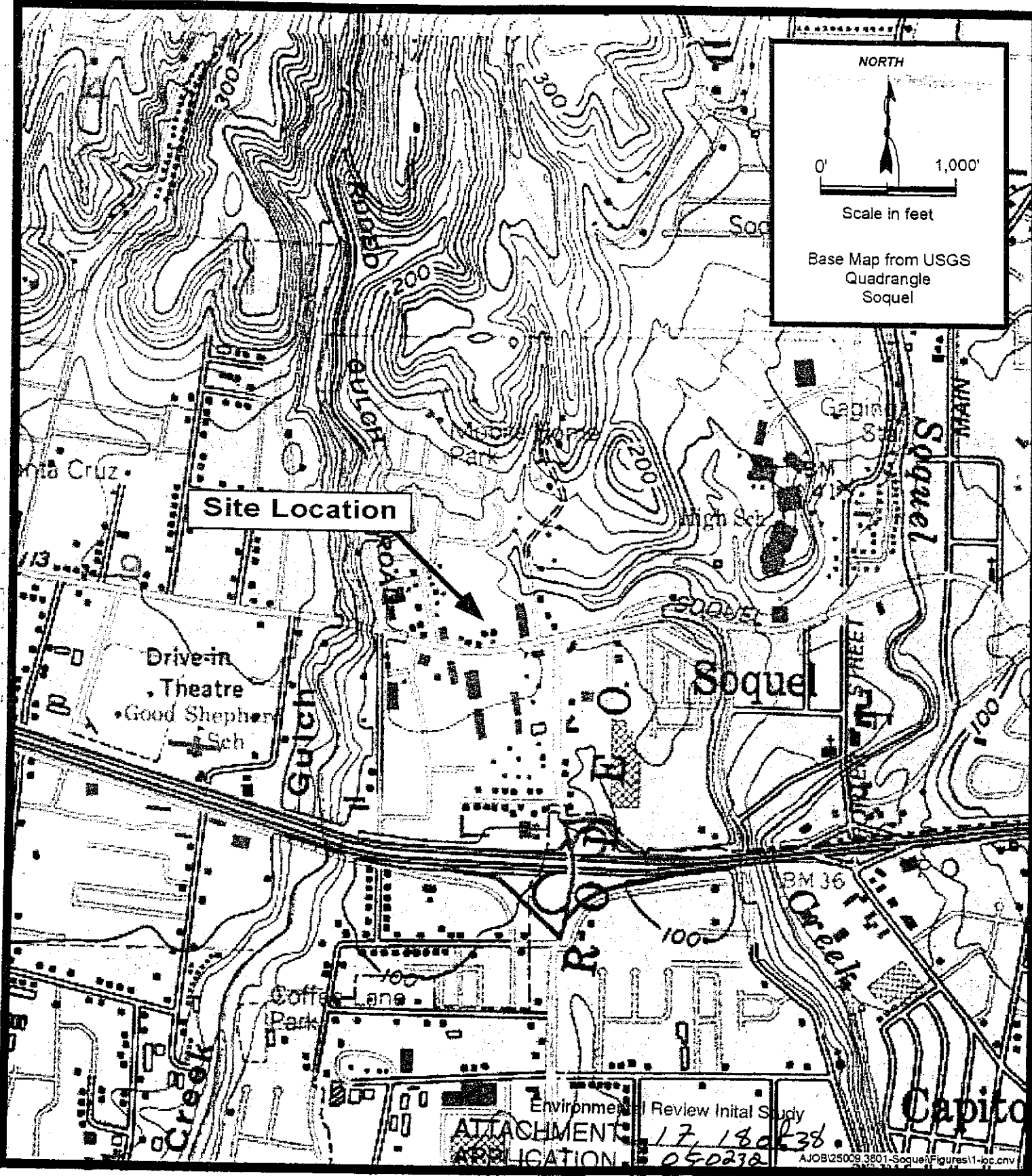
< = Detection limit elevated due to sample dilution and compound not detected at or above detection limit reported.

ND = Not detected at or above the lab's practical quantitation limit.

--- = Sample not analyzed for this compound(s).

MTBE = Methyl-Tert-Butyl-Ether

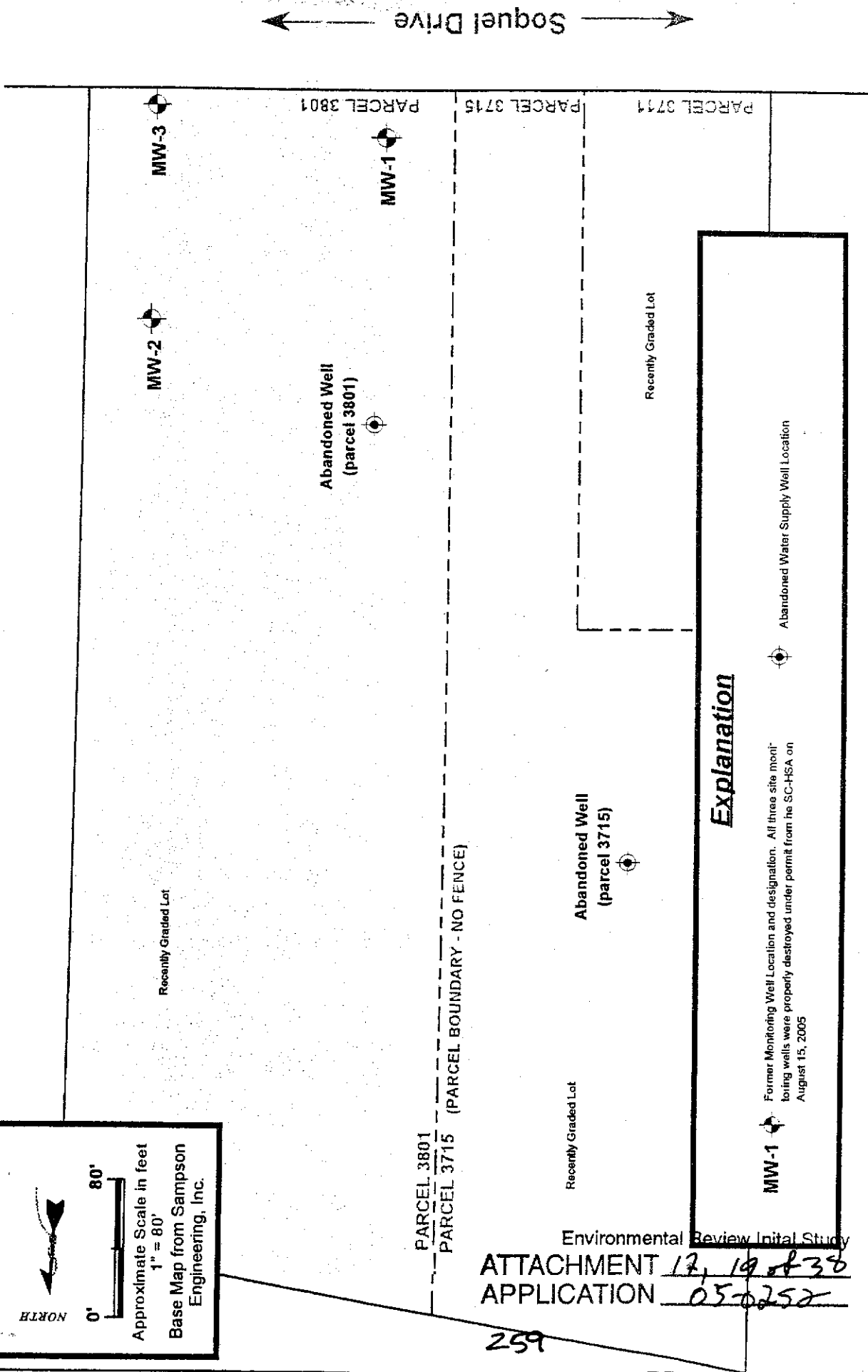
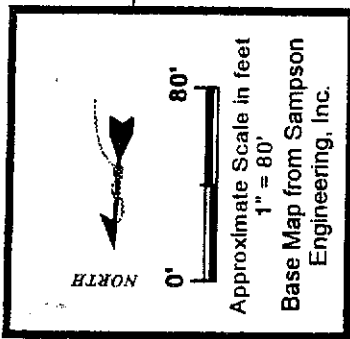
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**Weber, Hayes & Associates**  
Hydrogeology and Environmental Engineering  
120 Westgate Drive, Watsonville, Ca. 95076  
(831) 722 - 3580 (831) 662 - 3100


**Location Map**  
Former Markovich Property  
3801 Soquel Drive,  
Soquel, California

**FIGURE**  
**1**  
**Job #**  
**25009**



| Explanation |  |
|-------------|--|
|             | Former Monitoring Well Location and designation. All three site monitoring wells were properly destroyed under permit from the SC-HSA on August 15, 2005 |
|             | Abandoned Water Supply Well Location   |

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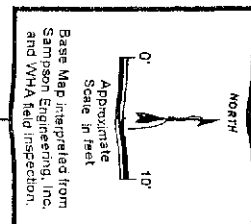
**Weber, Hayes & Associates**  
 Hydrogeology and Environmental Engineering  
 120 Westgate Drive, Watsonville, Ca. 95076  
 (831) 722 - 3580 (831) 662 - 3100

**Site Map showing Former Monitoring Well Locations & Existing Abandoned Water Supply Well Locations**  
 Former Markovich Property  
 3801 Soquel Drive, Santa Cruz, California

# Site Map

Excavation Footprint  
Approximately 610  
feet in area x 32 feet  
below ground surface  
(approximately 750  
yds<sup>3</sup> of impacted soils  
removed).

3801 S. Soquel Drive Hot Re entry Grad



## Excavation Detail

PLAN VIEW

| West Sidewall          |          |
|------------------------|----------|
| Sample Depth           | 10' 20'  |
| TPH-gas                | ND trace |
| All Other Contaminants | ND ND    |

| South Sidewall West    |             |
|------------------------|-------------|
| Sample Depth           | 10' 17'     |
| TPH-gas                | trace trace |
| Toluene                | trace ND    |
| Xylenes                | trace ND    |
| All Other Contaminants | ND ND       |

| South Sidewall East    |             |
|------------------------|-------------|
| Sample Depth           | 10' 20'     |
| TPH-gas                | trace trace |
| Toluene                | trace ND    |
| Xylenes                | trace ND    |
| All Other Contaminants | ND ND       |

| East Sidewall          |         |
|------------------------|---------|
| Sample Depth           | 10' 20' |
| TPH-gas                | trace   |
| All Other Contaminants | ND ND   |

CROSS SECTION

20'

## Explanation - Excavation Detail

All soil sample concentrations are presented in mg/kg (parts per million; ppm)  
(see Table 1 for Analytical Results)

Environmental Review

ATTACHMENT 17-20-21-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038-1039-1040-1041-1042-1043-1044-1045-1046-1047-1048-1049-1050-1051-1052-1053-1054-1055-1056-1057-1058-1059-1060-1061-1062-1063-1064-1065-1066-1067-1068-1069-1070-1071-1072-1073-1074-1075-1076-1077-1078-1079-1080-1081-1082-1083-1084-1085-1086-1087-1088-1089-1090-1091-1092-1093-1094-1095-1096-1097-1098-1099-1100-1101-1102-1103-1104-1105-1106-1107-1108-1109-1110-1111-1112-1113-1114-1115-1116-1117-1118-1119-1120-1121-1122-1123-1124-1125-1126-1127-1128-1129-1130-1131-1132-1133-1134-1135-1136-1137-1138-1139-1140-1141-1142-1143-1144-1145-1146-1147-1148-1149-1150-1151-1152-1153-1154-1155-1156-1157-1158-1159-1160-1161-1162-1163-1164-1165-1166-1167-1168-1169-1170-1171-1172-1173-1174-1175-1176-1177-1178-1179-1180-1181-1182-1183-1184-1185-1186-1187-1188-1189-1190-1191-1192-1193-1194-1195-1196-1197-1198-1199-1200-1201-1202-1203-1204-1205-1206-1207-1208-1209-1210-1211-1212-1213-1214-1215-1216-1217-1218-1219-1220-1221-1222-1223-1224-1225-1226-1227-1228-1229-1230-1231-1232-1233-1234-1235-1236-1237-1238-1239-1240-1241-1242-1243-1244-1245-1246-1247-1248-1249-1250-1251-1252-1253-1254-1255-1256-1257-1258-1259-1260-1261-1262-1263-1264-1265-1266-1267-1268-1269-1270-1271-1272-1273-1274-1275-1276-1277-1278-1279-1280-1281-1282-1283-1284-1285-1286-1287-1288-1289-1290-1291-1292-1293-1294-1295-1296-1297-1298-1299-1300-1301-1302-1303-1304-1305-1306-1307-1308-1309-1310-1311-1312-1313-1314-1315-1316-1317-1318-1319-1320-1321-1322-1323-1324-1325-1326-1327-1328-1329-1330-1331-1332-1333-1334-1335-1336-1337-1338-1339-1340-1341-1342-1343-1344-1345-1346-1347-1348-1349-1350-1351-1352-1353-1354-1355-1356-1357-1358-1359-1360-1361-1362-1363-1364-1365-1366-1367-1368-1369-1370-1371-1372-1373-1374-1375-1376-1377-1378-1379-1380-1381-1382-1383-1384-1385-1386-1387-1388-1389-1390-1391-1392-1393-1394-1395-1396-1397-1398-1399-1400-1401-1402-1403-1404-1405-1406-1407-1408-1409-1410-1411-1412-1413-1414-1415-1416-1417-1418-1419-1420-1421-1422-1423-1424-1425-1426-1427-1428-1429-1430-1431-1432-1433-1434-1435-1436-1437-1438-1439-1440-1441-1442-1443-1444-1445-1446-1447-1448-1449-1450-1451-1452-1453-1454-1455-1456-1457-1458-1459-1460-1461-1462-1463-1464-1465-1466-1467-1468-1469-1470-1471-1472-1473-1474-1475-1476-1477-1478-1479-1480-1481-1482-1483-1484-1485-1486-1487-1488-1489-1490-1491-1492-1493-1494-1495-1496-1497-1498-1499-1500-1501-1502-1503-1504-1505-1506-1507-1508-1509-1510-1511-1512-1513-1514-1515-1516-1517-1518-1519-1520-1521-1522-1523-1524-1525-1526-1527-1528-1529-1530-1531-1532-1533-1534-1535-1536-1537-1538-1539-1540-1541-1542-1543-1544-1545-1546-1547-1548-1549-1550-1551-1552-1553-1554-1555-1556-1557-1558-1559-1560-1561-1562-1563-1564-1565-1566-1567-1568-1569-1570-1571-1572-1573-1574-1575-1576-1577-1578-1579-1580-1581-1582-1583-1584-1585-1586-1587-1588-1589-1590-1591-1592-1593-1594-1595-1596-1597-1598-1599-1600-1601-1602-1603-1604-1605-1606-1607-1608-1609-1610-1611-1612-1613-1614-1615-1616-1617-1618-1619-1620-1621-1622-1623-1624-1625-1626-1627-1628-1629-1630-1631-1632-1633-1634-1635-1636-1637-1638-1639-1640-1641-1642-1643-1644-1645-1646-1647-1648-1649-1650-1651-1652-1653-1654-1655-1656-1657-1658-1659-1660-1661-1662-1663-1664-1665-1666-1667-1668-1669-1670-1671-1672-1673-1674-1675-1676-1677-1678-1679-1680-1681-1682-1683-1684-1685-1686-1687-1688-1689-1690-1691-1692-1693-1694-1695-1696-1697-1698-1699-1700-1701-1702-1703-1704-1705-1706-1707-1708-1709-1710-1711-1712-1713-1714-1715-1716-1717-1718-1719-1720-1721-1722-1723-1724-1725-1726-1727-1728-1729-1730-1731-1732-1733-1734-1735-1736-1737-1738-1739-1740-1741-1742-1743-1744-1745-1746-1747-1748-1749-1750-1751-1752-1753-1754-1755-1756-1757-1758-1759-1760-1761-1762-1763-1764-1765-1766-1767-1768-1769-1770-1771-1772-1773-1774-1775-1776-1777-1778-1779-1780-1781-1782-1783-1784-1785-1786-1787-1788-1789-1790-1791-1792-1793-1794-1795-1796-1797-1798-1799-1800-1801-1802-1803-1804-1805-1806-1807-1808-1809-1810-1811-1812-1813-1814-1815-1816-1817-1818-1819-1820-1821-1822-1823-1824-1825-1826-1827-1828-1829-1830-1831-1832-1833-1834-1835-1836-1837-1838-1839-1840-1841-1842-1843-1844-1845-1846-1847-1848-1849-1850-1851-1852-1853-1854-1855-1856-1857-1858-1859-1860-1861-1862-1863-1864-1865-1866-1867-1868-1869-1870-1871-1872-1873-1874-1875-1876-1877-1878-1879-1880-1881-1882-1883-1884-1885-1886-1887-1888-1889-1890-1891-1892-1893-1894-1895-1896-1897-1898-1899-1900-1901-1902-1903-1904-1905-1906-1907-1908-1909-1910-1911-1912-1913-1914-1915-1916-1917-1918-1919-1920-1921-1922-1923-1924-1925-1926-1927-1928-1929-1930-1931-1932-1933-1934-1935-1936-1937-1938-1939-1940-1941-1942-1943-1944-1945-1946-1947-1948-1949-1950-1951-1952-1953-1954-1955-1956-1957-1958-1959-1960-1961-1962-1963-1964-1965-1966-1967-1968-1969-1970-1971-1972-1973-1974-1975-1976-1977-1978-1979-1980-1981-1982-1983-1984-1985-1986-1987-1988-1989-1990-1991-1992-1993-1994-1995-1996-1997-1998-1999-2000-2001-2002-2003-2004-2005-2006-2007-2008-2009-2010-2011-2012-2013-2014-2015-2016-2017-2018-2019-2020-2021-2022-2023-2024-2025-2026-2027-2028-2029-2030-2031-2032-2033-2034-2035-2036-2037-2038-2039-2040-2041-2042-2043-2044-2045-2046-2047-2048-2049-2050-2051-2052-2053-2054-2055-2056-2057-2058-2059-2060-2061-2062-2063-2064-2065-2066-2067-2068-2069-2070-2071-2072-2073-2074-2075-2076-2077-2078-2079-2080-2081-2082-2083-2084-2085-2086-2087-2088-2089-2090-2091-2092-2093-2094-2095-2096-2097-2098-2099-2100-2101-2102-2103-2104-2105-2106-2107-2108-2109-2110-2111-2112-2113-2114-2115-2116-2117-2118-2119-2120-2121-2122-2123-2124-2125-2126-2127-2128-2129-2130-2131-2132-2133-2134-2135-2136-2137-2138-2139-2140-2141-2142-2143-2144-2145-2146-2147-2148-2149-2150-2151-2152-2153-2154-2155-2156-2157-2158-2159-2160-2161-2162-2163-2164-2165-2166-2167-2168-2169-2170-2171-2172-2173-2174-2175-2176-2177-2178-2179-2180-2181-2182-2183-2184-2185-2186-2187-2188-2189-2190-2191-2192-2193-2194-2195-2196-2197-2198-2199-2200-2201-2202-2203-2204-2205-2206-2207-2208-2209-2210-2211-2212-2213-2214-2215-2216-2217-2218-2219-2220-2221-2222-2223-2224-2225-2226-2227-2228-2229-2230-2231-2232-2233-2234-2235-2236-2237-2238-2239-2240-2241-2242-2243-2244-2245-2246-2247-2248-2249-2250-2251-2252-2253-2254-2255-2256-2257-2258-2259-2260-2261-2262-2263-2264-2265-2266-2267-2268-2269-2270-2271-2272-2273-2274-2275-2276-2277-2278-2279-2280-2281-2282-2283-2284-2285-2286-2287-2288-2289-2290-2291-2292-2293-2294-2295-2296-229



SANTA CRUZ COUNTY HEALTH SERVICES AGENCY - ENVIRONMENTAL HEALTH SERVICE - 701 OCEAN ST, RM 312, SANTA CRUZ, CA 95060 (831) 454-2022

**APPLICATION FOR WELL PERMIT**

MW-2

☐ NEW ☐ REPLACEMENT ☐ SUPPLEMENTAL ☒ DESTRUCTION ☐ OTHER ☒ MONITORING WELL

03006119 3.36 Acres 05-204 2381  
 (ASSESSOR'S PARCEL NUMBER) (PARCEL SIZE) (PERMIT #) (ENVISION #) PROGRAM ELEMENT  
 SITE ADDRESS 3801 Soquel Drive, Soquel, CA 95073  
 OWNER Steve John ADDRESS 4400 Auto Plaza Drive, Capitola, CA 95010  
 DRILLING CONTRACTOR Exploration Geoservices LICENSE # 484-288 PHONE 408-280-6822  
 DIRECTIONS TO SITE HWY 1 North, Exit Soquel, East on Soquel to site address

**DESIGN SPECIFICATIONS:****INTENDED USE**

DOMESTIC: \_\_\_\_\_

#homes Served \_\_\_\_\_

WATER SYSTEM WELL: \_\_\_\_\_

Name of Water System \_\_\_\_\_

IRRIGATION \_\_\_\_\_

COMMERCIAL/INDUSTRIAL \_\_\_\_\_

MONITORING: ☒ \_\_\_\_\_GROWTR ☒ VADOSE \_\_\_\_\_

OTHER: \_\_\_\_\_ (SPECIFY)

WITHIN WATER DISTRICT SERVICE AREA ☒ NO YES NAME: \_\_\_\_\_ (FORM HSA-578-REQUIRED)

CONSTRUCTION DEPTH (FT.) \_\_\_\_\_ DIAMETER (IN.) \_\_\_\_\_ DEPTH OF SEAL (FT.) \_\_\_\_\_ WIDTH OF SEAL (IN.) \_\_\_\_\_

**EXISTING WELLS ON PROPERTY:**

- OTHER WELLS ON PROPERTY: NUMBER: 85 TYPES: DOMESTIC ☒ IRRIGATION \_\_\_\_\_ COMMERCIAL USE \_\_\_\_\_ OTHER Monitoring
- CONDITION OF OTHER WELLS ON PROPERTY: IN USE \_\_\_\_\_ TO BE DESTROYED ☒
- IF NEW WELL REPLACES AN EXISTING WELL, INDICATE INTENTIONS FOR USE OF REPLACED WELL:  
 \_\_\_\_\_ TO SUPPLEMENT NEW WELL \_\_\_\_\_ TO BE DESTROYED \_\_\_\_\_ OTHER \_\_\_\_\_

WELL DESTRUCTION: DEPTH OF WELL 105 ft. DEPTH OF SEAL: 91 ft. NUMBER OF WATER FORMATIONS PENETRATED 1  
 CLEANING OF WELL REQUIRED YES: \_\_\_\_\_ NO: ☒ SEALING MATERIAL portland cement

PLOT PLAN: ATTACH 2 COPIES OF PLOT PLAN (SEE REVERSE FOR REQUIREMENTS)

I HEREBY AGREE TO COMPLY WITH ALL LAWS AND REGULATIONS OF THE COUNTY OF SANTA CRUZ AND STATE OF CALIFORNIA PERTAINING TO WELL CONSTRUCTION, AND DECLARE UNDER PENALTY OF PERJURY THE INFORMATION SUBMITTED ON THIS APPLICATION IS TRUE AND CORRECT. I WILL CONTACT THE ENVIRONMENTAL HEALTH SERVICE WHEN I COMMENCE THE WORK. WITHIN 15 DAYS AFTER COMPLETION OF WORK I WILL FURNISH THE ENVIRONMENTAL HEALTH SERVICE A REPORT OF THE WORK PERFORMED AND NOTIFY THEM BEFORE PUTTING THE WELL INTO USE. I UNDERSTAND THAT THIS PERMIT EXPIRES ONE YEAR FROM DATE OF ISSUANCE. I UNDERSTAND APPROVAL OF THE WELL PERMIT DOES NOT INDICATE WHETHER THIS PROPERTY IS SUITABLE FOR AN INDIVIDUAL SEWAGE DISPOSAL SYSTEM OR THAT A PERMIT TO INSTALL SUCH SYSTEM WILL BE GRANTED.

**WORKER'S COMPENSATION CERTIFICATE**

☒ A CURRENTLY EFFECTIVE CERTIFICATION OF WORKERS COMPENSATION INSURANCE IS ON FILE WITH THIS OFFICE.  
 INSURANCE CARRIER St. Paul Fire & Marine POLICY # WVA7724436

☒ I CERTIFY THAT IN THE PERFORMANCE OF THE WORK FOR WHICH THIS PERMIT IS ISSUED I SHALL NOT EMPLOY ANY PERSON IN ANY MANNER SO AS TO BECOME SUBJECT TO THE WORKER'S COMPENSATION LAWS OF CALIFORNIA

PROPERTY OWNER Mrs. Sheldon for: Steve John DRILLING CONTRACTOR John Chay for: Expl Geo 8/5/05

**FOR OFFICE USE ONLY:**ENVIRONMENTAL ASSESSMENT REQUIRED YES \_\_\_\_\_ NO ☒METER REQUIRED YES \_\_\_\_\_ NO ☒ METER INSTALLED \_\_\_\_\_ DATE \_\_\_\_\_ READING \_\_\_\_\_

SITE INSPECTION

APPLICATION APPROVAL

PAD INSPECTION

RECEIPT OF WELL LOG

FINAL

DATE

EHS SPECIALIST

ANNUAL WELL SEAL WITNESSED:

3/12/05

3/12/05

YES DATE

NO DEPTH

SEAL MATERIAL Environmental Review Initial Study

# SACS (SACS) 1401

COMMENTS: \_\_\_\_\_

ATTACHMENT 17, 21 of 38

APPLICATION 05-0252

DISTRIBUTION: WHITE - EHS /YELLOW - WELL DRILLER /PINK - FISCAL CONTROL /GOLDENROD - RECEIPT

Well Permit Application - PHD-133, WPD (REV. 9/03)

261

SANTA CRUZ COUNTY HEALTH SERVICES AGENCY - ENVIRONMENTAL HEALTH SERVICE - 701 OCEAN ST, RM 312, SANTA CRUZ, CA 95060 (831) 454-2022

**APPLICATION FOR WELL PERMIT**

MSP-1

☐ NEW ☐ REPLACEMENT ☐ SUPPLEMENTAL ☒ DESTRUCTION ☐ OTHER ☒ MONITORING WELL

03006119 3.36 Acres 05-203 2381  
 (ASSESSOR'S PARCEL NUMBER) (PARCEL SIZE) (PERMIT #) (ENVISION #) PROGRAM ELEMENT  
 SITE ADDRESS 3801 Soquel Drive, Soquel, CA 95073  
 OWNER Steve John ADDRESS 4400 Auto Plaza Drive, Capitola, CA 95010  
 DRILLING CONTRACTOR Exploration Geoservices LICENSE #484-288 PHONE 408-280-6822  
 DIRECTIONS TO SITE HWY 1 North, Exit Soquel, East on Soquel to site address

**DESIGN SPECIFICATIONS:**

CASH REGISTER VALIDATION

**INTENDED USE**  
 DOMESTIC: \_\_\_\_\_  
 #Homes Served \_\_\_\_\_  
 WATER SYSTEM WELL: \_\_\_\_\_  
 Name of Water System \_\_\_\_\_  
 IRRIGATION \_\_\_\_\_  
 COMMERCIAL/INDUSTRIAL \_\_\_\_\_  
 MONITORING: ☒ \_\_\_\_\_  
 GRDWTR ☒ VADOSE \_\_\_\_\_  
 OTHER: \_\_\_\_\_ (SPECIFY) \_\_\_\_\_

**DISTANCE FROM WELL SITE TO:**  
 SEPTIC SYSTEMS \_\_\_\_\_  
 SEWER \_\_\_\_\_  
 NEAREST PROPERTY LINE \_\_\_\_\_  
 CASING \_\_\_\_\_  
 SINGLE ☒ DOUBLE \_\_\_\_\_  
 MATERIAL Sch. 40 PVC  
 TYPE OF JOINT Te. Lock  
 GRAVEL PACK #2/12 Monterey

**TYPE OF WELL CONSTRUCTION**  
 ROTARY \_\_\_\_\_  
 CABLE \_\_\_\_\_  
 DUG \_\_\_\_\_  
 OTHER ☒ Hollow stem

08/09/05 5:05PM 000002223 0008  
 PL2381 \$89.00  
 CHECK \$89.00

**ESTIMATED WORK DATES:** START 8-18-05 COMPLETION 8-18-05

WITHIN WATER DISTRICT SERVICE AREA ☒ NO YES NAME: \_\_\_\_\_ (FORM HSA-579-REQUIRED)  
**CONSTRUCTION** DEPTH (FT.) \_\_\_\_\_ DIAMETER (IN.) \_\_\_\_\_ DEPTH OF SEAL (FT.) \_\_\_\_\_ WIDTH OF SEAL (IN.) \_\_\_\_\_

**EXISTING WELLS ON PROPERTY:**

- OTHER WELLS ON PROPERTY: NUMBER: 25 TYPES: DOMESTIC ☒ IRRIGATION \_\_\_\_\_ COMMERCIAL USE \_\_\_\_\_ OTHER Monitoring
- CONDITION OF OTHER WELLS ON PROPERTY: IN USE \_\_\_\_\_ TO BE DESTROYED ☒
- IF NEW WELL REPLACES AN EXISTING WELL, INDICATE INTENTIONS FOR USE OF REPLACED WELL:  
 \_\_\_\_\_ TO SUPPLEMENT NEW WELL \_\_\_\_\_ TO BE DESTROYED \_\_\_\_\_ OTHER \_\_\_\_\_

**WELL DESTRUCTION:** DEPTH OF WELL 10.5 ft DEPTH OF SEAL 8.1 ft NUMBER OF WATER FORMATIONS PENETRATED 1  
 CLEANING OF WELL REQUIRED YES: \_\_\_\_\_ NO: ☒ SEALING MATERIAL portland cement

**PLOT PLAN: ATTACH 2 COPIES OF PLOT PLAN (SEE REVERSE FOR REQUIREMENTS)**

I HEREBY AGREE TO COMPLY WITH ALL LAWS AND REGULATIONS OF THE COUNTY OF SANTA CRUZ AND STATE OF CALIFORNIA PERTAINING TO WELL CONSTRUCTION, AND DECLARE UNDER PENALTY OF PERJURY THE INFORMATION SUBMITTED ON THIS APPLICATION IS TRUE AND CORRECT. I WILL CONTACT THE ENVIRONMENTAL HEALTH SERVICE WHEN I COMMENCE THE WORK. WITHIN 15 DAYS AFTER COMPLETION OF WORK I WILL FURNISH THE ENVIRONMENTAL HEALTH SERVICE A REPORT OF THE WORK PERFORMED AND NOTIFY THEM BEFORE PUTTING THE WELL INTO USE. I UNDERSTAND THAT THIS PERMIT EXPIRES ONE YEAR FROM DATE OF ISSUANCE. I UNDERSTAND APPROVAL OF THE WELL PERMIT DOES NOT INDICATE WHETHER THIS PROPERTY IS SUITABLE FOR AN INDIVIDUAL SEWAGE DISPOSAL SYSTEM OR THAT A PERMIT TO INSTALL SUCH SYSTEM WILL BE GRANTED.

**WORKER'S COMPENSATION CERTIFICATE**

☒ A CURRENTLY EFFECTIVE CERTIFICATION OF WORKERS COMPENSATION INSURANCE IS ON FILE WITH THIS OFFICE.  
 INSURANCE CARRIER St. Paul Fire & Marine POLICY # WVA7724436  
☒ I CERTIFY THAT IN THE PERFORMANCE OF THE WORK FOR WHICH THIS PERMIT IS ISSUED I SHALL NOT EMPLOY ANY PERSON IN ANY MANNER SO AS TO BECOME SUBJECT TO THE WORKER'S COMPENSATION LAWS OF CALIFORNIA

PROPERTY OWNER Nelson Shubert for Steve John DRILLING CONTRACTOR J. L. Fox for: Geo Geo 8/5/05

**FOR OFFICE USE ONLY:**ENVIRONMENTAL ASSESSMENT REQUIRED YES \_\_\_\_\_ NO ☒

METER REQUIRED YES \_\_\_\_\_ NO ☒ METER INSTALLED \_\_\_\_\_ DATE \_\_\_\_\_ READING \_\_\_\_\_  
**DATE** **EHS SPECIALIST** **ANNULAR WELL SEAL WITNESSED:**  
 SITE INSPECTION 8/12/05 [Signature] \_\_\_\_\_  
 APPLICATION APPROVAL 8/12/05 [Signature] \_\_\_\_\_ YES DATE \_\_\_\_\_  
 PAD INSPECTION \_\_\_\_\_ NO DEPTH \_\_\_\_\_  
 RECEIPT OF WELL LOG \_\_\_\_\_ SEAL MATERIAL \_\_\_\_\_  
 FINAL \_\_\_\_\_

# SACKS CEMENT Environmental Review Initial Study

COMMENTS: \_\_\_\_\_

ATTACHMENT 17, 22 & 36  
 APPLICATION 05-02-52

DISTRIBUTION: WHITE - EHS / YELLOW - WELL DRILLER / PINK - FISCAL CONTROL / GOLDENROD - RECEIPT

Well Permit Application - PHD-133.WPD (REV. 8/03)

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SANTA CRUZ COUNTY HEALTH SERVICES AGENCY - ENVIRONMENTAL HEALTH SERVICE - 701 OCEAN ST, RM 312, SANTA CRUZ, CA 95060 (831) 454-2022

**APPLICATION FOR WELL PERMIT**

MW-3

☐ NEW ☐ REPLACEMENT ☐ SUPPLEMENTAL ☒ DESTRUCTION ☐ OTHER ☒ MONITORING WELL

03006119

3.36 Acres

05-205

2381

(ASSESSOR'S PARCEL NUMBER)

(PARCEL SIZE)

(PERMIT #) (ENVISION #)

PROGRAM ELEMENT

SITE ADDRESS 3801 Soquel Drive, Soquel, CA 95073

OWNER Steve John ADDRESS 4400 Auto Plaza Drive

DRILLING CONTRACTOR Exploration Geoservices LICENSE # 484-288 PHONE 408-280-6822

DIRECTIONS TO SITE HWY 1 North, Exit Soquel, East on Soquel to site address

**DESIGN SPECIFICATIONS:**

CASH REGISTER VALIDATION

**INTENDED USE**

DOMESTIC:

#Homes Served

WATER SYSTEM WELL:

Name of Water System

IRRIGATION

COMMERCIAL/INDUSTRIAL

MONITORING: ☒GROWTR ☒ VADOSE

OTHER: (SPECIFY)

**DISTANCE FROM WELL SITE TO:**

SEPTIC SYSTEMS

SEWER

NEAREST PROPERTY LINE

CASING

SINGLE ☒ DOUBLE

MATERIAL Sch. 40 PVC

TYPE OF JOINT T-b. Lock

GRAVEL PACK #2/12 Monterey

**TYPE OF WELL CONSTRUCTION**

ROTARY

CABLE

DUG

OTHER ☒

Hollow Stem

08/09/05 5:05PM 0004#2235 0006

PE381 \$89.00

CHECK \$89.00

ESTIMATED WORK DATES: START 8-18-05 COMPLETION 8-19-05

WITHIN WATER DISTRICT SERVICE AREA ☒ NO ☐ YES NAME: (FORM HSA-579-REQUIRED)

CONSTRUCTION DEPTH (FT.) DIAMETER (IN.) DEPTH OF SEAL (FT.) WIDTH OF SEAL (IN.)

**EXISTING WELLS ON PROPERTY:**

1. OTHER WELLS ON PROPERTY: NUMBER 15 TYPES: DOMESTIC ☒ IRRIGATION ☐ COMMERCIAL USE ☐ OTHER ☒ Monitoring
2. CONDITION OF OTHER WELLS ON PROPERTY: IN USE ☐ TO BE DESTROYED ☒
3. IF NEW WELL REPLACES AN EXISTING WELL, INDICATE INTENTIONS FOR USE OF REPLACED WELL  
TO SUPPLEMENT NEW WELL ☐ TO BE DESTROYED ☐ OTHER ☐

**WELL DESTRUCTION:** DEPTH OF WELL 109 ft DEPTH OF SEAL 85 ft NUMBER OF WATER FORMATIONS PENETRATED 1  
 CLEANING OF WELL REQUIRED YES: ☐ NO: ☒ SEALING MATERIAL portland cement
**PLOT PLAN: ATTACH 2 COPIES OF PLOT PLAN (SEE REVERSE FOR REQUIREMENTS)**

I HEREBY AGREE TO COMPLY WITH ALL LAWS AND REGULATIONS OF THE COUNTY OF SANTA CRUZ AND STATE OF CALIFORNIA PERTAINING TO WELL CONSTRUCTION, AND DECLARE UNDER PENALTY OF PERJURY THE INFORMATION SUBMITTED ON THIS APPLICATION IS TRUE AND CORRECT. I WILL CONTACT THE ENVIRONMENTAL HEALTH SERVICE WHEN I COMMENCE THE WORK. WITHIN 15 DAYS AFTER COMPLETION OF WORK I WILL FURNISH THE ENVIRONMENTAL HEALTH SERVICE A REPORT OF THE WORK PERFORMED AND NOTIFY THEM BEFORE PUTTING THE WELL INTO USE. I UNDERSTAND THAT THIS PERMIT EXPIRES ONE YEAR FROM DATE OF ISSUANCE. I UNDERSTAND APPROVAL OF THE WELL PERMIT DOES NOT INDICATE WHETHER THIS PROPERTY IS SUITABLE FOR AN INDIVIDUAL SEWAGE DISPOSAL SYSTEM OR THAT A PERMIT TO INSTALL SUCH SYSTEM WILL BE GRANTED.

**WORKER'S COMPENSATION CERTIFICATE**☒ A CURRENTLY EFFECTIVE CERTIFICATION OF WORKERS COMPENSATION INSURANCE IS ON FILE WITH THIS OFFICE.☒ INSURANCE CARRIER St. Paul Fire & Marine POLICY # WVA7724436

I CERTIFY THAT IN THE PERFORMANCE OF THE WORK FOR WHICH THIS PERMIT IS ISSUED I SHALL NOT EMPLOY ANY PERSON IN ANY MANNER SO AS TO BECOME SUBJECT TO THE WORKER'S COMPENSATION LAWS OF CALIFORNIA

PROPERTY OWNER Melvin Sheldon for: Steve John DRILLING CONTRACTOR Joe Chy For: Exploration Geos 8/5/05

**FOR OFFICE USE ONLY:**ENVIRONMENTAL ASSESSMENT REQUIRED YES ☐ NO ☒

|  |                 |                |                              |
|--|-----------------|----------------|------------------------------|
| METER REQUIRED YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> | METER INSTALLED | DATE           | READING                      |
|  | DATE            | EHS SPECIALIST | ANNULAR WELL SEAL WITNESSED: |
| SITE INSPECTION  | 8/12/05         | [Signature]    |                              |
| APPLICATION APPROVAL   | 8/12/05         | [Signature]    | YES DATE                     |
| PAD INSPECTION   |                 |                | NO DEPTH                     |
| RECEIPT OF WELL LOG  |                 |                | SEAL MATERIAL                |
| FINAL  |                 |                | # SACKS CEMENT/YARD          |

COMMENTS:

Environmental Review Initial Study

ATTACHMENT 17, 2381 38

DISTRIBUTION: WHITE - EHS /YELLOW - WELL DRILLER /PINK - FISCAL CONTROL /GOLDENROD - RECEIVED

Well Permit Application - PHD-133.WPD (REV. 9/03)

APPLICATION 050232

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CA

INDICATE ATTACHMENTS THAT APPLY

|                                    |  |                     |                 |
|------------------------------------|--|---------------------|-----------------|
| Client:                            | Ocean Honda Chevrolet (Former Markovich Property)  | Date:               | August 15, 2005 |
| Site Location:                     | 3801 Soquel Drive, Soquel, CA  | Job #:              | 25009.C         |
| Field Tasks:                       | <input type="checkbox"/> Drilling <input type="checkbox"/> Sampling <input checked="" type="checkbox"/> Other (see below): | Weather Conditions: | Foggy + Cool    |
| Well Destruction by Pressure Grout |  |                     |                 |
| Personnel / Company On-Site:       | Jered Chaney (Weber, Hayes and Associates: WHA)  |                     |                 |

Arrive onsite to perform well destructions: 0840

County Inspector called: YES NO

County Inspector (Palmdale Charles) arrives onsite to observe well destruction or gives verbal permission to proceed with well destruction.

Obtain depth to groundwater measurements for each well and record below:

| Location | DTW (BTOC) |
|----------|------------|
| MW-1     | 94.72'     |
| MW-2     | 95.08'     |
| MW-3     | 97.59'     |

each well for obstructions, and ensure each well is open to its original completion depth.

| Location | Original Completion Depth | Measured Completion Depth |
|----------|---------------------------|---------------------------|
| MW-1     | 105'                      | 104.74'                   |
| MW-2     | 105'                      | 115.68'                   |
| MW-3     | 109'                      | 111.58'                   |

Calculate the volume of sealing material needed to seal each well and record using the following equation:  $V = \pi r^2 L$ Where  $\pi r^2$  equals (depended on diameter of casing): (3/4")=3.1x10-3 ft<sup>2</sup>, (2")=0.02 ft<sup>2</sup>, (3")=0.05 ft<sup>2</sup>, (4")=0.08 ft<sup>2</sup>, (6")=0.196 ft<sup>2</sup>, and L=well depth (ft).Porosity of Filter Pack is approximately 40% or 0.40 times the diameter of annular space. Consider an 8" diameter boring (annular pore space volume dependent on casing diameter); Pore space volume equals: (2")=0.132 ft<sup>2</sup> x L, (3")=0.119 ft<sup>2</sup> x L, and (4")=0.107 ft<sup>2</sup> x L, and L=depth of seal (ft) - well depth(ft).Conversion: 1ft<sup>3</sup> = 7.4805 gallons.

$$MW-1: V = [(184.74' \cdot 0.02 ft^2) + (22' \cdot 0.132 ft^2)] = 4.99 ft^3 \text{ or } \sim 37 \text{ gallons}$$

$$MW-2: V = [(115.68' \cdot 0.02 ft^2) + (22' \cdot 0.132 ft^2)] = 5.21 ft^3 \text{ or } \sim 39 \text{ gallons}$$

$$MW-3: V = [(111.58' \cdot 0.02 ft^2) + (22' \cdot 0.132 ft^2)] = 5.13 ft^3 \text{ or } \sim 38 \text{ gallons}$$

Environmental Review Initial Study  
ATTACHMENT 17, 29 of 30

Confirm that each well is completely sealed with no bridging of the sealing material. Record the amount of sealing material used to seal each well. 05-0252

MW-1 : Approximately 35 gallons of neat cement used (~7 x 47# bags Portland)

MW-2 : Approximately 40 gallons of neat cement used (~7.5 x 47# bags Portland)

MW-3 : Approximately 40 gallons of neat cement used (~7.5 x 47# bags Portland)

Comments: All MW's Drilled out to ~5' bgs; Boxes removed

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Signature of Field Personnel &amp; Date 8/15/05

# Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Jered Chaney  
Weber, Hayes and Associates  
120 Westgate Drive  
Watsonville, CA 95076

Certificate ID: 45084 - 9/2/2005 7:47:01 PM

Order Number: 45084  
Project Name: 3801 Soquel  
Project Number: 25009

Date Received: 08/30/2005  
P.O. Number: 25009

## Certificate of Analysis - Final Report

On August 30, 2005, samples were received under chain of custody for analysis.  
Entech analyzes samples "as received" unless otherwise noted. The following results are included:

| <u>Matrix</u> | <u>Test</u>   | <u>Comments</u> |
|---------------|---|-----------------|
| Solid         | Composite<br>Metals<br>TPH-Extractable<br>TPH as Gasoline<br>MTBE by EPA 8020<br>BTEX |                 |

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).  
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



Laurie Glantz-Murphy  
Laboratory Director

Environmental Review Initial Study  
ATTACHMENT 17, 25 of 38  
APPLICATION 05-0252

Environmental Analysis Since 1983

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# Entcch Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054

Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates  
120 Westgate Drive  
Watsonville, CA 95076  
Attn: Jered Chaney

Date Received 8/30/2005  
Project ID: 25009  
Project Name: 3801 Soquel

P.O. Number: 25009  
Sample Collected by: Client

## Certificate of Analysis - Data Report

Lab #: 45084-002 Sample ID: DP-3-d31'

Matrix: Solid Sample Date: 8/29/2005

| EPA 3545 EPA 8015 MOD. (Extractable)                    |        |      |       |                 |       |           |            | TPH-Extractable |          |
|---|--------|------|-------|-----------------|-------|-----------|------------|-----------------|----------|
| Parameter   | Result | Qual | DIP-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date   | QC Batch |
| TPH as Diesel   | ND     |      | 1     | 2.5             | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005       | DS050830 |
| 8.4ppm hydrocarbon (C8-C18). No Diesel pattern present. |        |      |       |                 |       |           |            |                 |          |
| TPH as Motor Oil  | ND     |      | 1     | 10              | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005       | DS050830 |
| TPH as Kerosene   | ND     |      | 1     | 2.5             | mg/Kg | 8/31/2005 | 35050830   | 8/31/2005       | DS050830 |

Surrogate Surrogate Recovery Control Limits (%)  
o-Terphenyl 86.0 41 - 137

Analyzed by: JHsiang  
Reviewed by: dba

| EPA 8015 MOD. (Purgeable) |        |      |       |                 |       |           |            | TPR as Gasoline |            |
|---------------------------|--------|------|-------|-----------------|-------|-----------|------------|-----------------|------------|
| Parameter                 | Result | Qual | DIP-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date   | QC Batch   |
| TPH as Gasoline           | ND     |      | 1     | 2.5             | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005        | SGC4050831 |

Surrogate Surrogate Recovery Control Limits (%)  
4-Bromofluorobenzene 92.7 65 - 135

Analyzed by: mruan  
Reviewed by: MaiChiTu

| EPA 8020             |        |      |       |                 |       |           |            | BTEX          |            |
|----------------------|--------|------|-------|-----------------|-------|-----------|------------|---------------|------------|
| Parameter            | Result | Qual | DIP-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date | QC Batch   |
| Benzene              | ND     |      | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831 |
| Toluene              | ND     |      | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831 |
| Ethyl Benzene        | ND     |      | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831 |
| Xylenes, Total       | ND     |      | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831 |
| Methyl-t-butyl Ether | ND     |      | 1     | 0.25            | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831 |

Surrogate Surrogate Recovery Control Limits (%)  
4-Bromofluorobenzene 95.1 65 - 135

Analyzed by: mruan  
Reviewed by: MaiChiTu

Environmental Review Initial Study  
ATTACHMENT 17, 26 of 38  
APPLICATION 05-0252

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# Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054

Phone: (408) 558-0200

Fax: (408) 588-0201

Weber, Hayes and Associates  
120 Westgate Drive  
Watsonville, CA 95076  
Attn: Jered Chaney

Date Received: 8/30/2005

Project ID: 25009

Project Name: 3801 Soquei

P.O. Number: 25009

Sample Collected by: Client

## Certificate of Analysis - Data Report

Lab #: 45084-001 Sample ID: DP-3-d25'

Matrix: Solid Sample Date: 8/29/2005

EPA 3545 EPA 8015 MOD. (Extractable)

TPH-Extractable

| Parameter   | Result             | Qual               | DIP-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date        | QC Batch |
|---|--------------------|--------------------|-------|-----------------|-------|-----------|------------|----------------------|----------|
| TPH as Diesel   | NE                 |                    | 1     | 2.5             | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005            | DS050830 |
| 7.3ppm hydrocarbon (C8-C18). No Diesel pattern present. |                    |                    |       |                 |       |           |            |                      |          |
| TPH as Motor Oil  | ND                 |                    | 1     | 10              | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005            | DS050830 |
| TPH as Kerosene   | ND                 |                    | 1     | 2.5             | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005            | DS050830 |
| Surrogate   | Surrogate Recovery | Control Limits (%) |       |                 |       |           |            | Analyzed by: JHsiang |          |
| o-Terphenyl   | 92.8               | 41 - 137           |       |                 |       |           |            | Reviewed by: dba     |          |

EPA 8015 MOD. (Purgeable)

TPH as Gasoline

| Parameter            | Result             | Qual               | DIP-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date         | QC Batch   |
|----------------------|--------------------|--------------------|-------|-----------------|-------|-----------|------------|-----------------------|------------|
| TPH as Gasoline      | ND                 |                    | 1     | 2.5             | mg/Kg | 8/31/2005 | SGC4050831 | 8/31/2005             | SGC4050831 |
| Surrogate            | Surrogate Recovery | Control Limits (%) |       |                 |       |           |            | Analyzed by: mruan    |            |
| 4-Bromofluorobenzene | 89.2               | 65 - 135           |       |                 |       |           |            | Reviewed by: MaiChiTu |            |

EPA 8020

BTEX

| Parameter            | Result             | Qual               | DIP-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date         | QC Batch   |
|----------------------|--------------------|--------------------|-------|-----------------|-------|-----------|------------|-----------------------|------------|
| Benzene              | ND                 |                    | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 8/31/2005             | SGC4050831 |
| Toluene              | ND                 |                    | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 8/31/2005             | SGC4050831 |
| Ethyl Benzene        | ND                 |                    | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 8/31/2005             | SGC4050831 |
| Xylenes, Total       | ND                 |                    | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 8/31/2005             | SGC4050831 |
| Methyl-1-butyl Ether | ND                 |                    | 1     | 0.25            | mg/Kg | 8/31/2005 | SGC4050831 | 8/31/2005             | SGC4050831 |
| Surrogate            | Surrogate Recovery | Control Limits (%) |       |                 |       |           |            | Analyzed by: mruan    |            |
| 4-Bromofluorobenzene | 90.3               | 65 - 135           |       |                 |       |           |            | Reviewed by: MaiChiTu |            |

Environmental Review Initial Study  
ATTACHMENT 17, 27 of 38  
APPLICATION 05-0252

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# Entech Analytical Labs, Inc.

3334 Victor court, Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Weber, Hayes and Associates  
120 Westgate Drive  
Watsonville, CA 95076  
Attn: Jered Chaney

Date Received 8/30/2005  
Project ID: 15009  
Project Name: 3801 Soquel

P.O. Number: 25009  
Sample Collected by: Client

## Certificate of Analysis -Data Report

Lab # : 45084-003 Sample ID: DP-3-d36

Matrix: Solid Sample Date: 8/29/2005

| EPA 3545 EPA 8015 MOD. (Extractable)                    |                    |                    |       |                 |       |           |            | TPH-Extractable      |          |
|---|--------------------|--------------------|-------|-----------------|-------|-----------|------------|----------------------|----------|
| Parameter   | Result             | Qual               | DIP-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date        | QC Batch |
| PH as Diesel  | ND                 |                    | 1     | 2.5             | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005            | DS050830 |
| 2.5ppm hydrocarbon (C8-C18). No Diesel pattern present. |                    |                    |       |                 |       |           |            |                      |          |
| PH as Motor Oil   | ND                 |                    | 1     | 10              | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005            | DS050830 |
| PH as Kerosene  | ND                 |                    | 1     | 2.5             | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005            | DS050830 |
| Surrogate   | Surrogate Recovery | Control Limits (%) |       |                 |       |           |            | Analyzed by: JHsiang |          |
| o-Terphenyl   | 73.4               | 41 - 137           |       |                 |       |           |            | Reviewed by: dba     |          |

| EPA 8015 MOD. (Purgeable) |                    |                    |       |                 |       |           |            | TPH as Gasoline       |            |
|---------------------------|--------------------|--------------------|-------|-----------------|-------|-----------|------------|-----------------------|------------|
| Parameter                 | Result             | Qual               | DIP-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date         | QC Batch   |
| PH as Gasoline            | ND                 |                    | 1     | 2.5             | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005              | SGC4050831 |
| Surrogate                 | Surrogate Recovery | Control Limits (%) |       |                 |       |           |            | Analyzed by: mruan    |            |
| 4-Bromofluorobenzene      | 92.1               | 65 - 135           |       |                 |       |           |            | Reviewed by: MaiChiTu |            |

| EPA 8020             |                    |                    |       |                 |       |           |            | BTEX                  |            |
|----------------------|--------------------|--------------------|-------|-----------------|-------|-----------|------------|-----------------------|------------|
| Parameter            | Result             | Qual               | DIP-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date         | QC Batch   |
| Benzene              | ND                 |                    | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005              | SGC4050831 |
| Toluene              | ND                 |                    | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005              | SGC4050831 |
| o-Xylene             | ND                 |                    | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005              | SGC4050831 |
| m-Xylene             | ND                 |                    | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005              | SGC4050831 |
| p-Xylene             | ND                 |                    | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005              | SGC4050831 |
| BTEX, Total          | ND                 |                    | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005              | SGC4050831 |
| Methyl-t-butyl Ether | ND                 |                    | 1     | 0.25            | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005              | SGC4050831 |
| Surrogate            | Surrogate Recovery | Control Limits (%) |       |                 |       |           |            | Analyzed by: mruan    |            |
| 4-Bromofluorobenzene | 91.3               | 65 - 135           |       |                 |       |           |            | Reviewed by: MaiChiTu |            |

Environmental Review Initial Study  
ATTACHMENT 17, 28 & 38  
APPLICATION 05-0252

268



# Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054

Phone: (408) 588-0200 - Fax: (408) 588-0201

Weber, Hayes and Associates  
120 Westgate Drive  
Watsonville, CA 95076  
Attn: Jered Chaney

Date Received: 8/30/2005  
Project ID: 25009  
Project Name: 3801 Soquel

## Certificate of Analysis - Data Report

P.O. Number: 25009  
Sample Collected by: Client

Lab #: 45084-005 Sample ID: DP-6-d26'

Matrix: Solid Sample Date: 8/29/2005

### EPA 3545 EPA 8015 MOD. (Extractable)

| Parameter                | Result                     | Qual | DIP-F                          | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date                            | TPH-Extractable<br>Q c Batch |
|--------------------------|----------------------------|------|--------------------------------|-----------------|-------|-----------|------------|--|------------------------------|
| TPH as Diesel            | ND                         |      | 1                              | 2.5             | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005                                | DS050830                     |
| TPH as Motor Oil         | NE                         |      | 1                              | 10              | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005                                | DS050830                     |
| TPH as Kerosene          | NE                         |      | 1                              | 2.5             | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005                                | DS050830                     |
| Surrogate<br>o-Terphenyl | Surrogate Recovery<br>86.9 |      | Control Limits (%)<br>41 - 137 |                 |       |           |            | Analyzed by: JHsiang<br>Reviewed by: dba |                              |

### EPA 8015 MOD. (Purgeable)

| Parameter                         | Result                     | Qual | DIP-F                          | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date                               | TPH as Gasoline<br>QC Bnteb |
|-----------------------------------|----------------------------|------|--------------------------------|-----------------|-------|-----------|------------|---|-----------------------------|
| TPH as Gasoline                   | ND                         |      | 1                              | 2.5             | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005                                    | SGC4050831                  |
| Surrogate<br>4-Bromofluorobenzene | Surrogate Recovery<br>95.7 |      | Control Limits (%)<br>65 - 135 |                 |       |           |            | Analyzed by: mruan<br>Reviewed by: MaiChiTu |                             |

### EPA 8020

| Parameter                         | Result                    | Qual | DIP-F                          | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date                               | BTEX<br>QC Batch |
|-----------------------------------|---------------------------|------|--------------------------------|-----------------|-------|-----------|------------|---|------------------|
| Benzene                           | ND                        |      | 1                              | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005                                    | SGC4050831       |
| Toluene                           | ND                        |      | 1                              | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005                                    | SGC4050831       |
| Ethyl Benzene                     | ND                        |      | 1                              | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005                                    | SGC4050831       |
| Xylenes, Total                    | ND                        |      | 1                              | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005                                    | SGC4050831       |
| Methyl-t-butyl Ether              | NE                        |      | 1                              | 0.25            | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005                                    | SGC4050831       |
| Surrogate<br>4-Bromofluorobenzene | Surrogate Recovery<br>105 |      | Control Limits (%)<br>65 - 135 |                 |       |           |            | Analyzed by: mruan<br>Reviewed by: MaiChiTu |                  |

Environmental Review Initial Study  
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Detection Limit = Detection Limit for Reporting.

DIP-F = Dilution and/or Prep Factor includes sample volume adjustments

ND = Not Detected at or above the Detection Limit.

Qual = Data Qualifier

9/2/2005 1:46:47 PM - dba

# Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Weber, Hayes and Associates  
120 Westgate Drive  
Watsonville, CA 95076  
Attn: Jered Charley

Date Received: 8/30/2005  
Project ID: 25009  
Project Name: 3801 Soquel

P.O. Number: 25009

Sample Collected by: Client

## Certificate of Analysis - Data Report

Lab #: 45084-006 Sample ID: DP-6-d31.5'

Matrix: Solid Sample Date: 8/29/2005

| EPA 3545 EPA 8015 MOD. (Extractable) |                    |      |                    |                 |       |           |            | TPH-Extractable     |          |
|--------------------------------------|--------------------|------|--------------------|-----------------|-------|-----------|------------|---------------------|----------|
| Parameter                            | Result             | Qual | D/P-F              | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date       | QC Batch |
| TPH as Diesel                        | ND                 |      | 1                  | 2.5             | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005           | DS050830 |
| TPH as Motor Oil                     | ND                 |      | 1                  | 10              | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005           | DS050830 |
| TPH as Kerosene                      | ND                 |      | 1                  | 2.5             | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005           | DS050830 |
| Surrogate                            | Surrogate Recovery |      | Control Limits (%) |                 |       |           |            | Analyzed by JHsiang |          |
| o-Terphenyl                          | 79.8               |      | 41 - 137           |                 |       |           |            | Renewed by dba      |          |

| EPA 8015 MOD. (Purgeable) |                    |      |                    |                 |       |           |            | TPH as Gasoline      |            |
|---------------------------|--------------------|------|--------------------|-----------------|-------|-----------|------------|----------------------|------------|
| Parameter                 | Result             | Qual | D/P-F              | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date        | QC Batch   |
| TPH as Gasoline           | ND                 |      | 1                  | 2.5             | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005             | SGC4050831 |
| Surrogate                 | Surrogate Recovery |      | Control Limits (%) |                 |       |           |            | Analyzed by mruan    |            |
| 4-Bromofluorobenzene      | 93.3               |      | 65 - 135           |                 |       |           |            | Reviewed by MaiChiTu |            |

| EPA 8020              |                    |      |                    |                 |       |           |            | BTEX                 |            |
|-----------------------|--------------------|------|--------------------|-----------------|-------|-----------|------------|----------------------|------------|
| Parameter             | Result             | Qual | D/P-F              | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date        | QC Batch   |
| Benzene               | ND                 |      | 1                  | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005             | SGC4050831 |
| Toluene               | ND                 |      | 1                  | 0.015           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005             | SGC4050831 |
| Ethyl Benzene         | ND                 |      | 1                  | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005             | SGC4050831 |
| Xylenes, Total        | ND                 |      | 1                  | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005             | SGC4050831 |
| Diethyl-t-butyl Ether | ND                 |      | 1                  | 0.25            | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005             | SGC4050831 |
| Surrogate             | Surrogate Recovery |      | Control Limits (%) |                 |       |           |            | Analyzed by mruan    |            |
| 4-Bromofluorobenzene  | 101                |      | 65 - 135           |                 |       |           |            | Reviewed by MaiChiTu |            |

Environmental Review Initial Study  
ATTACHMENT & 30 of 38  
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# Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 538-0201

Weber, Hayes and Associates  
120 Westgate Drive  
Watsonville, CA 95076  
Attn: Jered Chaney

Date Received 8/30/2005  
Project ID: 25009  
Project Name: 3801 Soquei

## Certificate of Analysis - Data Report

P.O. Number: 25009  
Sample Collected by: Client

Lab #: 45084-007 Sample ID: DP-6-d35.5' Matrix: Solid Sample Date: 8/29/2005

| EPA 3545 EPA 8015 MOD. (Extractable) |                    |                    |       |                 |       |           |            | TPH-Extractable      |          |
|--------------------------------------|--------------------|--------------------|-------|-----------------|-------|-----------|------------|----------------------|----------|
| Parameter                            | Result             | Qual               | D/P-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date        | QC Batch |
| TPH as Diesel                        | ND                 |                    | 1     | 2.5             | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005            | DS050830 |
| TPH as Motor Oil                     | ND                 |                    | 1     | 10              | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005            | DS050830 |
| TPH as Kerosene                      | ND                 |                    | 1     | 2.5             | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005            | DS050830 |
| Surrogate                            | Surrogate Recovery | Control Limits (%) |       |                 |       |           |            | Analyzed by: jHsiang |          |
| o-Terphenyl                          | 80.2               | 41 - 137           |       |                 |       |           |            | Reviewed by: h a     |          |

| EPA 8015 MOD. (Purgeable) |                    |                    |       |                 |       |           |            | TPH as Gasoline       |            |
|---------------------------|--------------------|--------------------|-------|-----------------|-------|-----------|------------|-----------------------|------------|
| Parameter                 | Result             | Qual               | D/P-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date         | QC Batch   |
| TPH as Gasoline           | ND                 |                    | 1     | 2.5             | mg/Kg | 8/31/2005 | SGC4050831 | 8/31/2005             | SGC4050831 |
| Surrogate                 | Surrogate Recovery | Control Limits (%) |       |                 |       |           |            | Analyzed by: mruan    |            |
| 4-Bromofluorobenzene      | 92.7               | 65 - 135           |       |                 |       |           |            | Reviewed by: MaiChiTu |            |

| EPA 8020             |                    |                    |       |                 |       |           |            | BTEX                  |            |
|----------------------|--------------------|--------------------|-------|-----------------|-------|-----------|------------|-----------------------|------------|
| Parameter            | Result             | Qual               | D/P-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date         | QC Batch   |
| Benzene              | ND                 |                    | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 8/31/2005             | SGC4050831 |
| Toluene              | 0.056              |                    | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 8/31/2005             | SGC4050831 |
| Ethyl Benzene        | ND                 |                    | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 8/31/2005             | SGC4050831 |
| Xylenes, Total       | ND                 |                    | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 8/31/2005             | SGC4050831 |
| Methyl-t-butyl Ether | ND                 |                    | 1     | 0.25            | mg/Kg | 8/31/2005 | SGC4050831 | 8/31/2005             | SGC4050831 |
| Surrogate            | Surrogate Recovery | Control Limits (%) |       |                 |       |           |            | Analyzed by: mruan    |            |
| 4-Bromofluorobenzene | 93.3               | 65 - 135           |       |                 |       |           |            | Reviewed by: MaiChiTu |            |

Environmental Review Initial Study  
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# Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054

Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates  
120 Westgate Drive  
Watsonville, CA 95076  
Attn: Jered Chaney

Date Received 8/30/2005

Project ID: 25009

Project Name: 3801 Soquel

P.O. Number: 25009

Sample Collected by: Client

## Certificate of Analysis - Data Report

Lab #: 45084-012 Sample ID: Landfill Comp #1(Samples -008,-009,- Matrix: Solid Sample Date: 8/29/2005

| EPA 3050B EPA 6010B |        |      |       |                 |       |           |            |               | Metals   |
|---------------------|--------|------|-------|-----------------|-------|-----------|------------|---------------|----------|
| Parameter           | Result | Qual | D/P-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date | QC Batch |
| Lead                | 4.7    |      | 1     | 1.0             | mg/Kg | 8/31/2005 | SM050831   | 9/1/2005      | SM050831 |

Analyzed by: Equeja

Reviewed by: DQUEJA

| EPA 3545 EPA 8015 MOD. (Extractable) |        |      |       |                 |       |           |            |               | TPH-Extractable |
|--------------------------------------|--------|------|-------|-----------------|-------|-----------|------------|---------------|-----------------|
| Parameter                            | Result | Qual | DIP-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date | QC Batch        |
| PH as Diesel                         | ND     |      | 1     | 2.5             | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005     | DS050830        |
| PH as Motor Oil                      | ND     |      | 1     | 10              | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005     | DS050830        |
| TPH as Kerosene                      | ND     |      | 1     | 2.5             | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005     | DS050830        |

Surrogate Surrogate Recovery Control Limits (%)  
o-Terphenyl 90.4 41 - 137

Analyzed by: JHsiang

Reviewed by: dba

| EPA 8015 MOD. (Purgeable) |        |      |       |                 |       |           |            |               | TPH as Gasoline |
|---------------------------|--------|------|-------|-----------------|-------|-----------|------------|---------------|-----------------|
| Parameter                 | Result | Qual | DIP-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date | QC Batch        |
| TPH as Gasoline           | ND     |      | 1     | 2.5             | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831      |

Surrogate Surrogate Recovery Control Limits (%)  
4-Bromofluorobenzene 93.4 65 - 135

Analyzed by: mruan

Reviewed by: MaiChiTu

| EPA 8020              |        |      |       |                 |       |           |            |               | BTEX       |
|-----------------------|--------|------|-------|-----------------|-------|-----------|------------|---------------|------------|
| Parameter             | Result | Qual | DIP-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date | QC Batch   |
| Benzene               | ND     |      | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831 |
| Toluene               | 0.035  |      | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831 |
| Ethyl Benzene         | ND     |      | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831 |
| Xylenes, Total        | ND     |      | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831 |
| 4-ethyl-t-butyl Ether | ND     |      | 1     | 0.25            | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831 |

Surrogate Surrogate Recovery Control Limits (%)  
4-Bromofluorobenzene 98.2 65 - 135

Analyzed by: mruan

Reviewed by: MaiChiTu

Environmental Review Initial Study  
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APPLICATION 05-0252

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Detection Limit = Detection Limit for Reporting.

ND = Not Detected at or above the Detection Limit.

# Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Weber, Hayes and Associates  
120 Westgate Drive  
Watsonville, CA 95076  
Attn: Jered Chaney

Date Received 8/30/2005  
Project ID: 25009  
Project Name: 3801 Soquel

P.O. Number: 25009  
Sample Collected by: Client

## Certificate of Analysis - Data Report

Lab #: 45084-017 Sample ID: Landfill Comp #2(Samples -013,-014,- Matrix: Solid Sample Date: 8/29/2005

EPA 3050B EPA 6010B

| Parameter | Result | Qual | DIP-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date | Metals<br>QC Batch |
|-----------|--------|------|-------|-----------------|-------|-----------|------------|---------------|--------------------|
| Lend      | 4.2    |      | 1     | 1.0             | mg/Kg | 8/31/2005 | SM050831   | 9/1/2005      | SM050831           |

Analyzed by: Equeja

Reviewed by: DQUEJA

EPA 3545 EPA 8015 MOD. (Extractable)

| Parameter  | Result | Qual | DIP-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date | TPH-Extractable<br>QC Batch |
|--|--------|------|-------|-----------------|-------|-----------|------------|---------------|-----------------------------|
| TPH as Diesel  | ND     |      | 1     | 2.5             | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005     | DS050830                    |
| 4.5ppm hydrocarbon (C8-C18). No Diesel pattern present |        |      |       |                 |       |           |            |               |                             |
| TPH as Motor Oil                                       | ND     |      | 1     | 10              | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005     | DS050830                    |
| TPH as Kerosene  | ND     |      | 1     | 2.5             | mg/Kg | 8/31/2005 | DS050830   | 8/31/2005     | DS050830                    |

Surrogate Surrogate Recovery Control Limits (%)  
o-Terphenyl 94.0 41 - 137

Analyzed by: JHsiang

Reviewed by: dba

EPA 8015 MOD. (Purgeable)

| Parameter       | Result | Qual | D/P-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date | TPH as Gasoline<br>QC Batch |
|-----------------|--------|------|-------|-----------------|-------|-----------|------------|---------------|-----------------------------|
| TPH as Gasoline | NE     |      | 1     | 2.5             | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831                  |

Surrogate Surrogate Recovery Control Limits (%)  
4-Bromofluorobenzene 97.1 65 - 135

Analyzed by: mruan

Reviewed by: MaiChiTu

EPA 8020

| Parameter            | Result | Qual | D/P-F | Detection Limit | Units | Prep Date | Prep Batch | Analysis Date | BTEX<br>QC Batch |
|----------------------|--------|------|-------|-----------------|-------|-----------|------------|---------------|------------------|
| Benzene              | NE     |      | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831       |
| Toluene              | 0.033  |      | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831       |
| Ethyl Benzene        | NE     |      | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831       |
| Xylenes, Total       | ND     |      | 1     | 0.025           | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831       |
| Methyl-t-butyl Ether | ND     |      | 1     | 0.25            | mg/Kg | 8/31/2005 | SGC4050831 | 9/1/2005      | SGC4050831       |

Surrogate Surrogate Recovery Control Limits (%)  
4-Bromofluorobenzene 97.7 65 - 135

Analyzed by: mruan

Reviewed by: MaiChiTu

Environmental Review Initial Study  
ATTACHMENT 17, 33 & 38  
APPLICATION 05-0252

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Detection Limit = Detection Limit for Reponing.

ND = Not Detected at or above the Detection Limit

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

Qual = Data Qualifier

9/2/2005 7:46:48 PM dba

# Intech Analytical Labs, Inc.

1334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Laboratory Control Sample / Duplicate - Solid - EPA 8015 MOD. (Extractable) - TPH-Extractable

QC/Prep Batch ID: DS050830

Reviewed by dba - 09101105

QC/Prep Date: 8/31/2005

## CS

| Parameter       | Method Blank | Spike Amt      | SpikeResult | Units | % Recovery | Recovery Limits |
|-----------------|--------------|----------------|-------------|-------|------------|-----------------|
| PH as Diesel    | <2.5         | 50             | 49.1        | mg/Kg | 98.2       | 45 - 138        |
| PH as Motor Oil | <10          | 50             | 38.3        | mg/Kg | 76.6       | 45 - 138        |
| Prorogate       | % Recovery   | Control Limits |             |       |            |                 |
| Terphenyl       | 102          | 41 - 137       |             |       |            |                 |

## CSD

| Parameter       | Method Blank | Spike Amt      | SpikeResult | Units | % Recovery | RPD | RPD Limits | Recovery Limits |
|-----------------|--------------|----------------|-------------|-------|------------|-----|------------|-----------------|
| PH as Diesel    | <2.5         | 50             | 42.4        | mg/Kg | 84.8       | 15  | 30.0       | 45 - 138        |
| PH as Motor Oil | <10          | 50             | 37.4        | mg/Kg | 74.8       | 2.4 | 30.0       | 45 - 138        |
| Prorogate       | % Recovery   | Control Limits |             |       |            |     |            |                 |
| Terphenyl       | 91.1         | 41 - 137       |             |       |            |     |            |                 |

Environmental Review Initial Study  
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APPLICATION 05-0250

# Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Matrix Spike / Matrix Spike Duplicate - Solid - EPA 8020 - BTEX

QC/Prep Batch ID: SGC4050831

Reviewed by: MaiChiTU - 09/02/05

QC/Prep Date: 8/31/2005

MS Sample Spiked: 45084-001

| Parameter      | Sample Result | Spike Amount | Spike Result | Units | Analysis Date | % Recovery | Recovery Limits |
|----------------|---------------|--------------|--------------|-------|---------------|------------|-----------------|
| Benzene        | ND            | 0.14         | 0.131        | mg/Kg | 8/31/2005     | 93.5       | 54 - 146        |
| Ethyl Benzene  | ND            | 0.18         | 0.148        | mg/Kg | 8/31/2005     | 82.2       | 67 - 134        |
| Toluene        | ND            | 0.82         | 0.731        | mg/Kg | 8/31/2005     | 89.1       | 45 - 157        |
| Xylenes, total | ND            | 0.98         | 0.810        | mg/Kg | 8/31/2005     | 82.7       | 79 - 126        |

|                      |            |                |
|----------------------|------------|----------------|
| Surrogate            | % Recovery | Control Limits |
| 4-Bromofluorobenzene | 115        | 65 - 135       |

MSD Sample Spiked: 45084-001

| Parameter      | Sample Result | Spike Amount | Spike Result | Units | Analysis Date | % Recovery | RPD  | RPD Limits | Recovery Limits |
|----------------|---------------|--------------|--------------|-------|---------------|------------|------|------------|-----------------|
| Benzene        | ND            | 0.14         | 0.136        | mg/Kg | 8/31/2005     | 97.1       | 3.7  | 30.0       | 54 - 146        |
| Ethyl Benzene  | ND            | 0.18         | 0.149        | mg/Kg | 8/31/2005     | 82.8       | 0.67 | 30.0       | 67 - 134        |
| Toluene        | ND            | 0.82         | 0.748        | mg/Kg | 8/31/2005     | 91.2       | 2.3  | 30.0       | 45 - 157        |
| Xylenes, total | ND            | 0.98         | 0.790        | mg/Kg | 8/31/2005     | 80.6       | 2.5  | 30.0       | 79 - 126        |

|                      |            |                |
|----------------------|------------|----------------|
| Surrogate            | % Recovery | Control Limits |
| 4-Bromofluorobenzene | 104        | 65 - 135       |

Environmental Review Initial Study

ATTACHMENT 17, 35 & 38  
APPLICATION MSD 252

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# Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 558-0201

Matrix Spike / Matrix Spike Duplicate - Solid - EPA 8020 - MTBE by EPA 8020

QC/Prep Batch ID: SGC4050831 Reviewed by: MaiChiTu - 09/02/05  
QC/Prep Date: 8/31/2005

**MS Sample Spiked: 45084-001**

| Parameter            |            | Sample Result  | Spike Amount | Spike Result | Units | Analysis Date | % Recovery | Recovery Limits |
|----------------------|------------|----------------|--------------|--------------|-------|---------------|------------|-----------------|
| Methyl-t-butyl Ether |            | ND             | 1.3          | 1.13         | mg/Kg | 8/31/2005     | 86.6       | 55 - 135        |
| Surrogate            | % Recovery | Control Limits |              |              |       |               |            |                 |
| Bromofluorobenzene   | 115        | 65 - 135       |              |              |       |               |            |                 |

**MSD Sample Spiked: 45084-001**

| Parameter            |            | Sample Result  | Spike Amount | Spike Result | Units | Analysis Date | % Recovery | RPD  | RPD Limits | Recovery Limits |
|----------------------|------------|----------------|--------------|--------------|-------|---------------|------------|------|------------|-----------------|
| Methyl-t-butyl Ether |            | ND             | 1.3          | 1.12         | mg/Kg | 8/31/2005     | 86.2       | 0.53 | 30.0       | 55 - 135        |
| Surrogate            | % Recovery | Control Limits |              |              |       |               |            |      |            |                 |
| Bromofluorobenzene   | 104        | 65 - 135       |              |              |       |               |            |      |            |                 |

Environmental Review Initial Study  
ATTACHMENT 17, 36 of 38  
APPLICATION 05-0252



# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 555-0200

Fax: (408) 588-0201

Laboratory Control Sample / Duplicate - Solid - EPA6010B - Metals

QC/Prep Batch ID: SM050831

Reviewed by: DQUEJA - 09/02/05

QC/Prep Date: 8/31/2005

## \_CS

| Parameter  | Method Blank | Spike Amt | SpikeResult | Units | % Recovery | Recovery Limits |
|------------|--------------|-----------|-------------|-------|------------|-----------------|
| Antimony   | <1.0         | 50        | 47.8        | mg/Kg | 95.5       | 75 - 125        |
| Arsenic    | <1.0         | 50        | 44.8        | mg/Kg | 89.7       | 75 - 125        |
| Barium     | <1.0         | 50        | 48.5        | mg/Kg | 57.0       | 75 - 125        |
| Beryllium  | <1.0         | 50        | 44.5        | mg/Kg | 39.0       | 75 - 125        |
| Cadmium    | <1.0         | 50        | 45.3        | mg/Kg | 90.5       | 75 - 125        |
| Chromium   | <1.0         | 50        | 48.0        | mg/Kg | 96.0       | 75 - 125        |
| Cobalt     | <1.0         | 50        | 48.0        | mg/Kg | 96.0       | 75 - 125        |
| Copper     | <1.0         | 50        | 43.2        | mg/Kg | 96.3       | 75 - 125        |
| Lead       | <1.0         | 50        | 46.6        | mg/Kg | 93.2       | 75 - 125        |
| Molybdenum | <1.0         | 50        | 48.8        | mg/Kg | 97.5       | 75 - 125        |
| Nickel     | <1.0         | 50        | 45.3        | mg/Kg | 91.7       | 75 - 125        |
| Selenium   | <2.0         | 50        | 37.6        | mg/Kg | 75.2       | 75 - 125        |
| Silver     | <1.0         | 50        | 49.3        | mg/Kg | 98.6       | 75 - 125        |
| Thallium   | <2.0         | 50        | 43.8        | mg/Kg | 87.5       | 75 - 125        |
| Titanium   | <1.0         | 50        | 43.6        | mg/Kg | 97.1       | 75 - 125        |
| Zinc       | <2.0         | 50        | 45.6        | mg/Kg | 91.3       | 75 - 125        |

## \_CSD

| Parameter  | Method Blank | Spike Amt | SpikeResult | Units | % Recovery | RPD  | RPD Limits | Recovery Limits |
|------------|--------------|-----------|-------------|-------|------------|------|------------|-----------------|
| Antimony   | <1.0         | 50        | 47.8        | mg/Kg | 95.5       | 0.0  | 25.0       | 75 - 125        |
| Arsenic    | <1.0         | 50        | 44.3        | mg/Kg | 38.6       | 1.3  | 25.0       | 75 - 125        |
| Barium     | <1.0         | 50        | 48.4        | mg/Kg | 96.9       | 0.12 | 25.0       | 75 - 125        |
| Beryllium  | <1.0         | 50        | 44.3        | mg/Kg | 68.7       | 0.36 | 25.0       | 75 - 125        |
| Cadmium    | <1.0         | 50        | 44.7        | mg/Kg | 89.5       | 1.2  | 25.0       | 75 - 125        |
| Chromium   | <1.0         | 50        | 47.2        | mg/Kg | 94.5       | 1.7  | 25.0       | 75 - 125        |
| Cobalt     | 11.0         | 50        | 47.2        | mg/Kg | 94.5       | 1.6  | 25.0       | 75 - 125        |
| Copper     | <1.0         | 50        | 47.0        | mg/Kg | 94.0       | 2.5  | 25.0       | 75 - 125        |
| Lead       | <1.0         | 50        | 45.9        | mg/Kg | 91.8       | 1.4  | 25.0       | 75 - 125        |
| Molybdenum | <1.0         | 50        | 48.6        | mg/Kg | 97.2       | 0.33 | 25.0       | 75 - 125        |
| Nickel     | <1.0         | 50        | 46.3        | mg/Kg | 92.5       | 0.89 | 25.0       | 75 - 125        |
| Selenium   | <2.0         | 50        | 33.6        | mg/Kg | 77.2       | 2.7  | 25.0       | 75 - 125        |
| Silver     | <1.0         | 50        | 43.7        | mg/Kg | 97.4       | 1.2  | 25.0       | 75 - 125        |
| Thallium   | <2.0         | 50        | 43.7        | mg/Kg | 87.4       | 0.16 | 25.0       | 75 - 125        |
| Titanium   | <1.0         | 50        | 47.6        | mg/Kg | 95.2       | 2.0  | 25.0       | 75 - 125        |
| Zinc       | <2.0         | 50        | 45.3        | mg/Kg | 90.6       | 0.73 | 25.0       | 75 - 125        |

Environmental Review Initial Study  
ATTACHMENT 17, 37 of 38  
APPLICATION 05-0252

277



W. J. Hayes & Associates  
Hydrogeology and Environmental Engineering  
120 Westgate Dr., Watsonville, CA 95076  
(831) 722-3580 (831) 662-3100  
Fax: (831) 722-1159

CHANCE OF JUSTIFY REWORK

OF

PROJECT NAME AND JOB #: 3801 Soquel / 25009

LABORATORY: Entech

SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jared Chaney

ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

Sampler: Jared Chaney

Date: 8/30/05

| Sample Identification | Sample Depth | Date Sampled | Time Sampled | Matrix | SAMPLE CONTAINERS      |                    |                     |                          | Total Petroleum Hydrocarbons |                                      |  |                                 | Requested Analysis |                      |                            |                     |
|-----------------------|--------------|--------------|--------------|--------|------------------------|--------------------|---------------------|--------------------------|------------------------------|--------------------------------------|--|---------------------------------|--------------------|----------------------|----------------------------|---------------------|
|                       |              |              |              |        | 40 mL VO/S (preserved) | 1 Liter Amber Jars | ____ mL Poly Bottle | ____ mL Acetate or Brass | TPH-Diesel                   | TEPH as Diesel Motor oil, A Kerosene | THCA, M, BTEX by EPA Method 8015M - 8020 | Fuel Oxygenates EPA Method 8260 | Volatiles Organics | EOD EPA Method 8015M | 1,2-DCA by EPA Method 8260 | Additional Analysis |
| DP-3-d25'             | 25'          | 8/29/2005    | AM           | S      |                        |                    |                     |                          |                              |                                      |  |                                 |                    |                      |                            |                     |
| DP-3-d31'             | 31'          |              |              |        |                        |                    |                     |                          |                              |                                      |  |                                 |                    |                      |                            |                     |
| DP-3-d36'             | 36'          |              |              |        |                        |                    |                     |                          |                              |                                      |  |                                 |                    |                      |                            |                     |
| DP-3-d40'             | 40'          |              |              |        |                        |                    |                     |                          |                              |                                      |  |                                 |                    |                      |                            |                     |
| DP-6-d26'             | 26'          |              | PM           |        |                        |                    |                     |                          |                              |                                      |  |                                 |                    |                      |                            |                     |
| DP-6-d31.5'           | 31.5'        |              |              |        |                        |                    |                     |                          |                              |                                      |  |                                 |                    |                      |                            |                     |
| DP-6-d35.5'           | 35.5'        |              |              |        |                        |                    |                     |                          |                              |                                      |  |                                 |                    |                      |                            |                     |
| DP-4-d15.5'           | 15.5'        | 8/30/2005    | AM           |        |                        |                    |                     |                          |                              |                                      |  |                                 |                    |                      |                            |                     |
| DP-4-d32'             | 32'          |              |              |        |                        |                    |                     |                          |                              |                                      |  |                                 |                    |                      |                            |                     |
| DP-6-d11'             | 11'          | 8/29/2005    | PM           |        |                        |                    |                     |                          |                              |                                      |  |                                 |                    |                      |                            |                     |
| DP-6-d21.5'           | 21.5'        |              |              |        |                        |                    |                     |                          |                              |                                      |  |                                 |                    |                      |                            |                     |
| DP-2-d15.5'           | 15.5'        | 8/30/2005    | AM           |        |                        |                    |                     |                          |                              |                                      |  |                                 |                    |                      |                            |                     |
| DP-2-d33.5'           | 33.5'        |              |              |        |                        |                    |                     |                          |                              |                                      |  |                                 |                    |                      |                            |                     |
| DP-3-d11'             | 11'          | 8/29/2005    | AM           |        |                        |                    |                     |                          |                              |                                      |  |                                 |                    |                      |                            |                     |
| DP-3-d21'             | 21'          |              |              |        |                        |                    |                     |                          |                              |                                      |  |                                 |                    |                      |                            |                     |

RELEASED BY:

Date & Time

RECEIVED BY:

SAMPLE CONDITION:

(Circle 1)

Refrigerated Frozen  
Refrigerated Frozen  
Refrigerated Frozen  
Refrigerated Frozen  
Refrigerated Frozen  
Refrigerated Frozen

NOTES:

If MTBE is detected by EPA Method 8260, please confirm detection by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.

For MTBE analyzed samples with non-detectable results, please use MDL (Minimum Detection Limit) for any data samples.

ADDITIONAL COMMENTS

- Please composite samples "DP-4-d15.5, -d32', DP-6-d11', -d21.5" as Landfill Comp #1  
- Please composite samples "DP-2-d15.5, -d33.5', DP-3-d11', -d21" as Landfill Comp #2



# County of Santa Cruz

## HEALTH SERVICES AGENCY

701 OCEAN STREET, ROOM 312, SANTA CRUZ, CA 95060-4073

(831) 454-2022 FAX: (831) 454-3123 TDD: (831) 454-4123

ENVIRONMENTAL HEALTH

Mr. Steve John  
Ocean Honda Chevrolet  
4400 Auto Plaza Drive  
Capitola, California 95010

December 15, 2002 *5 Pst Huber*

RE: 3801 Soquel Drive Property – Monitoring Well Closure & Remedial Excavation Report  
Submitting to this department by Weber, Hayes & Associates and dated November 28,  
2005.

Dear Mr. John:

This office has received and reviewed the above referenced report.

You may proceed with the complete closure of the two abandoned water supply wells at the site. Destruction of Wells should meet the requirements set forth in the Water Well Standards: State of California; Bulletin 74-81(1981) and Supplement (1991). Schedule over site with this department prior to field activities.

If you have questions or need additional assistance, please contact me at (831) 454-2556

Sincerely,

Rolando Charles  
E.H.SII

cc: Tom Sayles, RWQCB  
Jared Chaney, Weber, Hayes & Assoc.

Environmental Review Initial Study  
ATTACHMENT 18  
APPLICATION 050252

**Donald Ballanti**  
***Certified Consulting Meteorologist***

---

1424 Scott Street  
El Cerrito, CA 94530  
(510) 234-6087  
Fax: (510) 232-7752

**February 16, 2006**

John Swift  
Hamilton Swift  
1509 Seabright Avenue, Suite A-1  
Santa Cruz, CA. 95062

Subject: Air Quality Impact Analysis for the Ocean Honda & Store More America Project

Dear Mr. Swift

I am pleased to submit this preliminary analysis of air quality impacts for the subject project. The project is within the Monterey Bay Unified Air Pollution Control District. The District has established specific thresholds of significance for use in CEQA documents.

For operational direct and indirect emissions, the following thresholds are recommended:

|                                    |                                    |
|------------------------------------|------------------------------------|
| Volatile Organic Compounds (VOC)   | 137 pounds/day (direct + indirect) |
| Nitrogen Oxides (NO <sub>x</sub> ) | 137 pounds/day (direct + indirect) |
| PM <sub>10</sub>                   | 82 pounds/day (direct only)        |
| Carbon Monoxide (CO)               | 550 pounds/day (direct only)       |
| Sulfur Oxides (SO <sub>x</sub> )   | 150 pounds/day (direct only)       |

Direct emissions refer to pollutants onsite from equipment or stationary engines. These types of sources typically **are** found at industrial or manufacturing facilities. The proposed project would **be** primarily a **source** of indirect, rather than direct emissions.

**Regional changes** in emissions due to vehicular travel from the proposed project were estimated using the URBEMIS-2002 (Version 8.7) computer program and traffic inputs

**Air Pollution Meteorology   Dispersion Modeling   Climatological Analysis**

Environmental Review Initial Study

ATTACHMENT 19, 1 of 6  
APPLICATION 050250

John Swift  
February 16, 2006  
**Page 2**

from the project traffic engineer. The resulting emissions are shown in attached Table 1 and are compared to the MBUAPCD significance thresholds. Emissions are shown separately for the auto dealership, the self storage facility and associated office, and both uses combined.

Total project emissions shown in attached Table 1 are well below the MBUAPCD thresholds of significance for all pollutants. Total project emissions shown in attached Table 1 are well below the MBUAPCD thresholds of significance for all pollutant should point out that comparing total project emissions to the thresholds of significance makes the assumption that all trips to the project represent new vehicle trips within the region. This is a ~~worst-case~~ assumption. In fact, the auto dealership is being relocated from a site roughly 1 mile away so the auto dealership trips could be considered as existing trips that are simply being re-directed to this site and would not represent new vehicle trips in the region. Whether or not the automobile dealership trips are considered as new trips, the impact of the project would be a small fraction of MBUAPCD thresholds of significance.

I hope you find this analysis useful. I have attached a copy of the URBEMIS-2002 output. Please call if you have any questions.

Sincerely,

Donald Ballanti  
Certified Consulting Meteorologist

Environmental Review Initial Study  
ATTACHMENT 19, 20 &  
APPLICATION 05-0252

**Table 1: Project Regional Emissions in Pounds Per Day**

|  | <b>ROG</b>   | <b>NO<sub>x</sub></b> | <b>CO</b> | <b>SO<sub>2</sub></b> | <b>PM<sub>10</sub></b> |
|--|--------------|-----------------------|-----------|-----------------------|------------------------|
| <b>Auto Dealership</b>                       | 5.15         | 5.31                  | 51.05     | 0.05                  | 4.32                   |
| <b>Self Storage/Office</b>                   | 5.09         | 3.31                  | 27.45     | 0.02                  | 2.18                   |
| <b>Total</b>                                 | <b>10.24</b> | <b>8.62</b>           | 78.50     | 0.07                  | 6.50                   |
| <b>MBUAPCD Threshold<br/>of Significance</b> | <b>137.0</b> | 137.0                 | 550.0     | 150.0                 | 82.0                   |

Environmental Review Initial Study  
 ATTACHMENT 19, 3 of 6  
 APPLICATION 05-0252

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version  
8.7\Projects2k2\oceanhonda.urb  
Project Name: Ocean Honda/Store More America  
Project Location: North central coast (Monterey area)  
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT  
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

|                              | ROG  | NOX  | CO   | SO2  | PM10 |
|------------------------------|------|------|------|------|------|
| TOTALS (lbs/day,unmitigated) | 2.43 | 1.21 | 3.34 | 0.00 | 0.01 |

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

|                              | ROG  | NOx  | CO    | SO2  | PM10 |
|------------------------------|------|------|-------|------|------|
| TOTALS (lbs/day,unmitigated) | 7.81 | 7.11 | 75.15 | 0.07 | 6.49 |

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

|                              | ROG   | NOX  | CO    | SO2  | PM10 |
|------------------------------|-------|------|-------|------|------|
| TOTALS (lbs/day,unmitigated) | 10.23 | 8.62 | 78.50 | 0.07 | 6.50 |

Environmental Review Initial Study  
ATTACHMENT 19. 4 of 6  
APPLICATION 05-0252

Page: 1  
02/16/2006 2:44 PM

URBEMIS a002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version  
8.7\Projects2k2\oceanhonda.urb  
Project Name: ocean Honda/Store More America  
Project location: North Central Coast (Monterey area)  
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT  
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

|                             | ROC  | NOX  | CO   | SO2  | PM10 |
|-----------------------------|------|------|------|------|------|
| TOTALS (lbs/day, mitigated) | 2.43 | 1.21 | 3.34 | 0.00 | 0.01 |

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

|                               | ROC  | NOx  | CO    | SO2  | PM10 |
|-------------------------------|------|------|-------|------|------|
| TOTALS (lbs/day, unmitigated) | 7.81 | 7.41 | 75.15 | 0.07 | 6.49 |

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

|                               | ROC   | NOx  | CO    | SO2  | PM10 |
|-------------------------------|-------|------|-------|------|------|
| TOTALS (lbs/day, unmitigated) | 10.24 | 8.62 | 78.50 | 0.07 | 6.50 |

Environmental Review Initial Study  
ATTACHMENT 19-4 of 6  
APPLICATION 05-0252



Page: a

02/16/1006 2:44 PM

URBEMIS 2002 For Windows a.7.0

File Name: C:\Program Files\URBEMIS 2002 Version  
8.7\Projects\2k2\oceanhonda.urb  
Project Name: ocean Honda/Store More America  
Project Location: North Central Coast (Monterey area)  
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REWRT  
(Pounds/Day - Summer)

| AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated) |      |      |      |      |      |
|---|------|------|------|------|------|
| Source  | ROG  | NOx  | CO   | SO2  | PM10 |
| Natural Gas   | 0.09 | 1.19 | 1.00 | 0    | 0.00 |
| Hearth - No summer emissions  |      |      |      |      |      |
| Landscaping   | 0.37 | 0.01 | 2.34 | 0.00 | 0.01 |
| Consumer Products   | 0.00 |      |      |      | -    |
| Architectural coatings  | 1.97 |      |      |      |      |
| TOTALS (lbs/day, unmitigated)                                       | 2.43 | 1.21 | 3.34 | 0.00 | 0.01 |

Environmental Review Initial Study  
ATTACHMENT 19, 5 of 6  
APPLICATION 05-0252

UNMITIGATED OPERATIONAL EMISSIONS

|                                  | ROG         | NOx         | CO           | SO2         | PM10        |
|----------------------------------|-------------|-------------|--------------|-------------|-------------|
| Auto Dealership                  | 4.45        | 4.93        | 49.96        | 0.05        | 4.92        |
| Office building                  | 0.22        | 0.25        | 2.62         | 0.00        | 0.13        |
| Self storage                     | 3.14        | 2.23        | 22.58        | 0.02        | 1.95        |
| <b>TOTAL EMISSIONS (lbs/day)</b> | <b>7.81</b> | <b>7.41</b> | <b>75.15</b> | <b>0.07</b> | <b>6.49</b> |

Does not include correction for passby trips.  
Does not include double counting adjustment for internal trips

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2006 Temperature (F): 85 season: summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

| unit Type                    | Acreage | Trip Rate                | No. Units | Total Trips |
|------------------------------|---------|--------------------------|-----------|-------------|
| Auto Dealership              |         | 14.22 trips/1000 sq. ft. | 38.80     | 551.74      |
| Office building              |         | 11.01 trips/1000 sq. ft. | 1.85      | 20.37       |
| Self Storage                 |         | 2.50 trips/1000 sq. ft.  | 99.74     | 249.34      |
| Sum of Total Trips           |         |                          |           | 821.44      |
| Total vehicle Miles Traveled |         |                          |           | 4,264.63    |

Vehicle Assumptions:

Fleet mix:

| vehicle Type              | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---------------------------|--------------|--------------|----------|--------|
| Light Auto                | 56.60        | 2.20         | 97.50    | 0.50   |
| Light Truck < 3,750 lbo   | 15.10        | 4.00         | 93.40    | 2.60   |
| Light Truck 3,751- 5,750  | 15.90        | 1.90         | 96.90    | 1.20   |
| Med Truck 5,751- 8,500    | 7.00         | 1.40         | 95.70    | 2.90   |
| Lite-Heavy 8,501-10,000   | 1.10         | 0.00         | 81.80    | 18.20  |
| Lite-Heavy 10,001-14,000  | 0.30         | 0.00         | 66.70    | 33.30  |
| Med-Heavy 14,001-33,000   | 1.00         | 10.00        | 20.00    | 70.00  |
| Heavy-Heavy 33,001-60,000 | 0.90         | 0.00         | 11.10    | 88.90  |
| Line Pull > 60,000 lba    | 0.00         | 0.00         | 0.00     | 100.00 |
| urban Bus                 | 0.10         | 0.00         | 0.00     | 100.00 |
| Motorcycle                | 1.70         | 82.40        | 17.60    | 0.00   |
| School Bus                | 0.10         | 0.00         | 0.00     | 100.00 |
| Motor Home                | 1.20         | 0.00         | 91.10    | 8.30   |

Travel Conditions

|                                      | Home-Work | Residential Home-Shop | Home-Other | Commute | Non-Work | Customer |
|--------------------------------------|-----------|-----------------------|------------|---------|----------|----------|
| Urban Trip Length (miles)            | 11.8      | 4.6                   | 6.1        | 11.8    | 5.0      | 5.0      |
| Rural Trip Length (miles)            | 15.0      | 10.0                  | 10.0       | 15.0    | 10.0     | 10.0     |
| Trip Speeds (mph)                    | 30.0      | 30.0                  | 30.0       | 30.0    | 30.0     | 30.0     |
| % of Trips - Residential             | 27.3      | 21.2                  | 51.5       |         |          |          |
| ● of Trip - Commercial (by land use) |           |                       |            |         |          |          |
| Auto Dealership                      |           |                       |            | 2.0     | 1.0      | 97.0     |
| Office building                      |           |                       |            | 35.0    | 17.5     | 47.5     |
| Self Storage                         |           |                       |            | 8.0     | 1.0      | 97.0     |

Environmental Review Initial Study  
ATTACHMENT 19, 6 of 6  
APPLICATION 05-0258

**Donald Ballanti**

*Certified Consulting Meteorologist*

---

1424 Scott Street  
El Cerrito, CA 94530  
(510) 234-6087  
Fax: (510) 232-7752

March 23, 2006

John Swift  
Hamilton Swift  
1509 Seabright Avenue, Suite A-I  
Santa Cruz, CA. 95062

Subject: Air Quality Impact Analysis for the Ocean Honda & Store More America Project

Dear Mr. Swift:

I am pleased to submit this updated analysis of air quality impacts for the subject project. You had asked that the URBEMIS-2002 model run include construction emissions. The attached URBEMIS-2002 output provides estimates of construction emissions based on the information provided. Construction emissions were based on an 8-month construction period. The size of the site was estimated at 6.1 acres. Construction dust emissions were based on the estimate of 15,730 cubic yards of cut/fill that you provided and a 1 month period of grading. For all phases of construction, the URBEMIS-2002 defaults for equipment were used.

The MBUAPCD construction threshold is 82 pounds per day for PM10. While the maximum URBEMIS-2002 construction PM10 emissions exceed this amount (90.92 pounds/day), this is for uncontrolled emissions (no dust control assumed). With standard dust controls (twice daily watering) dust emissions would be reduced by roughly 50%, reducing total emissions of PM10 to 48.64 pounds per day, well below the threshold.

I hope you find this information useful. I have attached a copy of the URBEMIS-2002 output. Please call if you have any questions.

Sincerely,

Donald Ballanti  
Certified Consulting Meteorologist

Environmental Review Initial Study  
ATTACHMENT 20, 1, 18  
APPLICATION - 52

Air Pollution Meteorology   Dispersion Modeling   Climatological Analysis

03/23/2006 9:20 AM

## URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\oceanhonda.urb  
 Project Name: Ocean Honda/Store More America  
 Project Location: North Central Coast (Monterey areal  
 On-Road Motor vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT  
 (Pounds/Day - summer:

## CONSTRUCTION EMISSION ESTIMATES

|                              | ROG   | NOx    | CO     | SO2  | PM10<br>TOTAL | PM10<br>EXHAUST | PM10<br>DUST |
|------------------------------|-------|--------|--------|------|---------------|-----------------|--------------|
| *** 2006 ***                 |       |        |        |      |               |                 |              |
| TOTALS (lbs/day,unmitigated) | 19.17 | 141.32 | 156.86 | 0.01 | 50.92         | 6.37            | 84.55        |

|                              | ROG    | NOx    | CO     | SO2  | PM10<br>TOTAL | PM10<br>EXHAUST | PM10<br>DUST |
|------------------------------|--------|--------|--------|------|---------------|-----------------|--------------|
| * 2007 ***                   |        |        |        |      |               |                 |              |
| TOTALS (lbs/day,unmitigated) | 361.39 | 161.74 | 200.37 | 0.01 | 6.85          | 6.72            | 3.13         |

## AREA SOURCE EMISSION ESTIMATES

|                              | ROG  | NOx  | CO   | SO2  | PM10 |
|------------------------------|------|------|------|------|------|
| TOTALS (lbs/day,unmitigated) | 2.43 | 1.21 | 3.34 | 0.00 | 0.01 |

## OPERATIONAL (VEHICLE) EMISSION ESTIMATES

|                              | ROG  | NOx  | CO    | SO2  | PM10 |
|------------------------------|------|------|-------|------|------|
| TOTALS (lbs/day,unmitigated) | 7.81 | 7.41 | 75.15 | 0.07 | 6.43 |

## SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

|                              | ROG   | NOx  | CO    | SO2  | PM10 |
|------------------------------|-------|------|-------|------|------|
| TOTALS (lbs/day,unmitigated) | 10.23 | 8.62 | 70.50 | 0.07 | 6.50 |

Environmental Review Initial Study  
 ATTACHMENT 20, 2008  
 APPLICATION 05-0252

03/23/2005 9:20 AM

## URBEMIS 2002 For Windows 6.7.0

File Name: C:\Program Files\URBEMIS 2002 Version  
 8.7\Projects2k2\oceanhonda.urb  
 Project Name: Ocean Honda/Store More America  
 Project Location: North Central Coast (Monterey area)  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
 (Pounds/Day - Summer)

Construction Start Month and Year: June, 2006  
 Construction Duration: 8  
 Total Land Use Area to be Developed: 6.1 acres  
 Maximum Acreage Disturbed Per Day: 1.5 acres  
 Single Family Units: 0 Multi-Family Units: 0  
 Retail/Office/Institutional/Industrial Square Footage: 140365

## CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

| source                           | ROG   | NOx    | CO     | SO2  | PM10<br>TOTAL | PM10<br>EXHAUST | PM10<br>DUST |
|----------------------------------|-------|--------|--------|------|---------------|-----------------|--------------|
| *** 2006***                      |       |        |        |      |               |                 |              |
| Phase 1 - Demolition Emissions   |       |        |        |      |               |                 |              |
| Fugitive Dust                    |       |        |        |      | 0.00          |                 | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00   | 0.00   |      | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 3.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 2 - Site Grading Emissions |       |        |        |      |               |                 |              |
| Fugitive Dust                    |       |        |        |      | 84.54         |                 | 84.54        |
| Off-Road Diesel                  | 12.92 | 103.36 | 91.93  |      | 4.76          | 4.78            | 0.30         |
| On-Road Diesel                   | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.11  | 0.17   | 2.97   | 0.00 | 0.02          | 0.01            | 0.01         |
| Maximum lbs/day                  | 13.03 | 103.53 | 94.96  | 0.30 | 89.34         | 4.79            | 84.55        |
| Phase 3 - Building Construction  |       |        |        |      |               |                 |              |
| Bldg Const Off-Road Diesel       | 18.06 | 139.92 | 131.82 |      | 6.33          | 6.33            | 0.00         |
| Bldg Const Worker Trips          | 1.11  | 1.40   | 25.04  | 0.01 | 0.10          | 0.04            | 0.06         |
| Arch Coatings Off-Gas            | 0.00  |        |        |      |               |                 |              |
| Arch Coatings Worker Trips       | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Off-Gas                  | 0.00  |        |        |      |               |                 |              |
| Asphalt Off-Road Diesel          | 0.00  | 0.00   | 0.00   |      | 0.00          | 0.00            | 0.00         |
| Asphalt On-Road Diesel           | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Worker Trips             | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 13.17 | 141.32 | 156.86 | 0.01 | 6.43          | 6.37            | 0.06         |
| Max lbs/day all phases           | 19.17 | 141.32 | 156.86 | 0.01 | 90.92         | 6.37            | 84.55        |

## \*\*\* 2007\*\*\*

## Phase 1 - Demolition Emissions

|                 |      |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|------|
| Fugitive Dust   |      |      |      |      | 0.00 |      | 0.00 |
| Off-Road Diesel | 0.00 | 0.00 | 0.00 |      | 0.00 | 0.00 | 0.00 |
| On-Road Diesel  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Worker Trips    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## Phase 2 - Site Grading Emissions

|                 |      |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|------|
| Fugitive Dust   |      |      |      |      | 0.00 |      | 0.00 |
| Off-Road Diesel | 0.00 | 0.00 | 0.00 |      | 0.00 | 0.00 | 0.00 |
| On-Road Diesel  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Worker Trips    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.30 | 0.00 |
| Maximum lbs/day | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Environmental Review Initial Study  
 ATTACHMENT 20, 2052  
 APPLICATION 05

Phase 3 - Building Construction

|                            |        |        |        |      |      |      |      |
|----------------------------|--------|--------|--------|------|------|------|------|
| Bldg Const Off-Road Diesel | 10.06  | 133.78 | 136.21 |      | 5.73 | 5.79 | 0.00 |
| Bldg Const Worker Trips    | 1.00   | 1.39   | 24.76  | 0.01 | 0.10 | 0.04 | 0.06 |
| Arch Coatings Off-Gas      | 337.29 |        |        |      |      |      |      |
| Arch Coatings Worker Trips | 0.33   | 0.20   | 4.30   | 0.00 | 0.06 | 0.00 | 0.06 |
| Asphalt Off-Gas            | 0.48   |        |        |      |      |      |      |
| Asphalt 3ff-Road Diesel    | 4.00   | 24.09  | 33.99  |      | 0.03 | 0.03 | 0.00 |
| Asphalt On-Road Diesel     | 0.13   | 2.27   | 0.49   | 0.00 | 0.06 | 0.06 | 0.00 |
| Asphalt Worker Trips       | 0.02   | 0.01   | 0.31   | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day            | 361.39 | 161.74 | 200.37 | 0.01 | 6.65 | 6.72 | 0.13 |
| Max lbs/day all phases     | 361.39 | 161.74 | 200.97 | 0.01 | 6.65 | 6.72 | 0.13 |

Environmental Review Initial Study  
 ATTACHMENT 20, 4 of 8  
 APPLICATION 05-0252

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions

Start Month/Year for Phase 2: Jun '06

Phase 2 Duration: 0.9 months

On-Road Truck Travel (VMT): 0

Off-Road Equipment

| No. | Type                     | Horsepower | Load Factor | Hours/Day |
|-----|--------------------------|------------|-------------|-----------|
| 3   | Rubber Tired Dozers      | 352        | 0.590       | 8.0       |
| 3   | Tractor/Loaders/Backhoes | 79         | 0.465       | 8.0       |

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Jun '06

Phase 3 Duration: 7.1 months

Start Month/Year for SubPhase Building: Jun '06

SubPhase Building Duration: 7.1 months

Off-Road Equipment

| No. | Type                     | horsepower | Load Factor | Hours/Day |
|-----|--------------------------|------------|-------------|-----------|
| 3   | Concrete/Industrial saws | 84         | 0.730       | 8.0       |
| 6   | Other Equipment          | 190        | 0.620       | 8.0       |
| 3   | Rough Terrain Forklifts  | 94         | 0.475       | 8.0       |

Start Month/Year for SubPhase Architectural Coatings: Jan '07

SubPhase Architectural Coatings Duration: 0.7 months

Start Month/Year for SubPhase Asphalt: Jan '07

SubPhase Asphalt Duration: 0.4 months

Acres to be Paved: 1.6

Off-Road Equipment

| No. | Type    | horsepower | Load Factor | Hours/Day |
|-----|---------|------------|-------------|-----------|
| 1   | Graders | 174        | 0.575       | 8.0       |
| 1   | Pavers  | 132        | 0.590       | 8.0       |
| 1   | Rollers | 114        | 0.430       | 8.0       |

Environmental Review Initial Study  
ATTACHMENT 20, 5 of 8  
APPLICATION 05-0252

| AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated) |      |      |      |      |      |
|---|------|------|------|------|------|
| source  | ROG  | NOx  | CO   | SO2  | PM10 |
| Natural Gas   | 0.09 | 1.19 | 1.00 | 0    | 0.00 |
| Hearth - No summer emissions  |      |      |      |      |      |
| Landscaping   | 0.37 | 0.01 | 2.34 | 0.00 | 0.01 |
| Consumer Products   | 0.00 |      |      |      |      |
| Architectural Coatings  | 1.97 |      |      |      |      |
| TOTALS (lbs/day, unmitigated)                                       | 2.43 | 1.21 | 3.54 | 0.00 | 0.01 |

Environmental Review Initial Study  
ATTACHMENT 20, 6 of 8  
APPLICATION 05-0252



# UNMITIGATED OPERATIONAL EMISSIONS

|                           | ROG  | NOx  | CO    | SO2  | PM10 |
|---------------------------|------|------|-------|------|------|
| Auto Dealership           | 4.45 | 4.93 | 49.36 | 0.05 | 4.32 |
| Office building           | 0.22 | 0.25 | 2.62  | 0.00 | 0.23 |
| Self storage              | 3.14 | 2.23 | 22.53 | 0.32 | 1.95 |
| TOTAL EMISSIONS (lbs/day) | 7.81 | 7.41 | 75.15 | 0.07 | 6.49 |

Does not include correction for passby trips.

Does not include double counting adjustment for internal trips.

## OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

## Summary of Land Uses:

| Unit Type                    | Acreage | Trip Raie                | No.<br>Units | Total<br>Trips |
|------------------------------|---------|--------------------------|--------------|----------------|
| Auto Dealership              |         | 14.22 trips/1000 sq. ft. | 38.80        | 551.74         |
| Office building              |         | 11.01 trips/1000 sq. ft. | 1.85         | 20.37          |
| Self Storage                 |         | 2.50 trips/1000 sq. ft.  | 951.74       | 249.34         |
| Sum of Total Trips           |         |                          |              | 821.44         |
| Total vehicle Miles Traveled |         |                          |              | 4,264.63       |

## vehicle Assumptions:

## Fleet Mix:

| Vehicle Type              | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---------------------------|--------------|--------------|----------|--------|
| Light Auto                | 55.60        | 2.20         | 97.30    | 0.50   |
| Light Truck < 3,750 lbs   | 15.10        | 4.00         | 93.40    | 2.60   |
| Light Truck 3,751- 5,750  | 15.90        | 1.90         | 96.90    | 1.20   |
| Med Truck 5,751- 8,500    | 7.00         | 1.40         | 95.70    | 2.90   |
| Lite-Heavy 8,501-10,000   | 1.10         | 0.00         | 81.80    | 18.23  |
| Lite-Heavy 10,001-14,000  | 0.30         | 0.00         | 66.70    | 33.30  |
| Med-Heavy 14,001-33,000   | 1.00         | 10.00        | 20.30    | 70.00  |
| Heavy-Heavy 33,001-60,000 | 0.90         | 0.00         | 11.10    | 88.90  |
| Line Haul > 60,000 lbs    | 0.00         | 0.00         | 0.00     | 100.00 |
| Urban Bus                 | 0.10         | 0.00         | 0.00     | 100.00 |
| Motorcycle                | 1.70         | 82.40        | 17.60    | 0.00   |
| School BUS                | 0.10         | 0.00         | 0.00     | 100.00 |
| Motor Home                | 1.20         | 0.03         | 91.70    | 8.30   |

## Travel Conditions

|                           | Residential   |               |                | Commercial |          |          |
|---------------------------|---------------|---------------|----------------|------------|----------|----------|
|                           | Home-<br>Work | Home-<br>Shop | Home-<br>Other | Commute    | Non-Work | Customer |
| Urban Trip Length (miles) | 11.8          | 4.6           | 6.1            | 11.8       | 5.0      | 5.0      |
| Rural Trip Length (miles) | 15.0          | 10.0          | 10.0           | 15.0       | 10.0     | 10.0     |
| Trip Speeds (mph)         | 30.0          | 30.0          | 30.0           | 30.0       | 30.0     | 30.0     |
| % of Trips - Residential  | 27.3          | 21.2          | 51.5           |            |          |          |

## % of Trips - Commercial (by land use)

|                 |      |      |      |
|-----------------|------|------|------|
| Auto Dealership | 2.0  | 1.0  | 97.0 |
| Office building | 35.0 | 17.5 | 47.5 |
| Self Storage    | 2.0  | 1.0  | 97.0 |

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Site Grading Fugitive Dust Option changed from Level 1 to Level 2

Changes made to the default values for Area

The tomes **per** acre changed from 2.6 to 3.0

Changes made to the default values for Operations

The operational emission year chanced from 2005 to 2006.  
The operational winter temperature changed from 50 to 40.  
The operational winter selection item changed from 3 to 2.  
The operational **summer** temperature changed from 75 to 85.  
The operational summer selection iter changed from 6 to 7.  
The home based work selection item changed from 6 to 7.  
The home based work trip percentage changed from 21.6 to 27.3.  
The home based work urban trip length chanced from 9.98 to 11.8.  
The home based **work** rural trip length changed from 9.98 to 15.  
The home based shopping trip speed changed from 20 to 30.  
The home **based** shopping selection item changed from 4 to 7.  
The home based shopping trip percentage changed from 27.4 to 21.2.  
The home based shopping urban trip length changed from 4.96 to 4.6.  
The home based shopping rural trip length changed from 4.96 to 10.  
The tome **based** other trip **speed** changed from 25 to 30.  
The home based other selection item changed from 5 to 7.  
The home based other trip percentage changed from 55.3 to 51.5.  
The name based other urban trip length changed from 6.49 to 6.1.  
The hone based other rural trip length changed from 6.49 to 10.  
The commercial **based** commute selection item changed from 6 to 7.  
The commercial based commute urban trip length changed from 9.64 to 11.8.  
The commercial based commute rural trip length changed from 9.64 to 15.  
The commercial **based** non-work selection item changed from 6 to 7.  
The commercial **based** *nor-work* urban trip length changed from 9.64 to 5.0.  
The commercial based non-work rural trip length changed from 9.64 to 10.  
The commercial based customer selection item changed from 6 to 7.  
The commercial based **customer** urban trip length changed from 9.64 to 5.0.  
The commercial based customer rural trip length changed from 9.64 to 10.

Environmental Review Initial Study  
ATTACHMENT 20, 8 of 8  
APPLICATION 05-0252



## MONTEREY BAY

Unified Air Pollution Control District  
serving Monterey, San Benito, and Santa Cruz counties

AIR POLLUTION CONTROL OFFICER  
Douglas Quetin

24580 Silver Cloud Court • Monterey, California 93940 • 831/647-9411 • FAX 831/647-8501

### DISTRICT BOARD MEMBERS

CHAIR:  
Lou Calicagno  
Monterey County

VICE CHAIR:  
Tony Campos  
Santa Cruz  
County

Anna Caballero  
Salinas

Butch Lindsey  
Monterey County

Ed Mettee  
McCutcheon  
Marina

Rob Monaco  
San Benito  
County

John Myers  
King City

Dennis Norton  
Capitola

Ellen Pifer  
Santa Cruz  
County

Jerry Smith  
Monterey County

March 28, 2006

Ms. Cathleen Cur, Project Planner  
Santa Cruz County Planning Dept.  
710 Ocean Avenue  
4<sup>th</sup> Floor  
Santa Cruz, CA 95060

SUBJECT: OCEAN HONDA AND STORE MORE AMERICA SELF-STORAGE

Dear Ms. Carr:

Mitigation Measures for Dust Control during Construction Page 22 of Initial Study

The District suggests the following mitigation measures to complement those listed in the Initial Study:

### Fugitive Dust – Mitigation Measures

- Limit grading to 8.1 acres per day, and grading and excavation to 2.2 acres per day.
- Water graded / excavated areas at least twice daily. Frequency should be based on the type of operations, soil and wind exposure.
- Prohibit all grading activities during periods of high wind (over 15 mph)
- Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days)
- Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations, and hydro-seed area.
- \*Haul trucks shall maintain at least 2'0" of freeboard.
- \*Cover all trucks hauling dirt, sand, or loose materials.
- Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land.
- Plant vegetative ground cover in disturbed areas as soon as possible.
- Cover inactive storage piles.
- Install wheel washers at the entrance to construction sites for all exiting trucks.
- \*Pave all roads at construction sites.

Environmental Review Initial Study  
ATTACHMENT 21, 1 of 5  
APPLICATION 05-0252

Permit for Earthwork. Page 23 of Initial Study.

A permit is not required from the Air District for earthwork. A grading permit from the County would be required, and the District suggests that the mitigation measures listed in this letter be incorporated into the conditions of the grading permit.

Thank you for sending the document for our review.

Yours truly,



Jean Getchell  
Supervising Planner  
Planning and Air Monitoring Division

Environmental Review Initial Study  
ATTACHMENT 21, 2 of 5  
APPLICATION 05-0252

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER Governor

## DEPARTMENT OF TRANSPORTATION

50 HIGUERA STREET  
 SAN LUIS OBISPO, CA 93401-5415  
 PHONE (805) 549-3101  
 FAX (805) 549-3329  
 TDD (805) 549-3259  
<http://www.dot.ca.gov/dist05/>



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|                   |              |         |              |            |   |
|-------------------|--------------|---------|--------------|------------|---|
| Post-it® Fax Note | 7671         | Date    | 4/4/06       | # of pages | 2 |
| To                | Paia Levine  | From    | J. Calate    |            |   |
| Co./Dept.         | SCR Planning | Co.     | Caltrans/D5  |            |   |
| Phone #           | 831 454 3178 | Phone # | 805 549 3099 |            |   |
| Fax #             | 831 454 2131 | Fax #   | 805 549 3077 |            |   |

April 4, 2006

SCr-1-13.6

SCH# 2006032035

Ms. Paia Levine  
 Environmental Coordinator  
 County of Santa Cruz  
 Planning Department  
 701 Ocean Street, 4<sup>th</sup> Floor  
 Santa Cruz, CA 95060

Dear Ms. Lavine:

#### COMMENTS ON THE NEGATIVE DECLARATION FOR THE OCEAN HONDA AND STORE MORE STORAGE PROJECT

The California Department of Transportation (Department), District 5, Development Review, has reviewed the above referenced project. The following comments are intended to assist you.

1. The Department supports local development that is consistent with State planning priorities intended to promote equity, strengthen the economy, protect the environment, and promote public health and safety. We accomplish this by working with local jurisdictions to achieve a shared vision of how the transportation system should and can accommodate interregional and local travel and development.
2. The traffic study states that this project's impact is "less than significant" because it does not increase traffic capacity by more *than* one percent. This concept is referred to as a "ratio theory" and is not supported by the Department. California Environmental Quality Act court cases validate our position:

*Kings County Farm Bureau v. City of Hanford (5<sup>th</sup> District 1550); Los Angeles Unified School District v. City of Los Angeles (2<sup>nd</sup> District 1597); Communities For A Better Environment v. California Resources Agency (3<sup>rd</sup> District 2002).* These court rulings invalidated the use of a "ratio theory" or "comparative approach" criterion because they improperly measure a proposed project's incremental impact relative to the existing cumulative effect rather than focus on the combined effects of both the project and other relevant past, present, and future projects.

3. The traffic study does not provide an analysis of mainline highway operations, which currently operates at Level of Service (LOS) F. When a State highway facility is operating at an unacceptable LOS, any additional trips are considered significant and must be mitigated accordingly.

"Caltrans improves mobility across California"

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Environmental Review Initial Study

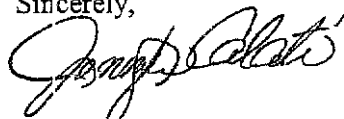
ATTACHMENT 20, 3085  
 APPLICATION 05-0252

Ms. Levine  
April 4, 2006  
Page 2

4. Although the initial study indicates the need to pay traffic improvement fees due to increased traffic volumes, it is unclear how these fees will be collected without an established mechanism in place to collect such fees. It is our concern that without an established fee program, the county will again be allowing growth and its' impact without mitigation.

Thank you for your consideration and action upon these issues. If you have any questions or concerns, or need further clarification on the items discussed above, please do not hesitate to call me at (805) 549-3099 or e-mail [jennifer.calate@dot.ca.gov](mailto:jennifer.calate@dot.ca.gov).

Sincerely,



JENNIFER CALATÉ  
Associate Transportation Planner  
District 5 Development Review Coordinator

c: David Murray  
File copy (2)

Environmental Review Initial Study  
ATTACHMENT 20, 4 of 5  
APPLICATION 05-0252



ASSOCIATION OF MONTEREY BAY AREA GOVERNMENTS

---

April 4, 2006

Ms. Paia Levine  
County of Santa Cruz Planning Dept.  
701 Ocean Street, 4<sup>th</sup> Floor  
Santa Cruz, CA 95060

**Re: MCH# 20060302 –Negative Declaration for Ocean Honda and Storemore Storage**

Dear Ms. Levine:

AMBAG's Regional Clearinghouse circulated a summary of notice of your environmental document to our member agencies and interested parties for review and comment.

The AMBAG Board of Directors considered the project on **April 1, 2006** and has no comments at this time.

Thank you for complying with the Clearinghouse process.

Sincerely,

A handwritten signature in black ink, appearing to read "Nicolas Papadakis", is written over a horizontal line.

Nicolas Papadakis  
Executive Director

Environmental Review Initial Study  
ATTACHMENT 20, 5 of 5  
APPLICATION 05-0252

BEFORE THE PLANNING COMMISSION  
OF THE COUNTY OF SANTA CRUZ, STATE OF CALIFORNIA

RESOLUTION NO. \_\_\_\_\_

On the motion of Commissioner  
duly seconded by Commissioner  
the following Resolution is adopted:

PLANNING COMMISSION RESOLUTION RECOMMENDING LAND USE  
DESIGNATION AMENDMENTS AND ZONE DISTRICT AMENDMENTS FOR APN  
030-061-18, 19 AND 20 IN THE SOQUEL AREA

---

WHEREAS, the Board of Supervisors, on May 24, 1994, approved an update of and adopted the County General Plan, which changed the land use designations and zone districts for parcels County-wide; and

WHEREAS, before the adoption of the General Plan update the land use designation and zone district for Assessor's Parcel Numbers 030-061-18, 19 and 20 were Service Commercial/Light Industry (C-S) and C-4 (Commercial Service), respectively; and

WHEREAS, with the adoption of the General Plan update, the land use designation and zone district for Assessor's Parcel Numbers 030-061-18, 19 and 20 were changed to Community Commercial (C-C) and C-2 (Community Commercial), respectively; and

WHEREAS, the intent of the land use designation and zone district change was to foster the development of community serving retail uses on the subject parcels; and

WHEREAS, no community serving retail uses have been developed on the subject parcels; and

WHEREAS, the existing commercial uses adjacent to the subject parcels are the types of uses allowed by the Commercial Service/Light Industry land use designation and the C-4 (Commercial Service) zone district, but not by the Community Commercial (C-C) land use designation and the C-2 (Community Commercial) zone district; and

WHEREAS, the Planning Department is seeking to change the land use designation and zone district on eight surrounding commercial parcels from the Community Commercial (C-C) land use designation and the C-2 (Community Commercial) zone district to the Service Commercial/Light Industry (C-S) land use designation and the C-4 (Commercial Service) zone district to bring the existing uses back into conforming status; and

WHEREAS, the proposed uses (car dealership and mini-storage) are the types of uses allowed by the Commercial Service/Light Industry land use designation and the C-4 (Commercial Service) zone district, but not by the community Commercial (C-C) land use designation and the C-2 (Community Commercial) zone district; and



WHEREAS, on March 3, 2006, the Environmental Coordinator determined that the proposed change of the land use designation and zone district on the subject parcels would not have a significant impact on the environment and issued a negative declaration; and

WHEREAS, on April 26, 2006, the Planning Commission held a duly noticed public hearing to consider the proposed land use designation and zone district change; and

| Assessor's Parcel Number | Current land use designation | Proposed land use designation | Current zoning | Proposed zoning |
|--------------------------|------------------------------|-------------------------------|----------------|-----------------|
| APN 030-061-18           | C-C                          | c-S                           | c-2            | c-4             |
| APN 030-061-19           | C-C                          | C-S                           | c-2            | C-4             |
| APN 030-061-20           | C-C                          | C-S                           | c-2            | c-4             |

PASSED AND ADOPTED by the Planning Commission of the County of Santa Cruz, State of California, this \_\_\_\_\_ day of \_\_\_\_\_, 2006 by the following vote:

AYES: COMMISSIONERS  
NOES: COMMISSIONERS  
ABSENT: COMMISSIONERS  
ABSTAIN: COMMISSIONERS

\_\_\_\_\_  
Chairperson

ATTEST: \_\_\_\_\_  
Cathy Graves, Secretary

APPROVED AS TO FORM:

\_\_\_\_\_  
COUNTY COUNSEL

cc: County Counsel  
Planning Department

FOR TAX PURPOSES ONLY

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POR. RANCHO ARROYO DEL RODEO  
SEC. 9 & 10, T11S, R1W, M.D.B. & M.

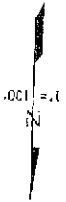
Tax Area Code  
96-103

30-06

(34)

5893

SEC. 10  
SEC. 9



(01)

32PM45

87RS31  
12/3/93

SOQUEL

Subject Parcels

Assessor's Map No. 30-06  
County of Santa Cruz, Calif  
September, 1998

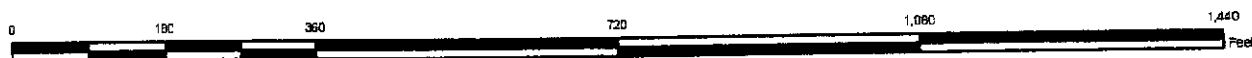
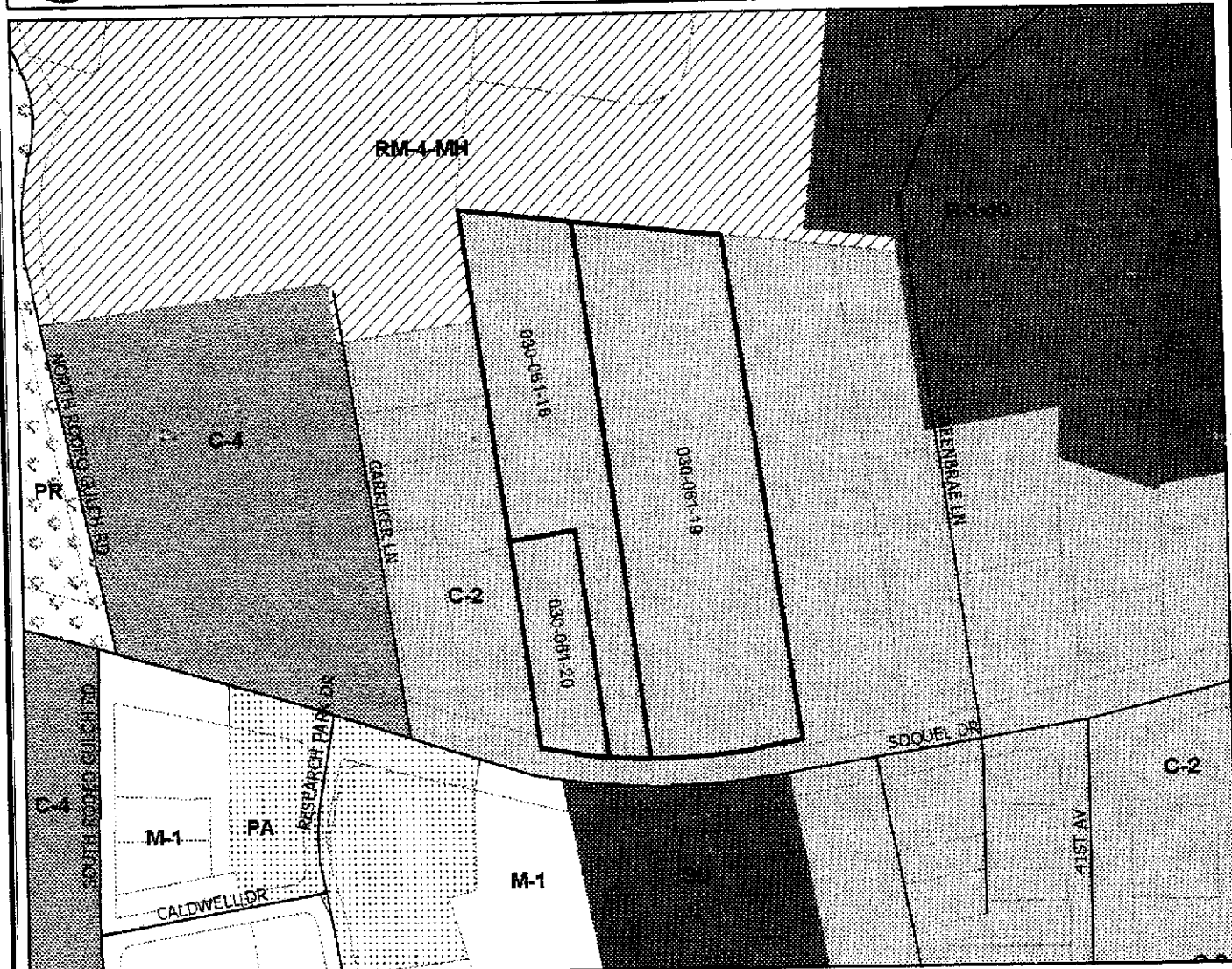
Note - Assessor's Parcel Block &  
Lot Numbers Shown in Circles.

ASSESSOR'S PARCEL MAP

302

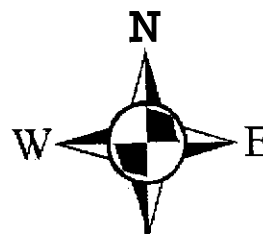
EXHIBIT F

# Zoning Map



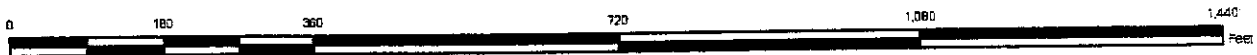
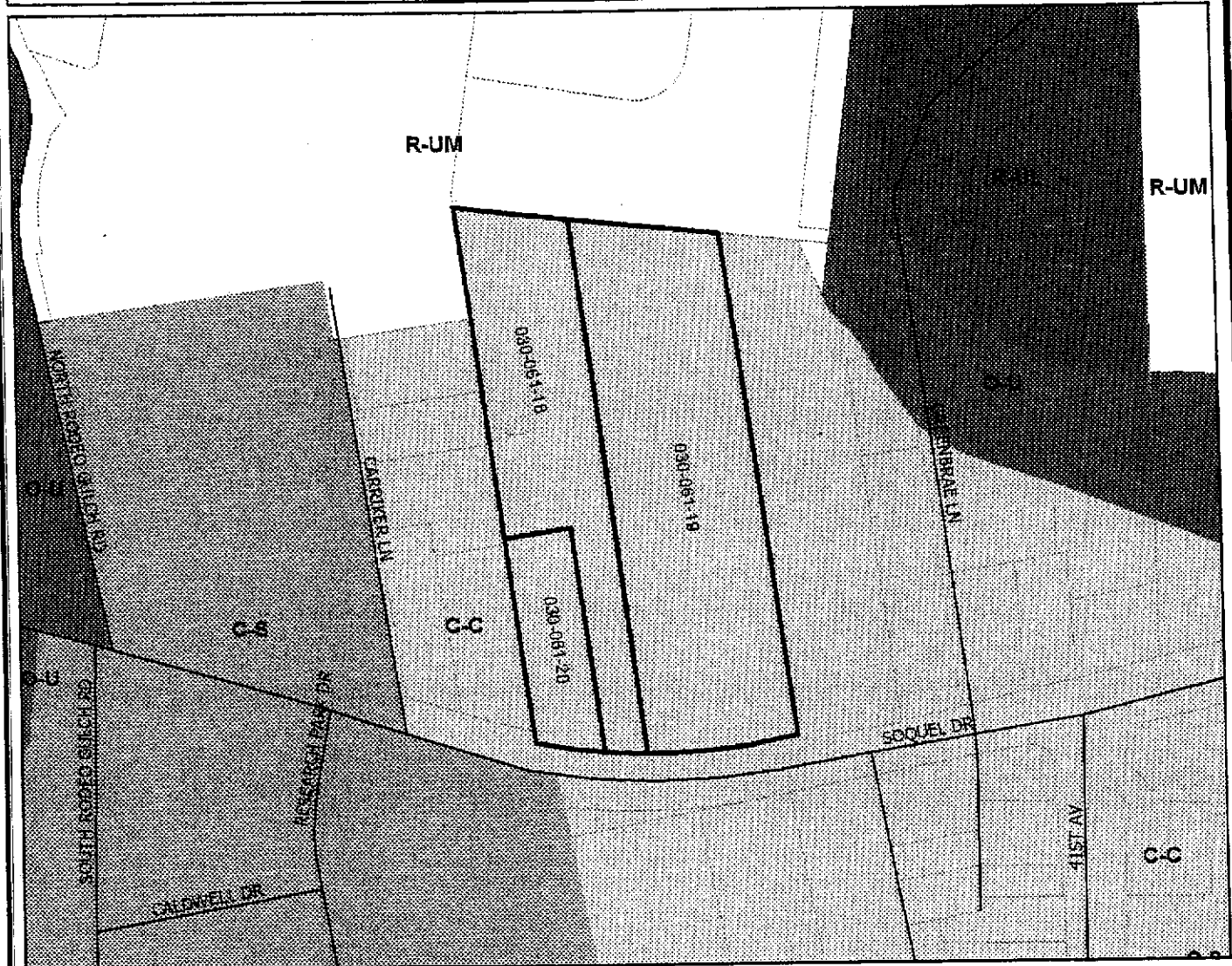
## Legend

- Project Parcels
- Streets
- Assessors Parcels
- COMMERCIAL-COMMUNITY (C-2)
- COMMERCIAL SERVICE (C-4)
- RESIDENTIAL-SINGLE FAMILY (R-1)
- SPECIAL USE (SU)
- LIGHT INDUSTRIAL (M-1)
- RESIDENTIAL-MULTI FAMILY (RM)
- COMMERCIAL-PROF OFFICE (PA)
- PARK (PR)










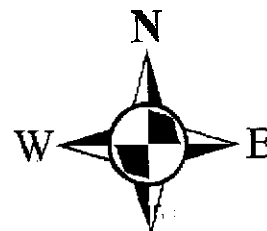
Map Created by  
County of Santa Cruz  
Planning Department  
February 2006

# General Plan Designation Map



## Legend

-  Project Parcels
-  Streets
-  Assessors' Parcels
-  Commercial-Community (C-C)
-  Commercial-Service (C-S)
-  Urban Open Space (O-U)
-  Residential-Urban Medium Density (R-UM)



Map Created by  
County of Santa Cruz  
Planning Department  
February 2006

RECEIVED JUL 10 8 2005

Santa Cruz Metropolitan  
Transit District



July 7, 2005

Mr. Charles Eadie  
Hamilton Swift Land Use & Development Consultants  
1509 Seabright Avenue  
Suite AI  
Santa Cruz, CA 95062

Dear Charlie:

Thanks for your letter of June 30, 2005 regarding the Bus Pullout of Ocean Honda/Store More America. The request made by METRO regarding the location of the bus stop was as a result of our just getting a copy of the plans during the circulation phase by the County of Santa Cruz. I can understand your frustration regarding what is shown in the County plan line.

For METRO, one of the purposes for moving the bus stop at 41<sup>st</sup> Street and Soquel farther inbound to this location was to get **the** stop away **from** the intersection of 41<sup>st</sup> and Soquel. This would give the driver better visibility when pulling back into traffic. The Soquel Drive plan line does in fact retain the stop at the approximate current location.

I am sympathetic to the problem that this change would cause on the design of the site. Given the established **plan** line, showing a full bus pullout in the future, METRO would be happy to amend our request that an ADA-compliant pad and shelter be installed at the current stop (Soquel Dr, end of 41<sup>st</sup>) as **part** of this project. This would help accommodate the needs of our customers until the implementation of the full pullout, **as** shown on the plan line. Our expectation would be that construction of the pad and shelter would coincide with construction of the proposed business development. The shelter that METRO currently uses is manufactured by Columbia Equipment Company, model SC5X10 (See attached sketch).

Having public transit nearby **an** automobile dealership is in fact **useful** as patrons of the repair facility can use the bus to return in the evening to pick up their vehicle. Dealerships usually provide service when you drop off your car, but it is not often **as** convenient **as** boarding a bus. This is a busy corridor for service and with a high level of service; transit is a more reasonable option.

I **trust** that this option will prove to be acceptable to your clients. With these improvements to the bus stop, METRO is able to adequately serve the public in a safe manner. Please feel free to contact me should you have any **further** questions.

Sincerely,

Mark J. Dorfman  
Assistant General **Manager**

370 Encinal Street, Suite 100, Santa Cruz, CA 95060 (831) 426-6080 FAX (831) 426-6117  
METRO OnLine at <http://www.scmtd.com>

RECEIVED JUL 13 2005

*Santa Cruz Metropolitan  
Transit District*

July 7, 2005



Mr. Charles Eadie  
Hamilton Swift Land Use & Development Consultants  
1509 Seabright Avenue  
Suite A1  
Santa Cruz, CA 95062

Dear Charlie:

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Sincerely,

Mark J. Dorfman  
Assistant General Manager

**30k**

370 Encinal Street, Suite 100, Santa Cruz, CA 95060 (831) 426-6080 FAX (831) 426-6117  
METRO OnLine at <http://iuwww.scmttd.com>

**EXHIBIT** 11

the future **if you** find a way to honor the currently adopted **plan line** and adjust your **request, given** the **hardship** that we now face and the limited benefits to transit riders related to relocation **of** the current turnout.

We **also** urge that you review the adopted County plan **lines**, with an eye to amending any that **are out of** sync with **your** current needs. **This** would avoid **a** repeat of **problems of** this nature in the future.

**Thank** you in advance for responding **to** our request. Please call us at **your** earliest convenience to schedule **an** opportunity to **discuss** the situation with you **further**.

Sincerely,

  
Charlie Eadie  
Principal

(for John Swift, Project Consultant)

Cc: **Tom** Stickle, Chair, Bus Service Advisory Committee  
Les White, Executive Director, SCMTD  
Steve **John**, Ocean Chevrolet/Honda  
Rob Marani, Store More America



**CENTRAL  
FIRE PROTECTION DISTRICT**  
of Santa Cruz County  
Fire Prevention Division

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

**Date:** November 8, 2005  
**To:** Steven and Lesa John  
**Applicant:** Hamilton Land Use & Development  
**From:** Tom Wiley  
**Subject:** 05-0252  
**Address:** 3715, 3711, 3801 Soquel Dr.  
**APN:** 030-061-18, 20, 19  
**OCC:** 1273  
**Permit:** 20050333

We have reviewed plans for the above subject project.

The following **NOTES** must be added to notes on plans by the designer/architect in order to satisfy District requirements when submitting for **Application** for Building Permit:

NOTE on the plans that these plans are in compliance with California Building and Fire Codes (2001) as amended by the Central Fire Protection District.

NOTE on the plans construction **classification** as determined by the building official and outlined in Part IV of the California Building Code.

NOTE on the plans the occupancy **classification** as determined by the building official and outlined in Part III of the California Building Code.

NOTE on the plans that the buildings will be **SPRINKLERED** as outlined in the 2001 California Building Code and via District Amendment

*The FIRE FLOW requirement for the subject property is 1875 gallons per minute.*

NOTE, on the plans, the required FIRE FLOW and the available FIRE FLOW. This information can be obtained from the water company upon request.

SHOW on the plans a public fire hydrant meeting the minimum required fire flow for the building, within 150 feet of any portion of the building. Additional fire hydrants are required to be installed at the front of the dealership building, right side of the main driveway and the rear of the dealership, North/East corner along the fence line, 20 feet from the trash area. On the Store More property, a fire hydrant on the island at the rear of the first building, and at the rear of the second building as approved by the Central Fire Protection District.

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

NOTE on the plans occupancy load of each area. Show where occupancy control signs will be posted.

NOTE on the plans that an UNDERGROUND FIRE PROTECTION SYSTEM WORKING DRAWING must be

*Serving the communities of Capitola, Live Oak and Soquel*



prepared by the designer/installer and submitted to the Central Fire Protection District for plan check and permits prior to installation. NOTE that the ~~WORKING DRAWINGS~~ shall comply with the District UNDERGROUND FIRE PROTECTION SYSTEM INSTALLATION POLICY HANDOUT.

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

NOTE on the plans that the designer/installer shall submit three (3) sets of plans and one (1) set of calculations for the automatic sprinkler system to this agency for approval. installation shall follow our guide sheet.

Compliance with the District Access Requirements outlined on the enclosed handout is required.

SHOW location of fire extinguishers.

SHOW Occupant Load(s) and an Exiting Plan.

SHOW location of exit signs.

SHOW where address numbers will be posted and maintained, plainly visible from the street. Numbers shall be a minimum of four (4) inches in height and of a color contrasting to their background.

SHOW location of Knox Box and key. A Knox box is required for the dealership and one for the Store More buildings.

NOTE roof coverings to be no less than Class " B rated roof.

NOTE on the plans that the gate shall be equipped with the Central Fire Protection District key entry system.

The Job copies of the building and fire systems plans and permits must be on-site during Inspections.

Submit a check in the amount of \$100.00 for this particular plan check, made payable to Central Fire Protection District. A \$35.00 Late Fee may be added to your plan check fee if payment is not received within 30 days of the date of this Discretionary Letter. INVOICE MAILED TO APPLICANT. Please contact the Fire Prevention Secretary at (831) 4794843 for total fees due for your project.

If you should have any questions regarding the plan check comments, please call me at (831) 722-2393, or email me at [tomw@centralfd.com](mailto:tomw@centralfd.com). All other questions may be directed to Fire Prevention at (831) 479-6843.

CC: File 8 County

As a condition of submittal of these plans; the submitter, designer and Installer certify that these plans and details comply with applicable Specifications, Standards, Codes and Ordinances, agree that they are solely responsible for compliance with applicable Specifications, Standards, Codes and Ordinances, and further agree to correct any deficiencies noted by this review, subsequent review, inspection or other source. Further, the submitter, designer, and installer agrees to hold harmless from any and all alleged claims to have arisen from any compliance deficiencies, without prejudice, the reviewer and the Central FPD of Santa Cruz County.

Any order of the Fire Chief shall be appealable to the Fire Code Board of Appeals as established by any party beneficially interested, except for order affecting acts or conditions which, in the opinion of the Fire Chief, pose an immediate threat to life, property, or the environment as a result of panic, fire, explosion or release.

Any beneficially interested party has the right to appeal the order served by the Fire Chief by filing a written "NOTICE OF APPEAL" with the office of the Fire Chief within ten days after service or such written order. The notice shall state the order appealed from, the identity and mailing address of the appellant, and the specific grounds upon which the appeal is taken.

1273-110805

## INTEROFFICE MEMO

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**APPLICATION NO: 05-0252 (second routing)**

Date: November 17, 2005  
To: Cathllen Carr, Project Planner  
From: Larry Kasparowitz, Urban Designer  
Re: Design Review for a self storage building and a car dealership at Soquel Drive, Soquel (Steven and Lesa John / owners, Hamilton-Swift / applicant)

---

**URBAN DESIGNER'S COMMENTS:****HONDA :**

*Delete metallic silver stripe (M-3) around building at middle of wall. Substitute with EIFS-1.*

*There should be a distinct connection between the front and rear of this building. Perhaps the architect should study a 6" or wider **expansion** joint which could be recessed and painted black to emphasize the two parts.*

**STORE-MORE**

*The elevations seem schizophrenic:*

1. *The rem (north) elevation should have a wainscot (all other elevations do).*
2. *The columns on the east elevation of the main building would appear to be in the way of **trucks/vans** backing up to unload. If the applicant believes a canopy is necessary it could be cantilevered.*
3. *There is no order to where the gable elements occur on the West elevation or the end of the East elevation*
4. *Why wouldn't the horizontal band that is on the East and North elevations run completely around the building.*
5. *The diamond shaped pattern on the west elevation seems out of place compared to the rest of the building.*
6. *The rear of the **building** roof should be lower to help the scale of this long building.*
7. *The entry to the office is almost indistinguishable.*
8. *Is the metal roof a **standing** seam roof. The drawings should indicate the seam*

Office File

December 15, 2005

Planning Commission  
c/o County Planning Department  
701 Ocean Street  
Santa Cruz, Ca 95060

Dear Commissioners:

We the undersigned residents of Rodeo Mobile Estates, Soquel, are petitioning you to remove the Eucalyptus trees behind our park that is owned by Ocean Chevrolet/Honda located on Soquel Drive between Senate Furniture and Davey Tree Service, Soquel.

These trees have already caused damage to two mobile homes directly beneath the trees resulting in an insurance claim against Ocean Chevrolet/Honda. Whenever a storm comes residents beneath the trees cannot sleep in their bedrooms in fear of a limb falling on the back of their house. Large branches have been seen flying across the street and landing on roofs of those homes leaving dents in the roofs. We are all feared for our safety during winter storms. Our manager, who lives under the trees, had only lived in his home six months and sustained \$1800 damage to his new (one year old) awning, which claim was turned over to Ocean Chevrolet/Honda Insurance Company to pay. Ocean Chevrolet/Honda has been a very accomodating neighbor keeping us informed of the progress of demolition and rebuilding on the property and we respect Steve John for caring about our welfare about us as neighbors. Therefore, we are urging removal of the trees as **soon** as possible. Thank you for your consideration to our request.

Yours Truly,

Residents of 100 N. Rodeo Gulch Rd. Estate, Soquel, Ca. 95073

|                          |                        |
|--------------------------|------------------------|
| Elaine Hedges #180       | Olive R. Conroy #183   |
| Ernesta King #185        | David M. Graham #174   |
| Bonnie Hedges #188       | Barbara R. Butler #163 |
| Carol Taul #181          | Barbara Tolman #174    |
| Jean Thompson #160       | Joe Weigand #179       |
| Bonita Graulund #184     | Manager - see back #   |
| Larry S. Welch #182      | Joan L. Wright #162    |
| Jay S. Welch #182        |                        |
| HELEN GATES #173         |                        |
| James + Laurel Main #161 |                        |
| E. Keith Love #188       |                        |

311

cc: Steve John  
Ocean Chevrolet  
Honda

EXHIBIT H

Last year we had to replace a shed  
that a rather large limb came down.  
and now we have to replace our  
new awning due to damage from  
tree limbs & pots (\$4,500.00) We are  
just waiting for a tree to fall  
on someones home and some  
serious damage to our homes or  
even take someones life.



COUNTY OF SANTA CRUZ  
Inter-Office Correspondence

DATE: January 11, 2006  
TO: Tom Burns, Planning Director  
✓ Cathleen Carr, Planner  
FROM: Supervisor Jan Beautz *JB*  
RE: ADDITIONAL COMMENTS ON APP. 05-0252, APNS 030-061-18,  
-19, **AND** -20, 3711 AND 3801 SOQUEL DRIVE, HONDA  
DEALERSHIP AND STORE MORE AMERICA STORAGE

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Please consider the following areas of concern in your evaluation of the above application for a lot line adjustment, General Plan amendment, and rezoning to support the construction of three commercial buildings: an auto dealership and two self-storage buildings.

The plans continue to indicate the edge of the drip-line for the existing eucalyptus grove at the rear of the proposed Honda Dealership. However, I continue to be concerned that the site plan and the landscape plans lack a clear indication of the existing riparian area and its required setback.

These revised plans have amended the sizes of the replacement trees proposed to be planted within habitat mitigation area D at the rear of the Honda business. However, this application continues to propose to mitigate the removal of a grove of 60 eucalyptus trees **up** to 3 feet in diameter and up to 100 feet tall with the planting of 15 replacement trees and 15 willow branch cuttings. While the sizes of the 15 replacement trees have been increased, the quantity has not. Anything less than the replanting of replacement trees on a 2 to 1 ratio is insufficient to mitigate the loss of such a significant area of mature tree canopy. Additionally, at least 5 large eucalyptus and a number of 7 and 8 inch oaks will be lost within the native habitat area E. These are proposed to be replaced with Japanese maples and Victorian **Box** trees. The potential height of these replacement trees will never mitigate the loss of the mature eucalyptus or the coastal live oaks. How will the tree species in this area be enriched to mitigate the loss of the significant trees that are being lost?

January 11, 2006  
Page 2

Sheet L-1 indicates a sound wall only on a portion of the rear of the Honda Dealership while Sheet A-1, Site Plan, indicates this 6 foot masonry sound wall to continue along the northern and western rear of the Store More America buildings. Will all plan sheets be revised accordingly to indicate the sound wall in total?

The site plan continues to lack any indication as to where the required trash and recycling enclosure for the Honda Dealership will be located.

These revised plans have not amended the proposed 50 square foot sign for Store More America facing Soquel Drive which only says "Business Office" and lacks a sign indicating the name of this business. While clients of this business will need direction to the office, other sign configurations may be more appropriate. Sheet L-1, Landscape plan, continues to omit the locations for the Honda Dealership monument signs adjacent to Soquel Drive as shown on the site plan.

JKB:ted

3451A1

**COUNTY OF SANTA CRUZ**  
INTER-OFFICE CORRESPONDENCE

**DATE:** January 18, 2006  
**TO:** Cathleen Carr, Planning Department, Project Planner  
**FROM:** Melissa Allen, Planning Liaison to the Redevelopment Agency  
**SUBJECT:** Applic. #05-0252, 3<sup>rd</sup> Routing, APN 030-061-18, 19 & 20; 3711, 3715 & 3801 Soquel Dr.

---

The applicant is proposing to construct three commercial buildings - an auto dealership and two self-storage buildings. The project requires a Commercial Development Permit, Lot Line Adjustment, Soils Report Review, Preliminary Grading Approval, a Rezoning and a General Plan Amendment. The property is located on the north side of Soquel Drive, about 400 feet west from 41st Avenue, at 3711, 3715 & 3801 Soquel Drive in Soquel.

This application was considered at Engineering Review Group (ERG) meetings on May 4, 2005, November 16, 2005, and January 4, 2006. The Redevelopment Agency (RDA) previously commented on this application on May 20, 2005, and November 30, 2005. RDA appreciates the applicant addressing some RDA's previous comments. Please see previous comments referenced below for items/issues not fully addressed with this submittal. RDA has the following comments regarding this 3<sup>rd</sup> Routing of the proposed project.

1. See previous comment #1. Required bus stop improvements should be worked out with the transit district and DPW and/or applicable conditions included.
2. See previous comment #2. All of the Soquel Drive frontage roadside improvements (including curb, gutter, and sidewalk) should be replaced with new improvements. Sheet C-5, Note 1, states: "Replace all 'damaged' curb and gutter."
3. See previous comment #5. RDA typically recommends that large directional and monument signs be located a minimum of 3 to 5 feet back from the edge of sidewalk to ensure sufficient vehicular line-of-sight and to ensure that the signs do not block or impact pedestrian use of the full width of the public sidewalk. Additional details of proposed signs have not been reviewed by RDA.
4. See previous comment #6, regarding the use of more mature replacement trees
5. The Plant Legend table on Sheet L-1 should be modified to be consistent with the Landscape Plan and Landscape Details (Sheet L-2). For example, the T-2 Crape Myrtle trees are used extensively in Area A (as street trees) and some of the T-1 London Plane trees are proposed to be installed at 48" box size.

The issues referenced above should be evaluated as part of this application and/or addressed by conditions of approval. RDA does not need to see future plan routings for this project unless there are changes to the project related to the comments made by RDA. The Redevelopment Agency appreciates this opportunity to comment. Thank you.

cc: Betsey Lynberg, RDA Administrator  
Paul Rodrigues, RDA Urban Designer  
Ronald Lechner, RDA Project Manager  
Greg Martin, DPW Road Engineering  
Ralph Norberg, DPW/RDA Engineer



**Land Use & Development Consultants, Inc**

June 30, 2005

Mr. Mark Dorfman  
Assistant Director  
Santa Cruz Metropolitan Transit District  
370 Encinal St.  
Santa Cruz CA 95060-2101

RE: Bus Pullout for Ocean Honda/Store More America (3711, 3715, 3801 Soquel Dr.)

Dear Mark:

We are preparing **an** application for development of the above site. In order to submit any application, the County of Santa **Cruz** requires that the applicant obtain the plan line adopted by the Board of Supervisors for the relevant roadways, and design the project in strict compliance with that plan line. In fact, no application may be submitted without adherence to the pian line.

We obtained the plan line information, and have spent considerable time and money to develop the site plan in accordance with the plan line that **was** adopted by the Board in April of 1994. Now, however, Jim **Baiocchi**, Facilities Maintenance Manager, has informed **us** that the Metro District wants to do something entirely different from what is shown in the adopted plan line, specifically, Metro has asked to relocate the bus pullout currently operational near the corner of 41<sup>st</sup> Avenue and Soquel Drive.

In light of the considerable time and expense we have used to develop **our** site plan in accordance with the adopted plan line, we find this new requirement to be not only ill-timed, but a major hardship for **us**. We cannot redesign the project to meet Metro's request without a **substantial** modification of the site plan, **because** the location proposed by **Metro** for the pullout is exactly where the main **access** to our site is planned, and there **are** no good alternatives available to us. Moreover, we believe that the proposed change does not benefit transit riders, who would be moved away from the corner to **a less** convenient location. **Also**, the uses we propose, auto dealer and storage facility, **are** rarely accessed by **transit**, so would not be **likely** to generate additional ridership that might utilize the proposed **new** location.

We believe that a better solution would be to **keep** the pullout in its current location, with the intention **of** increasing the pullout's size in the **future**, consistent with the adopted plan line. In fact, we would be willing to contribute on a pro **rata** basis, our fair share of any such **future** improvement.

In **our** past experience, your **staff** has been flexible and constructive in finding solutions when hardships like this occur. We believe **all** parties would **be** better served now **and** in



**C O U N T Y   O F   S A N T A   C R U Z**  
**D I S C R E T I O N A R Y   A P P L I C A T I O N   C O M M E N T S**

Project Planner: Cathleen Carr  
Application No.: 05-0252  
APN: 030-061-18

Date: April 6, 2006  
Time: 10:46:25  
Page: 1

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**Environmental Planning Completeness Coments**

===== REVIEW ON MAY 13, 2005 BY KENT M EOLER ===== 1. The soils report has been accepted. Note: additional geotechnical info will be required in the building permit stage - see misc. comments

2. Preliminary grading plans are acceptable as submitted. Grading and development has been set back from the riparian cooridor as outlined under application 03-0410

===== UPDATED ON NOVEMBER 7, 2005 BY KENT M EDLER =====

During a site meeting with Steve McGuirk on 7/11/05, it was discussed that there may be grading done in "Area D" of the landscape plans to create a swale. If grading is going to occur in this area, please show this on the plans.

The landscape plans only identify eucalyptus removal from "Area D". If there are additional eucalyptus trees along the northern property line to be removed, they should be identified on the plans for removal. If euclaptus trees are to remain on site, identify locations.

No further completeness comments.

===== UPDATED ON NOVEMBER 16, 2005 BY ANDREA M KOCH =====

11/16/05

1) No further completeness comments

**Environmental Planning Miscellaneous Comments**

===== REVIEW ON MAY 13, 2005 BY KENT M EDLER ===== 1. The soils report is accepted as submitted. A design level report will be required in the building permit stage, as recommendaed by the soils engineer.

2. A plan review letter from the soils engineer will be required in the building permit stage.

3. Winter grading will not be allowed on this site

4. The project should be conditioned that grading must commence by August 1 or grading must be postponed until April 15 of the following year.

5. The drainage system must be in place by September 15.

===== UPDATED ON NOVEMBER 7, 2005 BY KENT M EDLER ===== Additional Misc. Comments:

1) On "Area D" of the landscape plans, indentify what type of invasive species will be eradicated.

2) On "Area D" of the landscape plans, there is a hatched area that is not labeled - identify what this is intended to be

Discretionary Comments - Continued

Project Planner: Cathleen Carr  
Application No.: 05-0252  
APN: 030-061-18

Date: April 6, 2006  
Time: 10:46:25  
Page: 2

- 3) Specify the type of pre-emergent herbicide that will be used in "Area D"
- 4) Include a maintenance plan for 3-5 years for control of invasive species and which also identifies success criteria for new plantings  
===== UPDATED ON NOVEMBER 16, 2005 BY ANDREA M KOCH =====

11/16/05

- 1) No further miscellaneous comments

Long Range Planning Completeness Comments

===== REVIEW ON MAY 25, 2005 BY GLENDA L HILL =====

NO COMMENT

===== UPDATED ON NOVEMBER 16, 2005 BY STEVE D GUINEY =====

NO COMMENT

Long Range Planning Miscellaneous Comments

===== REVIEW ON MAY 25, 2005 BY GLENDA L HILL =====

Comments regarding compliance with SB 18 (Tribal Consultation) sent to project planner via e-mail.

Dpw Drainage Completeness Comments

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

===== REVIEW ON MAY 18, 2005 BY DAVID W SIMS =====

General Plan policies: 7.23.1 New Development 7.23.2 Minimizing Impervious Surfaces  
7.23.3 On-Site Stormwater Detention 7.23.4 Downstream Impact Assessments 7.23.5 Control Surface Runoff

A well engineered drainage plan was submitted with the application, and was reviewed for completeness of discretionary development, and compliance with stormwater management controls and County policies listed above. The plan was found to need the following additional information and revisions prior to approving discretionary stage Stormwater Management review.

1) The proposed plan relies exclusively on detention systems to control post-development runoff rates. This does not meet County requirements and is not accepted. The proposal must include other significant runoff controls prior to the Stormwater Management section giving any approval for the use of detention. Such other methods shall be effective in the control of development impacts caused by both smaller storms as well as the design flood storm. Please revise the proposal to fully meet policy 7.23.1.

2) This project has proposed a very large quantity of impervious surfacing, increasing coverage from 1.27 acres to 5.53 acres; a 434% increase. The legend on sheet C2 indicates impervious pavement, however a call to the engineer confirmed that there is no such proposal on the plan. Please revise the proposal to fully meet policy 7.23.2. Runoff control practices are available that address items 1 and 2 simul-

Discretionary Comments - Continued

Project Planner: Cathleen Carr  
Application No.: 05-0252  
APN: 030-061-18

Date: April 6, 2006  
Time: 10:46:25  
Page: 3

taneously. and are fully compatible with the desired land use.

3) Detention will be required only to the extent that predevelopment runoff rates cannot be maintained through other applied measures, and where drainage problems are not resolved. per policy 7.23.3.

4) The Kerby Method was used to compute time of concentration (**Tc**) of runoff. The equation is appropriate and approvable for use. The figure of 10 minutes used for pre-development Tc appears incorrect, A review check produced a Tc of 20 to 24 minutes for drainage area 1. This significantly affects the determined storage volumes. Please review for all areas, and submit all support calculations if retaining Tc near 10 minutes. There were some discrepancies in drainage area boundary determinations. The riparian area in the rear corner, the entrance drives, the southwest under-sidewalk drain, and perhaps some planters are areas of undetained runoff that should be subtracted from the computed allowable release rate, and otherwise accounted for in the detention calculations. Please revise. Other aspects of the calculation procedures looked good.

5) Please assess the erosional stability of the steep slope under an outfall located on Soquel Ave. at the entrance corner to APN 030-341-04, a mobile home park. If there is any present problem or significant future potential for such problem at this outfall, this project will be conditioned to make needed improvements. Document the outfall condition and show any needed improvements on the next plan submittal. If project frontage runoff does not route to this location please fully describe the actual routing.

6) A water quality treatment device is missing for the frontage release. Please provide an effective treatment method for both directions of release. Indicate the level of treatment for both locations on the plans such that it is clear that it will effectively treat the types of pollutants generated for the automotive site use.

7) It appears that the 6 foot masonry wall along the rear west property line could block receipt of small amounts of runoff from three adjoining properties. Please provide small ground level passages through the base of the wall and note this on the plans.

8) Indicate on the plans the manner in which building downspouts will be discharged. Proposing downspouts as discharged directly to the storm drain system is generally inconsistent with efforts to hold runoff to pre-development rates in the manner required by policy 7.23.1.

Because this application is incomplete in addressing County development policies, resulting revisions and additions will necessitate further review comment and possibly different or additional requirements. The applicant is subject to meeting all future review requirements as they pertain to the applicant's changes to the proposed plans. ===== UPDATED ON NOVEMBER 29, 2005 BY DAVID W SIMS =====  
2nd Routing:

Prior Item 1) Complete. The applicant has significantly changed the method of mitigation from structural chamber detention to a form of detention that relies on

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flow lag through the voids of gravel media. This method is much better at meeting the intent of County policy requirements to control a wider range of storm events up through the County standard design storm.

Prior item 2) Complete. Pervious pavement has been proposed in modest amounts of coverage equaling about 0.91 acres. The remaining increase in impervious surfacing is still significant. However the project either connects drains or slopes impervious surfaces onto the pervious paving and into the gravel beds for most of the project area. See item 4 - uncontrolled drainage.

Prior item 3) Complete. The form of mitigation now proposed relies on increased lag time of flows through coarse gravel media as the first form of runoff control. The system also has the potential to provide further detention storage. A detention/infiltration trench is also noted at the west boundary of the project, and appears to be another method of runoff control for a portion of the project area. This approach satisfies policy requirements

Prior item 4) Incomplete. Calculation package:

a) There are still discrepancies in drainage area boundary determinations for post-development calculations. The riparian area in the rear corner, the entrance drives, the southwest under-sidewalk drain (now deleted?), and perhaps some planters are areas of unmitigated runoff that should be subtracted from the computed allowable release rate, and otherwise accounted for in the detention calculations. A significant area of pavement extending from the SE drive entrance to midway alongside the Ocean Honda building is shown to enter an inlet and discharge directly to the street. Why isn't most of this area connected to the mitigation measures provided? It is also unclear where much of the runoff from the back side and south end of Store More building 1 is directed. Please clarify/revise.

b) Please provide reference to all equations, note all assumptions, and give definition of variables, terms and references used in the Darcy analysis. It appears that the configurations and assumptions used in the calculations do not match with the configurations apparent on the plans. The mechanism that would make the assumptions of a full and uniform flow area valid for the aquifer and Darcy analysis is not apparent. In general, the work couldn't be followed in review check because of inadequate definition of terms and missing explanation and reference.

c) The C-value (0.3) used in the calculations for the pervious pavement is not appropriate within the detention storage calculations. For the configuration made, the runoff for this surface is like normal pavement (0.9) since it drains into itself and immediately into the storage area. The design should not assume both a low C-value and a storage capability simultaneously for the same area. Assuming one or the other behavior, but not both, would be appropriate.

d) The SWM plan report is unclear on how the potential capability of additional detention, as discussed in the report, will be achieved. Is an outlet control restriction provided to more substantially back-up the system, or to act as a fail-safe if the intended lag time through the gravel media is not realized?

e) Required storage volumes of 2180 and 180 seem out of proportion based on respec-

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tive areas and runoff coefficients. Please check the accuracy of calculations for the lower figure.

f) Size and density of perforations in the gravel bed pipes (in and out) needs to be determined and explained in the calculations and shown on the plans such that **it** is clear they provide adequate passage or restriction. The perforated pipes delivering water to the gravel beds are likely to be affected by plugging due to the concentrated delivery of surface water by pipe systems. A sediment and debris trap would seem to be needed at certain inlet locations to simplify maintenance and extend service life.

Prior item 5) Incomplete. The engineer's report has stated that there is no visible erosion at the outfall on Soquel Drive. **It** is not clear the extent of effort made to reach this conclusion. Please provide more substantial description and documentation of the slope and outfall condition, such that **it** is clear that this entire slope has been thoroughly assessed. Show any needed improvements on the next plan submittal.

Prior item 6) Incomplete. Water quality treatment within the gravel beds by mechanical and aerobic mechanisms may be an acceptable means of treatment. The submitted report makes reference to this means without any supporting information. Please provide supporting data or references demonstrating the level of effectiveness. Indicate the level of treatment for both locations on the plans such that **it** is clear that **it** will effectively treat the types of pollutants generated for the automotive site use.

Prior item 7) Incomplete. **It** appears that the 6 foot masonry wall along the rear west property line could block receipt of small amounts of runoff from three adjoining properties. Please provide small ground level passages through the base of the wall and note this on the civil plans.

Prior item 8) Incomplete. Indicate on the plans the manner in which building downspouts will be discharged. ===== **UPDATED ON JANUARY 12, 2006 BY DAVID W SIMS**

3rd Routing:

Prior Items 1, 2, 3) Complete.

Prior item 4) Complete for discretionary stage. Additional work is needed for the design details and calculations. Related comment has been transferred to miscellaneous comments and is to be addressed with the building application submittal.

Prior item 5) Complete. Further description and photo documentation has been provided in the engineer's report documenting the condition of the off-site drainage outfall. No improvements are proposed.

Prior item 6) Complete. Designer has provided supporting data and references demonstrating potentially high water quality treatment capabilities for the proposed gravel beds. These reference studies presume that all runoff will be filtered via sub-soil percolation. The proposed design cannot achieve significant percolation, but does allow limited contact of stormwater with the sub-soil interface. The treatment levels shown in the references are unlikely to be fully attained. and the

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Discretionary Comments - Continued

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proposed design will be less effective than the references indicate. However, the designer is now adding several silt and grease traps to the site storm drain system and the gravel beds will only add more benefit to water quality treatment. This exceeds minimum County requirements for most much of the project surfacing.

Prior item 7) Complete. Notation for ground level passages through the base of the 6 foot masonry wall have been added to the civil plans.

Prior item 8) Complete. The manner in which building downspouts will be discharged has been indicated on plan sheet C2.

Opw Drainage Miscellaneous Comments

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

===== REVIEW ON MAY 18, 2005 BY DAVID W SIMS =====  
Miscellaneous:

A) Please provide notation on the plans for permanent bold markings at each inlet that read: "NO GUMPING - DRAINS TO BAY".

B) Note 4, sheet C5: thru-curb drains are to be built per Fig. ST-4B of the County Design Criteria. Please note or detail this.

C) Sheet C6: please improve display of H:V ratio of the section views so that line work can be more easily seen.

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

A drainage impact fee will be assessed on the net increase in impervious area. The fees are currently \$0.85 per square foot, and are assessed upon permit issuance. Reduced fees are assessed for semi-pervious surfacing to offset costs and encourage more extensive use of these materials.

All resubmittals shall be made through the Planning Department. Materials left with Public Works may be returned by mail, with resulting delays.

Please call the Dept. of Public Works, Stormwater Management Section, from 8:00 am to 12:00 noon if you have questions, ===== UPDATED ON NOVEMBER 29, 2005 BY DAVID W SIMS =====

Prior item A) Please provide notation on the plans for permanent bold markings at each inlet that read: "NO DUMPING - DRAINS TO BAY".

Prior item B) Note 4, sheet C5: thru-curb drains are to be built per Fig. ST-4B of the County Design Criteria. Please note or detail this.

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Prior item C) Complete

D) Location of detail 9/C7 does not show on the plan sheets

E) The curb with slotted openings needs to be detailed showing the size and frequency of the slot interval

F) The ~~detention~~/retention trench near the west boundary needs to be detailed

G) The cutslope shown on section B-B at the rear of the property will allow sediments to drain into the gravel bed and collector pipe area. Isolation of these sediments from the gravel bed is needed, such as with a curb.

H) The compacted sub-grade under the gravel beds is not drawn at the 1% slope that is noted. This should be corrected, to assure that elevation for the collector pipe is appropriate.

I) The detail for the level spreader does not show perforations along the entire pipe. Is a section of solid pipe intended? Please clarify.

J) Submit test data from Dees & Assoc. (8131105) as supporting info for design report. ===== UPDATED ON JANUARY 12, 2006 BY DAVID W SIMS =====  
Miscellaneous:

Prior item A) Please provide notation on the plans for permanent bold markings at each inlet that read: "NO DUMPING - DRAINS TO BAY".

Prior item B) Corrected

Prior item C) Corrected.

Prior item D) Location of detail 9/C7 does not show on the plan sheets.

Prior item E) The curb with slotted openings needs to be detailed showing the size and frequency of the slot interval.

Prior item F) The ~~detention~~/retention trench near the west boundary needs to be detailed.

Prior item G) The cutslope shown on section B-B at the rear of the property will allow sediments to drain into the gravel bed and collector pipe area. Isolation of these sediments from the gravel bed is needed, such as with a curb.

Prior item H) The compacted sub-grade under the gravel beds is not drawn at the 1% slope that is noted. This should be corrected, to assure that elevation for the collector pipe is appropriate.

Prior item I) Corrected

Prior item J) Submit test data from Dees & Assoc. (8/31/05) as supporting info for design report.

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Item K) This item transfers all issues and requirements from discretionary item 4. 2nd routing. The proposed mitigations generally appear conservative in extents and have the potential capability once refinements are made to adequately mitigate impacts to County standards. However, the stormwater mitigation design work and calculations still require corrections and more detailed development of both the methodology and the construction details. The applicant should understand that further changes will be needed to reach a final design. Selected pages from the design calculations have been marked up and returned to the designer. It is recommended that the designer meet to discuss the project design before proceeding with the 1st submittal of the building plans. More detailed comment will be given after the 1st building submittal

**Dpw Driveway/Encroachment Completeness Comments**

===== REVIEW ON MAY 2, 2005 BY DEBBIE F LOCATELLI ===== Building permit application shall reflect details of sidewalk, driveway approach(s) and ADA requirements meeting the County of Santa Design Criteria. At the time of building permit application, an encroachment permit shall be required for all work within the County right-of-way.

**Dpw Driveway/Encroachment Miscellaneous Comments**

===== REVIEW ON MAY 2, 2005 BY DEBBIE F LOCATELLI =====  
Civil engineered plans required for curb, gutter and sidewalk at the time of building permit application submittal.

**Dpw Road Engineering Completeness Comments**

===== REVIEW ON MAY 12, 2005 BY GREG J MARTIN =====  
The comments for this review has been saved by Diane Thorsen 1/17/06. Please see Greg Martin for electronic copy.

Additional comments will be made once these comments are addressed. If you have any questions please contact Greg Martin at 831-454-2811.

===== UPDATED ON NOVEMBER 18, 2005 BY GREG J MARTIN ===== Comments on the traffic impact analysis shall be appended to these comments at a later date. Please contact Jack Sohriakoff if necessary regarding comments on the traffic study. Show the sawcut line on the plan view. Show a typical detail showing the sawcut line at the bike lane line. The detail should include the structural section. The 12 foot aisle which is apparently for trucks should be one-way and 16 feet in width. The direction of travel should be shown with pavement markers and should be in the northern direction. Please show details of the entrance to Store More #2. It is unclear how the gate will operate. Will there be push button key entry entry? There are several doors exiting the Ocean Honda directly into parking areas or aisles. We recommend 4.625 foot wide grade separated sidewalks along the front of the building where this occurs to improve pedestrian safety.

If you have any questions please call Greg Martin at 831-454-2811.

===== UPDATED ON NOVEMBER 30, 2005 BY GREG J MARTIN ===== -----Traffic Study Comments by Jack Sohriakoff----- The Ocean Honda and Store More America draft traffic impact analysis dated October 27, 2005, by Higgins Associates is not



Discretionary Comments - Continued

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accepted at this time. A supplemental analysis will be required to evaluate the 41st Avenue inter- sections at the Highway 1 southbound ramps and Gross Road. The current evaluation was not based upon the same baseline criteria as in the previous Safeway and Home Depot traffic studies. It is required that the analysis be done for purposes of consistency with the other reports. Additional comments will be submitted when the requested supplemental information has been reviewed. The Soquel Transportation Improvement Area (TIA) fees are based upon the net new daily trips expected to be generated by the project. The traffic impact analysis calculated the total net new daily trips to be 580 trips per day. The current Soquel TIA fee is \$200 per trip end for transportation improvement fees and \$200 per trip end per roadside improvement fees. Therefore, the total anticipated Soquel TIA fees are \$232,000  $((\$200 + \$200 \text{ per daily trip}) \times 580 \text{ daily trips} = \$232,000)$ . Ocean Honda is expected to generate 437 daily trips (\$174,800). and Store More is expected to generate 143 daily trips (\$57,200).

----- UPDATED ON JANUARY 12, 2006 BY GREG J MARTIN ===== Left and right flowline and centerline profiles should be provided with slope percentages shown along Soquel Drive. Actual cross sections for Soquel Drive should be provided which include the right-of-way

Please number each space and identify the numeric range for Store More America and Honda. It is unclear whether the parking in front of the 1st two Store More America buildings consists of exclusive parking bays or whether there is a sidewalk in front of the Store More America which would allow the parking to be shared.

Access to the 3rd Store More America building is through a gate. the width of the aisle at this location is approximately 15 feet. Aisles are required to be 26 feet in width. Please show details of the entrance to Store More No. 2. It is unclear how the gate will operate. Will there be push button key entry entry? Santa Cruz Metro has recommended the bus stop on Soquel Drive just west of the intersection of 41st and Soquel Drive be improved in lieu of a bus stop within the Ocean Honda frontage. Public Works recommends this as well as a full turnout in order to alleviate any congestion result- ing from buses stopping in the travel lane. These improvements will be eligible for fee credit.

Comments on the traffic impact analysis shall be appended to these comments at a later date. Please contact Jack Sohriakoff if necessary regarding comments on the traffic study. ===== UPDATED ON FEBRUARY 8, 2006 BY JACK R SOHRIAKOFF ===== The Traffic Impact Analysis by Higgins Associates dated Oct. 27, 2005, and the supplemental memorandum dated January 23, 2006, has been reviewed and accepted by Public Works. The conclusion of the analysis was that the proposed project would not create a significant impact on the local study intersections during the peak hours. In addition, the memorandum verifies the need to utilize previous traffic volume data from the year 2000 and not the more recent data due to the decrease in volumes over the past several years for various segments of 41st Avenue, especially north of Highway 1 fronting the Redwood Shopping Center (Safeway, Home Depot). This is consistent with the previous Home Depot traffic analysis which utilized the basic parameters of the Safeway traffic analysis. This approach initiates a worst case scenario in determining potential traffic impacts. Transportation improvement area fees were previously calculated, but the final fees will be based upon the actual square footage identified in the building permit phase.

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Dpw Road Engineering Miscellaneous Comments

===== REVIEW ON MAY 12, 2005 BY GREG J MARTIN =====  
===== UPDATED ON NOVEMBER 18, 2005 BY GREG J MARTIN =====  
===== UPDATED ON NOVEMBER 30, 2005 BY GREG J MARTIN =====  
===== UPDATED ON JANUARY 12, 2006 BY GREG J MARTIN =====

Environmental Health Completeness Comments

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

===== REVIEW ON MAY 11, 2005 BY JIM G SAFRANEK ===== NO COMMENT.  
===== UPDATED ON NOVEMBER 15, 2005 BY JIM G SAFRANEK =====  
NO COMMENT

Environmental Health Miscellaneous Comments

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

===== REVIEW ON MAY 11, 2005 BY JIM G SAFRANEK =====  
If hazardous materials or hazardous waste are to be used, stored or generated on site, contact the appropriate Hazardous Material Inspector in Environmental Health at 454-2728 to determine if a permit is required  
===== UPDATED ON NOVEMBER 15, 2005 BY JIM G SAFRANEK ===== See May 11 comment



## 8 FREEWAY ANALYSIS

Exhibit 18 summarizes a review of the project trips that would travel via Highway 1 in the project vicinity. **As** noted in the aforementioned Safeway Shopping Center traffic analysis, Highway 1 **in** the project vicinity currently operates at a deficient level of service. The Santa Cruz County Regional Transportation Commission is currently working on plans to widen Highway 1 between Santa Cruz and Aptos from four to six lanes through the addition **of** a high-occupancy vehicle (HOV) lane in each direction of the freeway. The additional **trips** generated by the study project would not exceed more than 1% of the existing freeway capacity of the highway, as noted on Exhibit 18. The project would therefore not represent a significant impact on operations of Highway 1.

| Facility  | Location              | Direction | Capacity<br>(veh/in/hr) <sup>1</sup> | Net Project Trips |    | % of Capacity |       | Impact Significant?<br>(>1%) |
|-----------|-----------------------|-----------|--------------------------------------|-------------------|----|---------------|-------|------------------------------|
|           |                       |           |                                      | AM                | PM | AM            | PM    |                              |
| Highway 1 | North of Soquel Drive | NB        | 4400                                 | 0                 | 13 | 0.00%         | 0.30% | No                           |
|           |                       | SB        | 4400                                 | 11                | 8  | 0.25%         | 0.18% | No                           |
| Highway 1 | North of 41st Avenue  | NB        | 4400                                 | 0                 | 10 | 0.00%         | 0.23% | No                           |
|           |                       | SB        | 4400                                 | 9                 | 6  | 0.20%         | 0.14% | No                           |
| Highway 1 | South of 41st Avenue  | NB        | 4400                                 | 9                 | 6  | 0.20%         | 0.14% | No                           |
|           |                       | SB        | 4400                                 | 0                 | 11 | 0.00%         | 0.25% | No                           |

Note:  
 1. Freeway capacity is 2,200 vehicles per lane per hour. With two lanes in each direction, directional capacity is 4,400 vehicles per hour per lane. Auxiliary lanes on Highway 1 south of 41st Avenue do not add additional through capacity.