

## **ENVIRONMENTAL-DOCUMENTS**





## County of San Diego

### DEPARTMENT OF PLANNING AND LAND USE

5201 RUFFIN ROAD, SUITE B, SAN DIEGO, CALIFORNIA 92123-1666  
INFORMATION (858) 694-2960  
TOLL FREE (800) 411-0017

### MITIGATED NEGATIVE DECLARATION

March 22, 2007

Project Name: Sweetwater Road Condominiums

Project Number(s): TM 5392RPL<sup>3</sup>, S04-050, Log No. 04-18-008

**This Document is Considered Draft Until it is Adopted by the Appropriate  
County of San Diego Decision-Making Body.**

This Mitigated Negative Declaration is comprised of this form along with the Environmental Initial Study that includes the following:

- a. Initial Study Form
  - b. Environmental Analysis Form and attached Stormwater Management Plan, Acoustical Analysis, CEQA Preliminary Hydrology/Drainage Study, and Sensitive Plant Survey Report.
1. California Environmental Quality Act Mitigated Negative Declaration Findings:

Find, that this Mitigated Negative Declaration reflects the decision-making body's independent judgment and analysis, and; that the decision-making body has reviewed and considered the information contained in this Mitigated Negative Declaration and the comments received during the public review period; and that revisions in the project plans or proposals made by or agreed to by the project applicant would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and, on the basis of the whole record before the decision-making body (including this Mitigated Negative Declaration) that there is no substantial evidence that the project as revised will have a significant effect on the environment.
  2. Required Mitigation Measures:

Refer to the attached Environmental Initial Study for the rationale for requiring the following measures:

A. TRANSPORTATION

1. The payment of the Transportation Impact Fee, which will be required at issuance of building permits, in combination with other components of this program, will mitigate potential cumulative traffic impacts to less than significant.

B. BIOLOGICAL RESOURCES

1. Prior to approval of grading or improvement plans, and prior to approval of the Map, the applicant shall:
  - a. Provide for the approval of the Director of Planning and Land Use evidence that 0.35 acres of non-native grasslands (Tier III) or higher tier habitat credit have been secured in a County approved mitigation bank located in the MSCP. Evidence of purchase shall include the following information to be provided by the mitigation bank:
    - (1) A copy of the purchase contract referencing the project name and numbers for which the habitat credits were purchased.
    - (2) If not stated explicitly in the purchase contract, a separate letter must be provided identifying the entity responsible for the long-term management and monitoring of the preserved land.
    - (3) To ensure the land will be protected in perpetuity, evidence must be provided that a dedicated conservation easement or similar land constraint has been placed over the mitigation land.
    - (4) An accounting of the status of the mitigation bank. This shall include the total amount of credits available at the bank, the amount required by this project and the amount remaining after utilization by this project.

**-OR-**

- b. Provide for the conservation and habitat management of a minimum of 0.35 acres of non-native grasslands (Tier III) or higher Tier habitat located in the MSCP. A Habitat Management Plan (HMP) for the habitat must be submitted

and approved by the Director of the Department of Planning and Land Use. An open space easement over the acquired habitat must be dedicated to the County of San Diego prior to or immediately following the approval of the HMP.

C. Noise

1. Include a detail on the site plans specifying that sound attenuation barriers may be a berm, wall, or a combination design. Specify that "the wall portion of each barrier shall be made of earthen berm, masonry, ¾-inch thick plywood, ¼-inch thick glass, ½-inch thick Lexan, fiberglass, or a combination with no cracks or gaps through or below the barrier. The minimum surface density of each barrier shall be at least 3.5 pounds per square foot."
2. On the Final Map the applicant shall:

Grant to the County of San Diego a Noise Protection Easement over the entire area of Lot 1 of Tentative Map 5392RPL<sup>3</sup>. This easement is for the mitigation of present and anticipated future excess noise levels from Sweetwater Road and State Route 125 on residential uses of the affected Lot. The easement shall require:

- a. Complete to the satisfaction of the Director of the Department of Planning and Land Use, an acoustical analysis performed by a County approved acoustical engineer, demonstrating that the present and anticipated future noise levels for the interior of each residential dwelling unit will not exceed the allowable sound level limit of the Noise Element of the San Diego County General Plan [interior (45 dB CNEL)]. Future traffic noise level estimates, must utilize a Level of Service "C" traffic flow for a Major Road for Sweetwater Road which is the designated General Plan Circulation Element buildout roadway classification.
- b. Incorporate to the satisfaction of the Director of the Department of Planning and Land Use all of the recommendations or mitigation measures of the acoustical analysis into the project design and building plans.



3. Critical Project Design Elements That Must Become Conditions of Approval:

The following project design elements were either proposed in the project application or the result of compliance with specific environmental laws and regulations and were essential in reaching the conclusions within the attached Environmental Initial Study. While the following are not technically mitigation measures, their implementation must be assured to avoid potentially significant environmental effects.

1. Prior to approval of the Final Map,
  - a. Improve or agree to improve and provide security for the on-site private road with a minimum unobstructed private road width of twenty-four feet (24') of asphaltic concrete pavement over approved base. Private road grades shall be a minimum of 1.0 percent and designed to drain the surface water properly per Standard Condition 11 of the "Standard Conditions for Tentative Subdivision Maps". All of the foregoing shall be to the satisfaction of the San Miguel Consolidated Fire Protection District and the Director of Public Works.
  - b. Provide a certification by a Registered Civil Engineer, Licensed Land Surveyor, or Registered Traffic Engineer, that the unobstructed intersectional sight distance along Sweetwater Road looking in both directions from the project entrance is a minimum of seven hundred feet (700'), to the satisfaction of the Director of Public Works.
  - c. Dedicate/grant/provide any necessary on-site and off-site public/private drainage easements to the satisfaction of the Director of Public Works.
2. For the duration of this project-Comply with all applicable stormwater regulations at all times. The activities proposed under this application are subject to enforcement under permits from the San Diego Regional Water Quality Control Board (RWQCB) and the County of San Diego Watershed Protection, Stormwater Management, and Discharge Control Ordinance (Ordinance No. 9424 and Ordinance No. 9426) and all other applicable ordinances and standards. This includes requirements for materials and wastes control, erosion control, and sediment control on the project site. Projects that involve areas greater than one (1) acre require that the property owner keep additional and updated information onsite concerning

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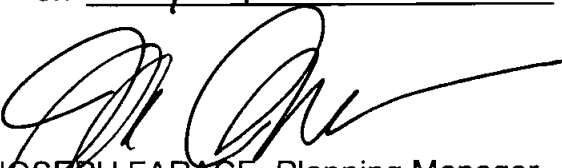
stormwater runoff. This requirement shall be to the satisfaction of the Director of Public Works.

3. The project includes category 2 post-construction BMPs (catch basin insert), the applicant will be required to establish a maintenance agreement/mechanism (to include easements) to assure maintenance of these BMPs and to provide security to back up maintenance pursuant to the County Maintenance Plan Guidelines to the satisfaction of the Director of Public Works.
4. The private road shall have red curbs and signage every 50' indicating "No Parking/ Fire Zone."
5. A fire hydrant shall be installed at the inside corner across from Lots 1 and 2.

**ADOPTION STATEMENT:** This Mitigated Negative Declaration was adopted and above California Environmental Quality Act findings made by the:

PLANNING COMMISSION

on 7/27/07

  
JOSEPH FARACE, Planning Manager  
Regulatory Planning Division

JF:LS:jcr

ND03-07\0418008-ND



**GARY L. PRYOR**  
DIRECTOR

## County of San Diego

### DEPARTMENT OF PLANNING AND LAND USE

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INFORMATION (858) 694-2960  
TOLL FREE (800) 411-0017

**SAN MARCOS OFFICE**  
151 E. CARMEL STREET  
SAN MARCOS, CA 92078-4309  
(760) 471-0730

**EL CAJON OFFICE**  
200 EAST MAIN ST. - SIXTH FLOOR  
EL CAJON, CA 92020-3912  
(619) 441-4030

March 22, 2007

### **CEQA Initial Study - Environmental Checklist Form** **(Based on the State CEQA Guidelines, Appendix G Rev. 10/04)**

1. Project Number(s)/Environmental Log Number/Title:

TM 5392RPL<sup>3</sup>, S04-050, Log No. 04-18-008

2. Lead agency name and address:

County of San Diego, Department of Planning and Land Use  
5201 Ruffin Road, Suite B,  
San Diego, CA 92123-1666

3. a. Contact:: Lori Spar, Project Manager  
b. Phone number: (858) 694-3737  
c. E-mail: Lori.Spar@sdcounty.ca.gov.

4. Project location:

The project is located east of Sweetwater Road, south of Ildica Street (adjacent to 2047 Sweetwater Road), in the Spring Valley Community Planning area, within the unincorporated portion of the County of San Diego.

Thomas Brothers Coordinates: Page 1291, Grid A/1

5. Project Applicant name and address:

Hossein Eftekhari  
A&E Sweet Homes LLC  
100 S. Anaheim Blvd., #360  
Anaheim, CA 92805

6. General Plan Designation  
Community Plan:  
Land Use Designation:  
Density:

Spring Valley  
(7) Residential  
10.9 du/ acre

7. Zoning  
Use Regulation: RV11  
Minimum Lot Size: 10,000 s.f.  
Special Area Regulation: B, D1, D2

8. Description of project:

The project is a single-lot subdivision (TM 5392RPL<sup>3</sup>) for ten condominium units within 1.15 acres. The project site is located east of Sweetwater Road, south of Ildica Street, in the Spring Valley Community Planning area, within unincorporated San Diego County. The site is subject to both the General Plan Regional Category Current Urban Development Area (CUDA) and Environmentally Constrained Area (ECA). The Land Use Designation is (7) Residential. The zoning for the site is RV11, with a density of 10.9 dwelling units per acre. The property is subject to three Special Area regulations: B (Community Design Review), D1 (Floodplain) and D2 (Noise Mitigation), requiring submittal of a Site Plan.

The site is currently vacant, with the exception of an existing six-foot high berm along the western boundary which will be retained. Access would be provided by a private driveway easement connecting to Sweetwater Road. The private road will be 25-foot wide and contain a red curb and signage identifying the road as "no parking/ fire land." A fire hydrant will be installed at the inside corner across from Lots 1 and 2.

The project would be served by the Spring Valley Sanitation District for sewer and imported water will be provided by the Helix Water District. Extension of sewer or water utilities from the existing driveway easement will be required by the project.

The project will consist of two buildings, one with seven attached units and the other with three attached units. The units contain three bedrooms and are two-stories in height with a maximum height of 27 feet, 11 inches. Each unit totals 1,262 square feet. All units will be equipped with fire sprinkler systems. A two car garage is located on the first floor of each unit. Eight additional parking spaces (one of which is ADA compliant) are provided for guests. A private driveway provides access from the Private Roadway along the northern boundary of the site that intersects with Sweetwater Road.

Open space areas are located in the front and rear of each unit. Six hundred (600) square feet of common open space is proposed along the western edge of the project site. This area will include benches and barbeques. A 6-foot high sound barrier is located between this common open space and Sweetwater Road. An additional 620 square feet of common open space is proposed at the northeast corner of the site. This area is to include a children's play area.

A 6-foot block wall is proposed along the southern property boundary. Slopes on-site will be constructed with a maximum 2:1 ratio with retaining walls not exceed 3 feet in height.

The project proposes landscaping as illustrated in the Landscape/ Planting Plan. All groundcover, trees, shrubs and flowers will have automatic sprinklers. The Homeowners Association will be responsible for maintenance of the landscaping and irrigation.

9. Surrounding land uses and setting (Briefly describe the project's surroundings):

Lands surrounding the project site are developed with multi-family residential and mobile homes. Immediately to the north of the project site is an eight unit duplex development within four buildings. To the east of the project site are various multi-family developments and south of the site is a mobile home park. The topography of the project site slopes from east to west, and vegetation on site is generally disturbed. The extension of SR 125 parallels Sweetwater Road, which runs along the western property boundary of the site.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

<b>Permit Type/Action</b>	<b>Agency</b>
Landscape Plans	County of San Diego
Site Plan	County of San Diego
Tentative Map	County of San Diego
County Right-of-Way Permits Construction Permit Encroachment Permit	County of San Diego
Grading Permit	County of San Diego
Improvement Plans	County of San Diego
Relinquish Access Rights	County of San Diego
National Pollutant Discharge Elimination System (NPDES) Permit	RWQCB
General Construction Storm water Permit	RWQCB
Water District Approval	Helix Water District
Sewer District Approval	Spring Valley Sanitation Maintenance District
Fire District Approval	San Miguel Consolidated Fire Protection District

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:** The environmental factors checked below would be potentially affected by this project and involve at least one impact that is a "Potentially Significant Impact" or a "Potentially Significant Impact Unless Mitigation Incorporated," as indicated by the checklist on the following pages.

CEQA Initial Study - 4 -  
 TM 5392RPL<sup>3</sup>, S04-050, Log No. 04-18-008

March 22, 2007

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> <u>Aesthetics</u>                      | <input type="checkbox"/> <u>Agriculture Resources</u>                         | <input type="checkbox"/> <u>Air Quality</u>                       |
| <input checked="" type="checkbox"/> <u>Biological Resources</u> | <input type="checkbox"/> <u>Cultural Resources</u>                            | <input type="checkbox"/> <u>Geology &amp; Soils</u>               |
| <input type="checkbox"/> <u>Hazards &amp; Haz. Materials</u>    | <input type="checkbox"/> <u>Hydrology &amp; Water Quality</u>                 | <input type="checkbox"/> <u>Land Use &amp; Planning</u>           |
| <input type="checkbox"/> <u>Mineral Resources</u>               | <input checked="" type="checkbox"/> <u>Noise</u>                              | <input type="checkbox"/> <u>Population &amp; Housing</u>          |
| <input type="checkbox"/> <u>Public Services</u>                 | <input type="checkbox"/> <u>Recreation</u>                                    | <input checked="" type="checkbox"/> <u>Transportation/Traffic</u> |
| <input type="checkbox"/> <u>Utilities &amp; Service Systems</u> | <input checked="" type="checkbox"/> <u>Mandatory Findings of Significance</u> |   |

**DETERMINATION:** (To be completed by the Lead Agency)  
 On the basis of this initial evaluation:

- ☐ On the basis of this Initial Study, the Department of Planning and Land Use finds that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ On the basis of this Initial Study, the Department of Planning and Land Use finds that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ On the basis of this Initial Study, the Department of Planning and Land Use finds that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

  
 Signature

March 22, 2007  
 Date

Lori Spar  
 Printed Name

Land Use/Environmental Planner  
 Title

## INSTRUCTIONS ON EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, potentially significant unless mitigation incorporated, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Potential Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
  - a) Earlier Analysis Used. Identify and state where they are available for review.
  - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c) Mitigation Measures. For effects that are "Potentially Significant Unless Mitigation Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. The explanation of each issue should identify:
  - a) The significance criteria or threshold, if any, used to evaluate each question; and
  - b) The mitigation measure identified, if any, to reduce the impact to less than significance

**I. AESTHETICS** -- Would the project:

a) Have a substantial adverse effect on a scenic vista?

☐ Potentially Significant Impact☐ Less than Significant Impact☐ Potentially Significant Unless  
Mitigation Incorporated☒ No Impact

## Discussion/Explanation:

**No Impact:** Scenic vistas are singular vantage points that offer unobstructed views of valued viewsheds, including areas designated as official scenic vistas along major highways or County designated visual resources. Based on a site visit completed by Alyssa Maxson on September 27, 2004, the proposed project is not located near or visible from a scenic vista and will not change the composition of an existing scenic vista. The project site is located in an area that primarily consists of single- and multi-family residential development. The extension of SR 125 runs parallel to Sweetwater Road, which forms the western property boundary of the site. Therefore, the proposed project will not have any substantial adverse effect on a scenic vista.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

☐ Potentially Significant Impact☐ Less than Significant Impact☐ Potentially Significant Unless  
Mitigation Incorporated☒ No Impact

## Discussion/Explanation:

**No Impact:** State scenic highways refer to those highways that are officially designated. A scenic highway is officially designated as a State scenic highway when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation for scenic highway approval, and receives notification from Caltrans that the highway has been designated as an official Scenic Highway. Based on a site visit completed by Alyssa Maxson on September 27, 2004 the proposed project is not located near or visible within the same composite viewshed as a State scenic highway and will not change the visual composition of an existing scenic resource within a State scenic highway. Generally, the area defined within a State scenic highway is the land adjacent to and visible from the vehicular right-of-way. The dimension of a scenic highway is usually identified using a motorist's line of vision, but a reasonable boundary is selected when the view extends to the distant horizon. The project site is located east of the SR 125, more than one mile south of the interchange with SR 94. Therefore, the proposed project will not have any substantial adverse effect on a scenic resource within a State scenic highway.



- c) Substantially degrade the existing visual character or quality of the site and its surroundings?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

**Less Than Significant Impact:** Visual character is the objective composition of the visible landscape within a viewshed. Visual character is based on the organization of the pattern elements line, form, color, and texture. Visual character is commonly discussed in terms of dominance, scale, diversity and continuity. Visual quality is the viewer's perception of the visual environment and varies based on exposure, sensitivity and expectation of the viewers. The existing visual character and quality of the project site and surrounding can be characterized as urban developed. The area is developed with single- and multi-family residential and mobile home residential. The surrounding structures consist of single story mobile homes and two-story structures. The extension of SR 125 parallels Sweetwater Road, which runs along the western property boundary of the site. The proposed project is a single-lot subdivision for the development of ten condominiums. The project type, scale and density would be compatible the existing development surrounding the project site.

The project will not result in cumulative impacts on visual character or quality because the entire existing viewshed and a list of past, present and future projects within that viewshed were evaluated. Refer to XVII. Mandatory Findings of Significance for a comprehensive list of the projects considered. Those projects listed in Section XVII are located within the viewshed surrounding the project and will not contribute to a cumulative impact for the following reasons: the proposed project is located within an urbanized area of Spring Valley and similar development is expected to continue, the project will not require significant alteration of the landform, does not propose grading and development on Steep Slopes, and is located within an area of existing multi-family residential development of similar density. The project will not result in incompatible changes in visual character or degrade the overall visual quality. Therefore, the project will not result in any adverse project or cumulative level effect on visual character or quality on-site or in the surrounding area.

- d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

**Less Than Significant Impact:** The proposed project will use outdoor lighting and is located within Zone B as identified by the San Diego County Light Pollution Code. However, it will not adversely affect nighttime views or astronomical observations, because the project will conform to the Light Pollution Code (Section 59.101-59.115), including the Zone B lamp type and shielding requirements per fixture and hours of operation limitations for outdoor lighting and searchlights.

The project will not contribute to significant cumulative impacts on day or nighttime views because the project will conform to the Light Pollution Code. The Code was developed by the San Diego County Department of Planning and Land Use and Department of Public Works in cooperation with lighting engineers, astronomers, land use planners from San Diego Gas and Electric, Palomar and Mount Laguna observatories, and local community planning and sponsor groups to effectively address and minimize the impact of new sources light pollution on nighttime views. The standards in the Code are the result of this collaborative effort and establish an acceptable level for new lighting. Compliance with the Code is required prior to issuance of any building permit for any project. Mandatory compliance for all new building permits ensures that this project in combination with all past, present and future projects will not contribute to a cumulatively considerable impact. Therefore, compliance with the Code ensures that the project will not create a significant new source of substantial light or glare, which would adversely affect daytime or nighttime views in the area, on a project or cumulative level.

**II. AGRICULTURE RESOURCES** -- In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

☐ Potentially Significant Impact  
☐ Potentially Significant Unless Mitigation Incorporated

☐ Less than Significant Impact  
☒ No Impact

Discussion/Explanation:

**No Impact:** The project site does not contain any lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. In addition, the project does not contain Farmland of Local Importance. Therefore, no Prime Farmland, Unique Farmland, Farmland of Statewide or Farmland of Local Importance will be converted to a non-agricultural use.

## b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

## Discussion/Explanation:

**No Impact:** The project site is zoned RV11, which is not considered to be an agricultural zone. Additionally, the project site's land is not under a Williamson Act Contract. Therefore, the project does not conflict with existing zoning for agricultural use, or a Williamson Act Contract.

## c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

## Discussion/Explanation:

**Less Than Significant Impact:** The project site is considered to be Urban/Developed land. The project site surrounding area within a radius of 1 mile has land designated as Prime Farmland. As a result, the proposed project was reviewed by Alyssa Maxson and was determined not to have significant adverse impacts related to the conversion of Prime Farmland, Unique Farmland, Farmland of Statewide Importance or Farmland of Local Importance to a non-agricultural use due to the already built-up nature of the surrounding area. Therefore, no potentially significant project or cumulative level conversion of Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Farmland of Local Importance to a non-agricultural use will occur as a result of this project.

**III. AIR QUALITY** – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

## a) Conflict with or obstruct implementation of the San Diego Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (SIP)?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

## Discussion/Explanation:

**Less Than Significant Impact:** The project proposes development that was anticipated in SANDAG growth projections used in development of the RAQS and SIP. Operation of the project will not result in emissions of significant quantities of criteria pollutants listed in the California Ambient Air Quality Standards or toxic air contaminants as identified by the California Air Resources Board. As such, the proposed project is not expected to conflict with either the RAQS or the SIP. In addition, the project is consistent with the SANDAG growth projections used in the RAQS and SIP, therefore, the project will not contribute to a cumulatively considerable impact.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

**Discussion/Explanation:**

In general, air quality impacts from land use projects are the result of emissions from motor vehicles, and from short-term construction activities associated with such projects. The San Diego County Air Pollution Control District (SDAPCD) has established screening-level criteria for all new source review (NSR) in APCD Rule 20.2. For CEQA purposes, these screening-level criteria can be used as numeric methods to demonstrate that a project's total emissions (e.g. stationary and fugitive emissions, as well as emissions from mobile sources) would not result in a significant impact to air quality. Since APCD does not have screening-level criteria for emissions of volatile organic compounds (VOCs), the use of the screening level for reactive organic compounds (ROC) from the CEQA Air Quality Handbook for the South Coast Air Basin (SCAB), which has stricter standards for emissions of ROCs/VOCs than San Diego's, is appropriate. However, the eastern portions of the county have atmospheric conditions that are characteristic of the Southeast Desert Air Basin (SEDAB). SEDAB is not classified as an extreme non-attainment area for ozone and therefore has a less restrictive screening-level. Projects located in the eastern portions of the County can use the SEDAB screening-level threshold for VOCs.

**Less Than Significant Impact:** The project proposes a single-lot subdivision for the development of ten condominiums. However, grading operations associated with the construction of the project would be subject to County of San Diego Grading Ordinance, which requires the implementation of dust control measures. Emissions from the construction phase would be minimal and localized, resulting in pollutant emissions below the screening-level criteria established by SDAPCD Rule 20.2 and by the South Coast Air Quality Management District (SCAQMD) CEQA Air Quality Handbook section 6.2 and 6.3. In addition, the vehicle trips generated from the project will result in 80 Average Daily Trips (ADTs). According to the Bay Area Air Quality Management District CEQA Guidelines for Assessing the Air Quality Impacts of Projects and Plans, projects that generate less than 2,000 ADT are below the Screening-Level Criteria established

by SDAPCD Rule 20.2 and by the SCAQMD CEQA Air Quality Handbook section 6.2 and 6.3 for criteria pollutants. As such, the project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

**Discussion/Explanation:**

San Diego County is presently in non-attainment for the 1-hour concentrations under the California Ambient Air Quality Standard (CAAQS) for Ozone (O<sub>3</sub>). San Diego County is also presently in non-attainment for the annual geometric mean and for the 24-hour concentrations of Particulate Matter less than or equal to 10 microns (PM<sub>10</sub>) under the CAAQS. O<sub>3</sub> is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>) react in the presence of sunlight. VOC sources include any source that burns fuels (e.g., gasoline, natural gas, wood, oil); solvents; petroleum processing and storage; and pesticides. Sources of PM<sub>10</sub> in both urban and rural areas include: motor vehicles, wood burning stoves and fireplaces, dust from construction, landfills, agriculture, wildfires, brush/waste burning, and industrial sources of windblown dust from open lands.

**Less Than Significant Impact:** Air quality emissions associated with the project include emissions of PM<sub>10</sub>, NO<sub>x</sub> and VOCs from construction/grading activities, and VOCs as the result of increase of traffic from operations at the facility. However, grading operations associated with the construction of the project would be subject to County of San Diego Grading Ordinance, which requires the implementation of dust control measures. Emissions from the construction phase would be minimal and localized, resulting in PM<sub>10</sub> and VOC emissions below the screening-level criteria established by SDAPCD Rule 20.2 and by the South Coast Air Quality Management District (SCAQMD) CEQA air quality handbook section 6.2 and 6.3. The vehicle trips generated from the project will result in 80 Average Daily Trips (ADTs). According to the Bay Area Air Quality Management District CEQA Guidelines for Assessing the Air Quality Impacts of Projects and Plans, projects that generate less than 2,000 ADT are below the Screening-Level Criteria established by SDAPCD Rule 20.2 and by the SCAQMD CEQA air quality handbook section 6.2 and 6.3 for VOCs and PM<sub>10</sub>.

In addition, a list of past, present and future projects within the surrounding area were evaluated and none of these projects emit significant amounts of criteria pollutants. Refer to XVII. Mandatory Findings of Significance for a comprehensive list of the projects considered. The proposed project as well as the past, present and future

projects within the surrounding area, have emissions below the screening-level criteria established by SDAPCD Rule 20.2 and by the SCAQMD CEQA air quality handbook section 6.2 and 6.3, therefore, the construction and operational emissions associated with the proposed project are not expected to create a cumulatively considerable impact nor a considerable net increase of PM<sub>10</sub>, or any O<sub>3</sub> precursors.

d) Expose sensitive receptors to substantial pollutant concentrations?

- ☐ Potentially Significant Impact  
☐ Potentially Significant Unless Mitigation Incorporated

- ☒ Less than Significant Impact  
☐ No Impact

Discussion/Explanation:

Air quality regulators typically define sensitive receptors as schools (Preschool-12<sup>th</sup> Grade), hospitals, resident care facilities, or day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality.

**Less Than Significant Impact:** The following sensitive receptors have been identified within a quarter-mile (the radius determined by the SCAQMD in which the dilution of pollutants is typically significant) of the proposed project: Mount Miguel High School. However, the project does not propose uses or activities that would result in exposure of these identified sensitive receptors to significant pollutant concentrations. In addition, the project will not contribute to a cumulatively considerable exposure of sensitive receptors to substantial pollutant concentrations because the proposed project as well as the listed projects have emissions below the screening-level criteria established by SDAPCD Rule 20.2 and by the SCAQMD CEQA air quality handbook section 6.2 and 6.3.

e) Create objectionable odors affecting a substantial number of people?

- ☐ Potentially Significant Impact  
☐ Potentially Significant Unless Mitigation Incorporated

- ☒ Less than Significant Impact  
☐ No Impact

Discussion/Explanation:

**Less Than Significant Impact:** The project could produce objectionable odors, which would result from volatile organic compounds, ammonia, carbon dioxide, hydrogen sulfide, methane, alcohols, aldehydes, amines, carbonyls, esters, disulfides dust and endotoxins from the construction and operational phases. However, these substances, if present at all, would only be in trace amounts (less than 1 µg/m<sup>3</sup>). Subsequently, no significant air quality – odor impacts are expected to affect surrounding receptors. Moreover, the affects of objectionable odors are localized to the immediate surrounding

area and will not contribute to a cumulatively considerable odor. A list of past, present and future projects within the surrounding area were evaluated and none of these projects create objectionable odors. Refer to XVII. Mandatory Findings of Significance for a comprehensive list of the projects considered.

**IV. BIOLOGICAL RESOURCES** -- Would the project:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

**Less Than Significant Impact:** Based on an analysis of the County's Geographic Information System (GIS) records, the County's Comprehensive Matrix of Sensitive Species, site photos, a site visit by staff biologist Greg Krzys and a spring rare plant survey by RC biological Consulting dated June 5, 2005, the site supports non-native grasslands, non-native vegetation and urban-developed lands. However, staff has determined that although the site supports non-native grasslands, the removal of this habitat will not result in substantial adverse effects, either directly or through habitat modifications, to species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service for the following reasons: no sensitive, narrow endemic or listed species occur on-site and the surrounding lands are completely developed.

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

**Less Than Significant Impact:** Based on an analysis of the County's Geographic Information System (GIS) records, the County's Comprehensive Matrix of Sensitive Species, site photos, a site visit by staff biologist Greg Krzys and a spring rare plant survey by RC biological Consulting dated June 5, 2005, it has been determined that the proposed project site contains no riparian or other sensitive habitat types. On-site there

are 0.3 acres of non-native vegetation, 0.15 acres of urban-developed land and 0.70 acres of non-native grasslands. The areas proposed for development will impact the entire site. Impacts to 0.70 acre of non-native grasslands is not considered significant but will be mitigated in accordance with the MSCP's Biological Mitigation Ordinance at a ½:1 ratio.

- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

☐ Potentially Significant Impact

☐ Less than Significant Impact

☐ Potentially Significant Unless Mitigation Incorporated

☒ No Impact

**Discussion/Explanation:**

**No Impact:** County staff biologist Greg Krzys has conducted a site visit and determined that the proposed project site does not contain any wetlands as defined by Section 404 of the Clean Water Act, including, but not limited to, marsh, vernal pool, stream, lake, river or water of the U.S., that could potentially be impacted through direct removal, filling, hydrological interruption, diversion or obstruction by the proposed development. Therefore, no impacts will occur to wetlands defined by Section 404 of the Clean Water Act in which the Army Corps of Engineers maintains jurisdiction over.

- d) Interfere substantially 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 wildlife nursery sites?

☐ Potentially Significant Impact

☐ Less than Significant Impact

☐ Potentially Significant Unless Mitigation Incorporated

☒ No Impact

**Discussion/Explanation:**

**No Impact:** Based on an analysis of the County's Geographic Information System (GIS) records, the County's Comprehensive Matrix of Sensitive Species, site photos, a site visit by staff biologist Greg Krzys, it has determined that the site is completely surrounded by development and the existing habitat types do not function in any manner as a wildlife linkage or corridor. Impacts to 0.70 acres of non-native grasslands will be mitigated off-site at a ½:1 ratio in an approved bank. This will contribute to the assembly of the MSCP preserve, which once fully assembled will provide for wildlife movement. Therefore, impedance of the movement of any native resident or migratory fish or wildlife species, or established native resident or migratory wildlife corridors, or



impedance of the use of native wildlife nursery sites would not be expected as a result of the proposed project.

- e) Conflict with the provisions of any adopted Habitat Conservation Plan, Natural Communities Conservation Plan, other approved local, regional or state habitat conservation plan or any other local policies or ordinances that protect biological resources?

- ☐ Potentially Significant Impact  
☐ Potentially Significant Unless Mitigation Incorporated

- ☐ Less than Significant Impact  
☒ No Impact

**Discussion/Explanation:**

Refer to the attached Ordinance Compliance Checklist dated January 11, 2007, for further information on consistency with any adopted Habitat Conservation Plan, Natural Communities Conservation Plan, other approved local, regional or state habitat conservation plan, including, Habitat Management Plans (HMP) Special Area Management Plans (SAMP) or any other local policies or ordinances that protect biological resources including the Multiple Species Conservation Program (MSCP), Biological Mitigation Ordinance, and Resource Protection Ordinance (RPO).

**V. CULTURAL RESOURCES** – Would the project:

- a) Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5?

- ☐ Potentially Significant Impact  
☐ Potentially Significant Unless Mitigation Incorporated

- ☐ Less than Significant Impact  
☒ No Impact

**Discussion/Explanation:**

**No Impact:** Based on an analysis of records by a County of San Diego staff archaeologist, Gail Wright on September 28, 2004, it has been determined that there are no impacts to historical resources because they do not occur within the project site. Additionally, the western portion of the project site has been previously disturbed, which has eliminated any potential for impacts to buried historical resources. Therefore, no impact to historical resources will occur as the result of the proposed project.

- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5?

- ☐ Potentially Significant Impact  
☐ Potentially Significant Unless Mitigation Incorporated

- ☐ Less than Significant Impact  
☒ No Impact

## Discussion/Explanation:

**No Impact:** Based on an analysis of records by a County of San Diego staff archaeologist, Gail Wright on September 28, 2004, it has been determined that the project site does not contain any archaeological resources. Additionally, the western portion of the project site has been previously disturbed and has eliminated any potential for impacts to buried archaeological resources. Therefore, no impact to archaeological resources will occur as the result of the proposed project.

- c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

## Discussion/Explanation:

**Less Than Significant Impact:** A review of the paleontological maps provided by the San Diego Museum of Natural History, combined with available data on San Diego County's geologic formations indicates that the project is located on geological formations that have low resource potential. Low resource potential is assigned to geologic formations that, based on their relative young age and/or high-energy depositional history, are judged unlikely to produce important fossil remains. Typically, low sensitivity formations produce invertebrate fossil remains in low abundance.

However, it has been determined the project will have less than significant impact on paleontological resources because the project will not result in the permanent loss of paleontological information, because the project will not exceed the following excavation guidelines that indicate when a paleontological resource may be significantly impacted for areas with low resource potential:

- a. The total excavation associated with the project does not exceed 3,000 cubic yards and not any portion of such excavation exceeds 10 feet in depth into the geologic formation; or
- b. In situations where the geologic formation has been previously excavated and the total excavation associated with the project does not exceeds 3,000 cubic yards; or
- c. In situations where the project is located within 200 feet of a recorded fossil site and is within the same geologic formation as such site, the total excavation associated with the project is not more than 200 cubic yards and not any portion of such excavation exceeds 10 feet in depth.

The minimum graded cut depth of 10 feet is the approximate depth at which bedrock is unweathered and the depth at which unique paleontological resources can typically begin to be found. The excavation volume of 3,000 is based on an excavation with 30' x 10'

footprint and a 10' depth. The excavation volume of 3,000 cubic yards was designed to address the patchy nature of many fossil occurrences and the observation that fossil discoveries increase in frequency with increasing volume of excavation. The excavation guidelines are based on discussions with City and County of San Diego staff and professional opinions of paleontological experts from the San Diego Natural History Museum. Therefore, because the project will not exceed the excavation guidelines the project will not result in the permanent loss of significant paleontological information. Moreover, the project will not contribute to a cumulatively considerable loss of information, because all projects in the areas with low resource potential are required to have paleontological monitor during grading operations if these guidelines are exceeded.

Additionally, no known unique geologic features were identified on the property or in the immediate vicinity.

- d) Disturb any human remains, including those interred outside of formal cemeteries?

☐ Potentially Significant Impact  
☐ Potentially Significant Unless Mitigation Incorporated

☐ Less than Significant Impact  
☒ No Impact

Discussion/Explanation:

**No Impact:** Based on an analysis of records by a County of San Diego staff archaeologist, Gail Wright, on September 28, 2004, it has been determined that the project will not disturb any human remains because the project site does not include a formal cemetery or any archaeological resources that might contain interred human remains. Additionally, the western portion of the project site has been previously disturbed and has eliminated any potential for impacts to buried human remains. Therefore, no impact to human remains will occur as the result of the proposed project.

**VI. GEOLOGY AND SOILS** – Would the project:

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- i. 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 based on other substantial evidence of a known fault?  
Refer to Division of Mines and Geology Special Publication 42.

☐ Potentially Significant Impact  
☐ Potentially Significant Unless Mitigation Incorporated

☐ Less than Significant Impact  
☒ No Impact

Discussion/Explanation:

**No Impact:** The project is not located in a fault rupture hazard zone identified by the Alquist-Priolo Earthquake Fault Zoning Act, Special Publication 42, Revised 1997, Fault-Rupture Hazards Zones in California, or located within any other area with substantial evidence of a known fault. Therefore, there will be no impact from the exposure of people or structures to adverse effects from a known hazard zone as a result of this project.

ii. Strong seismic ground shaking?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:

**No Impact:** The Uniform Building Code (UBC) and the California Building Code (CBC) classifies all San Diego County with the highest seismic zone criteria, Zone 4. However, the project is not located within 5 kilometers of the centerline of a known active-fault zone as defined within the Uniform Building Code's Maps of Known Active Fault Near-Source Zones in California. In addition, the project will have to conform to the Seismic Requirements – Chapter 16 Section 162- *Earthquake Design* as outlined within the California Building Code. Section 162 requires a soils compaction report with proposed foundation recommendations to be approved by a County Structural Engineer before the issuance of a building or grading permit. Therefore, there will be no impact from the exposure of people or structures to potential adverse effects from strong seismic ground shaking as a result of this project.

iii. Seismic-related ground failure, including liquefaction?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

**Less Than Significant Impact:** The project site is located within an area identified as Quaternary Alluvium. However, the project on-site conditions do not have susceptibility to settlement and liquefaction. Therefore, there will be a less than significant impact from the exposure of people to adverse effects from a known area susceptible to ground failure.

iv. Landslides?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

## Discussion/Explanation:

**Less Than Significant Impact:** The site is located within a very low to marginal landslide susceptibility zone. However, it has been determined that the area does not show evidence of either pre-existing or potential conditions that could become unstable in the event of seismic activity. Therefore, there will be no potentially significant impact from the exposure of people or structures to adverse effects from an area susceptible to landslides.

## b) Result in substantial soil erosion or the loss of topsoil?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

## Discussion/Explanation:

**Less Than Significant Impact:** According to the Soil Survey of San Diego County, the soils on-site are identified as PeC (Placentia sandy loam, 2 to 9 percent slopes) and AyE (Auld stony clay, 9 to 30 percent slopes). The Placentia sandy loam has a soil erodibility rating of "severe" and the Auld stony clay has a soil erodibility rating of "moderate" as indicated by the Soil Survey for the San Diego Area, prepared by the US Department of Agriculture, Soil Conservation and Forest Service dated December 1973. However, the project will not result in substantial soil erosion or the loss of topsoil for the following reasons:

- The project will not result in unprotected erodible soils; is not located in a floodplain, wetland, or significant drainage feature; and will not develop steep slopes.
- The project has prepared a Storm water Management Plan dated March 2006, prepared by Fereydoon Alipanah. The plan includes the following Best Management Practices to ensure sediment does not erode from the project site: Site design measures – The project site will landscape the slopes and common areas, and an irrigation system will be used to reduce over irrigation; Source control BMPs – The project will include an education component directed at each homeowner and storm drain inlets will be stenciled with a message warning citizens not to dump pollutants into the drains; Treatment control BMPs – A catch basin insert is proposed to be used to address water quality for this project.
- The project involves grading. However, the project is required to comply with the San Diego County Code of Regulations, Title 8, Zoning and Land Use

Regulations, Division 7, Sections 87.414 (DRAINAGE - EROSION PREVENTION) and 87.417 (PLANTING). Compliance with these regulations minimizes the potential for water and wind erosion.

Due to these factors, it has been found that the project will not result in substantial soil erosion or the loss of topsoil on a project level.

In addition, the project will not contribute to a cumulatively considerable impact because all the of past, present and future projects included on the list of projects that involve grading or land disturbance are required to follow the requirements of the San Diego County Code of Regulations, Title 8, Zoning and Land Use Regulations, Division 7, Sections 87.414 (DRAINAGE - EROSION PREVENTION) and 87.417 (PLANTING); Order 2001-01 (NPDES No. CAS 0108758), adopted by the San Diego Region RWQCB on February 21, 2001; County Watershed Protection, Storm Water Management, and Discharge Control Ordinance (WPO) (Ord. No. 9424); and County Storm water Standards Manual adopted on February 20, 2002, and amended January 10, 2003 (Ordinance No. 9426). Refer to XVII. Mandatory Findings of Significance for a comprehensive list of the projects considered.

- c) Will the project produce unstable geological conditions that will result in adverse impacts resulting from landslides, lateral spreading, subsidence, liquefaction or collapse?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

**Less Than Significant Impact:** The proposed project is a single-lot subdivision for the development of ten condominiums. The project will result in site disturbance and grading of 1.15 acres. However, the project will not result in unstable geological conditions because the project is consistent with the geological formation underlying the site. A Stormwater Management Plan prepared by Fereydoon Alipanah, dated March 2006, identified Best Management Practices to ensure sediment does not erode from the project site. For further information refer to VI Geology and Soils, Question a., i-iv listed above.

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

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

## Discussion/Explanation:

**Less Than Significant Impact:** The project is located on expansive soils as defined within Table 18-I-B of the Uniform Building Code (1994). This was confirmed by staff review of the Soil Survey for the San Diego Area, prepared by the US Department of Agriculture, Soil Conservation and Forest Service dated December 1973. The soils on-site are PeC (Placentia sandy loam) and AyE (Auld stoney clay). However, the project will not have any significant impacts because the project is required to comply the improvement requirements identified in the 1997 Uniform Building Code, Division III – Design Standard for Design of Slab-On-Ground Foundations to Resist the Effects of Expansive Soils and Compressible Soils, which ensure suitable structure safety in areas with expansive soils. Therefore, these soils will not create substantial risks to life or property.

- e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

## Discussion/Explanation:

**No Impact:** The project will rely on public water and sewer for the disposal of wastewater. A service availability letter has been received from the Spring Valley Sanitation Maintenance District indicating that the facility has adequate capacity for the projects wastewater disposal needs. No septic tanks or alternative wastewater disposal systems are proposed.

**VII. HAZARDS AND HAZARDOUS MATERIALS** -- Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, storage, use, or disposal of hazardous materials or wastes?

- |  |   |
|--|---|
| <input type="checkbox"/> Potentially Significant Impact                          | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporation | <input checked="" type="checkbox"/> No Impact         |

## Discussion/Explanation:

**No Impact:** The project will not create a significant hazard to the public or the environment because it does not propose the storage, use, transport, emission, or disposal of Hazardous Substances, nor are Hazardous Substances proposed or currently in use in the immediate vicinity.

- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:

**No Impact:** The project will not contain, handle, or store any potential sources of chemicals or compounds that would present a significant risk of accidental explosion or release of hazardous substances.

- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:

**No Impact:** Although the project is located within one-quarter mile of an existing school, Mount Miguel High School, the project does not propose the handling, storage, or transport of hazardous materials. Therefore, the project will not have any effect on an existing or proposed school.

- d) 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?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:

**No Impact:** The project is not located on a site listed in the State of California Hazardous Waste and Substances sites list compiled pursuant to Government Code Section 65962.5.



- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:

**No Impact:** The proposed project is not located within a Comprehensive Land Use Plan (CLUP) for airports; or within two miles of a public airport. Also, the project does not propose construction of any structure equal to or greater than 150 feet in height, constituting a safety hazard to aircraft and/or operations from an airport or heliport. Therefore, the project will not constitute a safety hazard for people residing or working in the project area.

- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:

**No Impact:** The proposed project is not within one mile of a private airstrip. As a result, the project will not constitute a safety hazard for people residing or working in the project area.

- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

The following sections summarize the project's consistency with applicable emergency response plans or emergency evacuation plans.

- i. OPERATIONAL AREA EMERGENCY PLAN:

**Less Than Significant Impact:** The Operational Area Emergency Plan is a framework document that provides direction to local jurisdictions to develop specific operational area of San Diego County. It provides guidance for emergency planning and requires subsequent plans to be established by each jurisdiction that has responsibilities in a disaster situation. The project will not interfere with this plan because it will not prohibit subsequent plans from being established.

ii. **SAN DIEGO COUNTY NUCLEAR POWER STATION EMERGENCY RESPONSE PLAN**

**No Impact:** The San Diego County Nuclear Power Station Emergency Response Plan will not be interfered with by the project due to the location of the project, plant and the specific requirements of the plan. The emergency plan for the San Onofre Nuclear Generating Station includes an emergency planning zone within a 10-mile radius. All land area within 10 miles of the plant is not within the jurisdiction of the unincorporated County and as such a project in the unincorporated area is not expected to interfere with any response or evacuation.

iii. **OIL SPILL CONTINGENCY ELEMENT**

**No Impact:** The Oil Spill Contingency Element will not be interfered with because the project is not located along the coastal zone or coastline.

iv. **EMERGENCY WATER CONTINGENCIES ANNEX AND ENERGY SHORTAGE RESPONSE PLAN**

**No Impact:** The Emergency Water Contingencies Annex and Energy Shortage Response Plan will not be interfered with because the project does not propose altering major water or energy supply infrastructure, such as the California Aqueduct.

v. **DAM EVACUATION PLAN**

**No Impact:** The Dam Evacuation Plan will not be interfered with because the project is located outside a dam inundation zone.

- h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

- ☐ Potentially Significant Impact  
☐ Potentially Significant Unless Mitigation Incorporated

- ☐ Less than Significant Impact  
☒ No Impact

Discussion/Explanation:

**No Impact:** The proposed project is completely surrounded by urbanized areas, and/or irrigated lands and there are no adjacent wildland areas. Also, a Fire Service Availability Letter, dated March 27, 2006, and conditions/comments, dated March 24, 2006, has been received from the San Miguel Consolidated Fire Protection District. Therefore, based on the location of the project; review of the project by County staff; and through compliance with the San Miguel Fire District's conditions, it is not anticipated that the project will expose people or structures to a significant risk of loss, injury or death involving hazardous wildland fires.

- i) Propose a use, or place residents adjacent to an existing or reasonably foreseeable use that would substantially increase current or future resident's exposure to vectors, including mosquitoes, rats or flies, which are capable of transmitting significant public health diseases or nuisances?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

**Discussion/Explanation:**

**No Impact:** The project does not involve or support uses that allow water to stand for a period of 72 hours (3 days) or more (e.g. artificial lakes, agricultural irrigation ponds). Also, the project does not involve or support uses that will produce or collect animal waste, such as equestrian facilities, agricultural operations (chicken coops, dairies etc.), solid waste facility or other similar uses. Moreover, based on a site visit conducted by Alyssa Maxson on September 27, 2004, there are none of these uses on adjacent properties. Therefore, the project will not substantially increase current or future resident's exposure to vectors, including mosquitoes, rats or flies.

**VIII. HYDROLOGY AND WATER QUALITY – Would the project:**

- a) Violate any waste discharge requirements?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

**Discussion/Explanation:**

**Less Than Significant Impact:** The proposed project is a single-lot subdivision for the development of ten condominiums. The project applicant has an approved the Stormwater Management Plan which demonstrates that the project will comply with all requirements of the NPDES Permit. The project site proposes and will be required to implement the following site design measures, source control BMPs, and treatment control BMPs to reduce potential pollutants to the maximum extent practicable from entering storm water runoff:

- Site design measures – The project site will landscape the slopes and common areas, and an irrigation system will be used to reduce over irrigation;
- Source control BMPs – The project will include an education component directed at each homeowner and storm drain inlets will be stenciled with a message warning citizens not to dump pollutants into the drains; and
- Treatment control BMPs – A catch basin insert is proposed to be used to address water quality for this project.

These measures will enable the project to meet waste discharge requirements as required by the Land-Use Planning for New Development and Redevelopment Component of the San Diego Municipal Permit (SDRWQCB Order No. 2001-01), as implemented by the San Diego County Jurisdictional Urban Runoff Management Program (JURMP) and Standard Urban Storm Water Mitigation Plan (SUSMP).

Finally, the project's conformance to the waste discharge requirements listed above ensures the project will not create cumulatively considerable water quality impacts related to waste discharge because, through the permit, the project will conform to Countywide watershed standards in the JURMP and SUSMP, derived from State regulation to address human health and water quality concerns. Therefore, the project will not contribute to a cumulatively considerable impact to water quality from waste discharges.

- b) Is the project tributary to an already impaired water body, as listed on the Clean Water Act Section 303(d) list? If so, could the project result in an increase in any pollutant for which the water body is already impaired?

- ☐ Potentially Significant Impact  
☐ Potentially Significant Unless Mitigation Incorporated

- ☒ Less than Significant Impact  
☐ No Impact

**Discussion/Explanation:**

**Less Than Significant Impact:** The project lies in the Sweetwater River hydrologic subarea (909.12), within the Sweetwater hydrologic unit. According to the Clean Water Act Section 303(d) list, July 2003, although portions of the San Diego Bay are impaired for coliform bacteria, no portion of the Sweetwater River, which is tributary to the Bay, is impaired. Constituents of concern in the Sweetwater River watershed include coliform bacteria and trace metals.

As a result of the land use activities proposed by this project, surface waters may contain additional urban runoff pollutants from the proposed road surfaces including silts, oil, and grease, along with hydrocarbons resulting from vehicular traffic. Additionally, sediments are likely to occur as a result of grading activities and non-planted slopes; nutrients and pesticides are likely to be present as a result of fertilizer and other chemical use around the new homesite; trash and debris may occur from the

homesite or people using the roadway; oxygen demanding substances and bacteria may occur as a result of improper disposal of pet waste or use of non-degradable detergents when washing vehicles.

However, the following site design measures, source control BMPs, and treatment control BMPs will be employed such that potential pollutants will be reduced in any runoff to the maximum extent practicable so as not to increase the level of these pollutants in receiving waters: Site design measures – The project site will landscape the slopes and common areas, and an irrigation system will be used to reduce over irrigation; Source control BMPs – The project will include an education component directed at each homeowner and storm drain inlets will be stenciled with a message warning citizens not to dump pollutants into the drains; Treatment control BMPs – A catch basin insert is proposed to be used to address water quality for this project.

The proposed BMPs are consistent with regional surface water and storm water planning and permitting process that has been established to improve the overall water quality in County watersheds. As a result the project will not contribute to a cumulative impact to an already impaired water body, as listed on the Clean Water Act Section 303(d). Regional surface water and storm water permitting regulation for County of San Diego, Incorporated Cities of San Diego County, and San Diego Unified Port District includes the following: Order 2001-01 (NPDES No. CAS 0108758), adopted by the San Diego Region RWQCB on February 21, 2001; County Watershed Protection, Storm Water Management, and Discharge Control Ordinance (WPO) (Ord. No. 9424); County Storm water Standards Manual adopted on February 20, 2002, and amended January 10, 2003 (Ordinance No. 9426). The stated purposes of these ordinances are to protect the health, safety and general welfare of the County of San Diego residents; to protect water resources and to improve water quality; to cause the use of management practices by the County and its citizens that will reduce the adverse effects of polluted runoff discharges on waters of the state; to secure benefits from the use of storm water as a resource; and to ensure the County is compliant with applicable state and federal laws. Ordinance No. 9424 (WPO) has discharge prohibitions, and requirements that vary depending on type of land use activity and location in the County. Ordinance No. 9426 is Appendix A of Ordinance No. 9424 (WPO) and sets out in more detail, by project category, what Dischargers must do to comply with the Ordinance and to receive permits for projects and activities that are subject to the Ordinance. Collectively, these regulations establish standards for projects to follow which intend to improve water quality from headwaters to the deltas of each watershed in the County. Each project subject to WPO is required to prepare a Stormwater Management Plan that details a project's pollutant discharge contribution to a given watershed and propose BMPs or design measures to mitigate any impacts that may occur in the watershed.

- c) Could the proposed project cause or contribute to an exceedance of applicable surface or groundwater receiving water quality objectives or degradation of beneficial uses?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

**Discussion/Explanation:**

**Less Than Significant Impact:** The Regional Water Quality Control Board has designated water quality objectives for waters of the San Diego Region as outlined in Chapter 3 of the Water Quality Control Plan (Plan). The water quality objectives are necessary to protect the existing and potential beneficial uses of each hydrologic unit as described in Chapter 2 of the Plan.

The project lies in the Sweetwater River hydrologic subarea (909.12), within the Sweetwater hydrologic unit that has the following existing and potential beneficial uses for inland surface waters, coastal waters, reservoirs and lakes, and ground water: municipal and domestic supply; industrial service supply; contact water recreation; non-contact water recreation; warm freshwater habitat; and wildlife habitat.

As a result of the land use activities proposed by this project, surface waters may contain additional urban runoff pollutants from the proposed road surfaces including silts, oil, and grease, along with hydrocarbons resulting from vehicular traffic. Additionally, sediments are likely to occur as a result of grading activities and non-planted slopes; nutrients and pesticides are likely to be present as a result of fertilizer and other chemical use around the new homesite; trash and debris may occur from the homesite or people using the roadway; oxygen demanding substances and bacteria may occur as a result of improper disposal of pet waste or use of non-degradable detergents when washing vehicles.

However, the following site design measures, source control BMPs, and treatment control BMPs will be employed such that potential pollutants will be reduced in any runoff to the maximum extent practicable so as not to increase the level of these pollutants in receiving waters: Site design measures – The project site will landscape the slopes and common areas, and an irrigation system will be used to reduce over irrigation; Source control BMPs – The project will include an education component directed at each homeowner and storm drain inlets will be stenciled with a message warning citizens not to dump pollutants into the drains; Treatment control BMPs – A catch basin insert is proposed to be used to address water quality for this project.

In addition, the proposed BMPs are consistent with regional surface water, storm water and groundwater planning and permitting process that has been established to improve the overall water quality in County watersheds. As a result, the project will not contribute to a cumulatively considerable exceedance of applicable surface or groundwater receiving water quality objectives or degradation of beneficial uses. Refer to Section VIII., Hydrology and Water Quality, Question b, for more information on regional surface water and storm water planning and permitting process.

- d) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:

**No Impact:** The project will obtain its water supply from the Helix Water District that obtains water from surface reservoirs or other imported water source. The project will not use any groundwater for any purpose, including irrigation, domestic or commercial demands. In addition, the project does not involve operations that would interfere substantially with groundwater recharge including, but not limited to the following: the project does not involve regional diversion of water to another groundwater basin; or diversion or channelization of a stream course or waterway with impervious layers, such as concrete lining or culverts, for substantial distances (e.g. ¼ mile). These activities and operations can substantially affect rates of groundwater recharge. Therefore, no impact to groundwater resources is anticipated.

- e) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

**Less Than Significant Impact:** The proposed project will not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in substantial erosion or siltation on- or off-site. In addition, a CEQA Preliminary Hydrology/Drainage Study received August 30, 2005, by DPLU was reviewed and accepted by DPW.

- f) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

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- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

**Less Than Significant Impact:** The proposed project will not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. In addition, a CEQA Preliminary Hydrology/Drainage Study received August 30, 2005, by DPLU was reviewed and accepted by DPW.

- g) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

**Less Than Significant Impact:** The proposed project will not substantially create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems. In addition, a CEQA Preliminary Hydrology/Drainage Study received August 30, 2005, by DPLU was reviewed and accepted by DPW.

- h) Provide substantial additional sources of polluted runoff?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

**Less Than Significant Impact:** As a result of the land use activities proposed by this project, surface waters may contain additional urban runoff pollutants from the proposed road surfaces including silts, oil, grease, along with hydrocarbons resulting from vehicular traffic. Additionally, sediments are likely to occur as a result of grading activities and non-planted slopes; nutrients and pesticides are likely to be present as a result of fertilizer and other chemical use around the new homesite; trash and debris may occur from the homesite or people using the roadway; oxygen demanding substances and bacteria may occur as a result of improper disposal of pet waste or use of non-degradable detergents when washing vehicles.



However, the following site design measures, source control BMPs, and treatment control BMPs will be employed such that potential pollutants will be reduced in any runoff to the maximum extent practicable so as not to increase the level of these pollutants in receiving waters: Site design measures – The project site will landscape the slopes and common areas, and an irrigation system will be used to reduce over irrigation; Source control BMPs – The project will include an education component directed at each homeowner and storm drain inlets will be stenciled with a message warning citizens not to dump pollutants into the drains; Treatment control BMPs – A catch basin insert is proposed to be used to address water quality for this project. Refer to VIII Hydrology and Water Quality Questions a, b, c, for further information.

- i) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, including County Floodplain Maps?

- ☐ Potentially Significant Impact  
☐ Potentially Significant Unless Mitigation Incorporated

- ☐ Less than Significant Impact  
☒ No Impact

Discussion/Explanation:

**No Impact:** No FEMA mapped floodplains, County-mapped floodplains or drainages with a watershed greater than 25 acres were identified on the project site or off-site improvement locations; therefore, no impact will occur.

- j) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

- ☐ Potentially Significant Impact  
☐ Potentially Significant Unless Mitigation Incorporated

- ☐ Less than Significant Impact  
☒ No Impact

Discussion/Explanation:

**No Impact:** No 100-year flood hazard areas were identified on the project site or off-site improvement locations; therefore, no impact will occur.

- k) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

- ☐ Potentially Significant Impact  
☐ Potentially Significant Unless Mitigation Incorporated

- ☐ Less than Significant Impact  
☒ No Impact

Discussion/Explanation:

**No Impact:** The project site lies outside any identified special flood hazard area including a mapped dam inundation area for a major dam/reservoir within San Diego County. In addition, the project is not located immediately downstream of a minor dam that could potentially flood the property. Therefore, the project will not expose people to a significant risk of loss, injury or death involving flooding.

i) Inundation by seiche, tsunami, or mudflow?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:

i. SEICHE

**No Impact:** The project site is not located along the shoreline of a lake or reservoir; therefore, could not be inundated by a seiche.

ii. TSUNAMI

**No Impact:** The project site is located more than a mile from the coast; therefore, in the event of a tsunami, would not be inundated.

iii. MUDFLOW

**No Impact:** Mudflow is type of landslide. The site is not located within a landslide susceptibility zone. Also, it has been determined that the geologic environment of the project area has a low probability to be located within an area of potential or pre-existing conditions that could become unstable in the event of seismic activity. In addition, though the project does propose land disturbance that will expose unprotected soils, the project is not located downstream from unprotected, exposed soils within a landslide susceptibility zone. Therefore, it is not anticipated that the project will expose people or property to inundation due to a mudflow.

**IX. LAND USE AND PLANNING** -- Would the project:

a) Physically divide an established community?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:

**No Impact:** The project does not propose the introducing new infrastructure such major roadways or water supply systems, or utilities to the area. Therefore, the proposed project will not significantly disrupt or divide the established community.

- b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

☐ Potentially Significant Impact

☒ Less than Significant Impact

☐ Potentially Significant Unless Mitigation Incorporated

☐ No Impact

**Discussion/Explanation:**

**Less Than Significant Impact:** The proposed project is subject to the Regional Land Use Element Policy 1.1 Current Urban Development Area (CUDA) and Policy 1.6 Environmentally Constrained Area (ECA). The ECA Regional Category is applied to the western portion of the property that prior to the improvements and construction of State Route 125, was considered a potential floodplain during high levels of precipitation. The project has a General Plan Land Use Designation of (7) Residential. The General Plan does not have a minimum gross parcel size for the (7) Residential, however, the maximum density is not more than 10.9 dwelling units per acre. The proposed project has a density that will be consistent with the General Plan Regional Category and Land Use Designation.

The project is subject to the policies of the Spring Valley Community Plan. The proposed project is consistent with the policies of the Spring Valley Community Plan. The current zone is RV11, with a density of 10.9 dwelling units per acre and a minimum net lot size of 10,000 square feet. The proposed project is a single-lot subdivision for the development of ten condominiums on 1.15 acres. The proposed project is consistent with the Zoning Ordinance requirements for density and minimum lot size.

**X. MINERAL RESOURCES** -- Would the project:

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

☐ Potentially Significant Impact

☒ Less than Significant Impact

☐ Potentially Significant Unless Mitigation Incorporated

☐ No Impact

**Discussion/Explanation:**

**Less Than Significant Impact:** Although the project site has been classified by the California Department of Conservation – Division of Mines and Geology (Update of Mineral Land Classification: Aggregate Materials in the Western San Diego Production-Consumption Region, 1997) as an area of undetermined mineral resources MRZ-3, it has been determined that the site is not located within an alluvial river valley or underlain by coastal marine/non-marine granular deposits. Therefore, no potentially significant loss of availability of a known mineral resource of value to the region and the residents of the state will occur as a result of this project. Moreover, if the resources are not considered significant mineral deposits, loss of these resources cannot contribute to a potentially significant cumulative impact.

- b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

- ☐ Potentially Significant Impact  
☐ Potentially Significant Unless Mitigation Incorporated

- ☐ Less than Significant Impact  
☒ No Impact

**Discussion/Explanation:**

**No Impact:** The project site is zoned RV11, which is not considered to be an Extractive Use Zone (S82) nor does it have an Impact Sensitive Land Use Designation (24) with an Extractive Land Use Overlay (25) (County Land Use Element, 2000).

**XI. NOISE** – Would the project result in:

- a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

- ☐ Potentially Significant Impact  
☒ Potentially Significant Unless Mitigation Incorporated

- ☐ Less than Significant Impact  
☐ No Impact

**Discussion/Explanation:**

**Potentially Significant Unless Mitigation Incorporated:** The project is a single Lot subdivision for 10 condominium units that will be occupied by local residents. This facility is considered to be noise sensitive. Noise sensitive land uses include residences, hospitals, schools, libraries or similar facilities where quiet is an important attribute. Based on a site visit completed by Alyssa Maxson on September 24, 2004 and as described in the Acoustical Analysis of the Sweetwater Road Project prepared by Gordon Bricken and Associates and dated February 7, 2007, the surrounding area supports multi-family and mobile home residential. The project will not expose people to potentially significant noise levels that exceed the allowable limits of the County of San Diego General Plan, for the following reasons:

**General Plan – Noise Element**

The County of San Diego General Plan, Noise Element, Policy 4b addresses noise sensitive land uses and requires an acoustical study to be prepared for any use that may expose noise sensitive land uses to noise in excess of a Community Noise Equivalent Level (CNEL) of 60 decibels (dBA). Moreover, if the project is in excess of CNEL 60 dB(A), modifications must be made to the project to reduce noise levels. Based on Bricken's Acoustical Analysis and dated February 7, 2007, project implementation is expected to expose onsite future noise sensitive land uses to road noise in excess of the CNEL 60 dB(A). Without measures or design considerations, the private usable open space and the common open space required for this development are going to be potentially affected by significant traffic noise levels ranging from 61 to 66 decibels CNEL. To reduce the future CNEL to acceptable levels, the site plan (STP04-050) requires the construction of a 6-foot tall sound attenuation barrier along the south property line, two-story buildings for these residential condominiums, and balcony sound attenuation barriers (42-inch and 60-inch heights in order to supplement the existing noise control features (berms and walls) in the vicinity of the subdivision. For interior noise sensitive land uses associated with each condominium, a Noise Protection Easement will be granted for the whole Lot so that an interior noise analysis of the final building design will be required prior to the issuance of building permits to demonstrate future compliance to the 45-decibel CNEL interior criterion.

**Noise Ordinance – Section 36-404**

Non-transportation noise generated by the project is not expected to exceed the standards of the County of San Diego Noise Ordinance (Section 36-404) at or beyond the project's property line. The site is zoned RV-11 that has a day/night one-hour average sound limit of 55/50 decibels (A). The adjacent properties are zoned either RV-11 or RMH-9 and have day/night one-hour average sound limits of the site (55/50) or 50/45 decibels (A). Based on a review by the County Noise Specialist John Bennett on December 19, 2006, the project's noise levels are not anticipated to impact adjoining properties or exceed County Noise Ordinance Standards, which is 50 decibels except for the south property line with 47.5 decibels being the most stringent limit, because the project includes property line sound attenuation barriers or other design considerations such as berms and parapet walls. Staff expects these features will provide the means for compliance from the potential effects of any noise producing equipment like air conditioners and the requirement of an acoustical analysis of the final building designs for the Noise Protection Easement.

**Noise Ordinance – Section 36-410**

The project will not generate construction noise that may exceed the standards of the County of San Diego Noise Ordinance (Section 36-410). Construction operations will occur only during permitted hours of operation pursuant to Section 36-410. Also, it is not anticipated that the project will operate construction equipment in excess of an average sound level of 75 dB between the hours of 7:00 AM and 7:00 PM.

Additionally, the project's conformance to the County of San Diego General Plan (Noise Element, Policy 4b) and County of San Diego Noise Ordinance (Section 36-404 and 36.410) ensures the project will not create cumulatively considerable noise impacts, because the project will not exceed the local noise standards for noise sensitive areas; and the project will not exceed the applicable noise level limits at the property line or construction noise limits, derived from State regulation to address human health and quality of life concerns. Therefore, the project will not contribute to a cumulatively considerable exposure of persons or generation of noise levels in excess of standards established in the local general plan, noise ordinance, and applicable standards of other agencies.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

**Less Than Significant Impact:** The project proposes residences where low ambient vibration is essential for sleeping conditions. However, the facilities are setback 50 feet from any County Circulation Element (CE) roadway using rubber-tired vehicles with projected groundborne noise or vibration contours of 38 VdB or less; any property line for parcels zoned industrial or extractive use; or any permitted extractive uses. It is not expected that the adjacent County CE roadways would be dominated by frequent heavy-duty truck activities. A setback of 50 feet from the roadway centerline for frequent heavy-duty truck activities insures that these proposed uses or operations do not have any chance of being impacted by groundborne vibration or groundborne noise levels (Federal Transit Administration, "Transit Noise and Vibration Impact Assessment," Final Report, May 2006, Rudy Hendriks, *Transportation Related Earthborne Vibrations* 2002). In addition, the setback ensures that the project will not be affected by any past, present or future projects that may support sources of groundborne vibration or groundborne noise.

Also, the project does not propose any major, new or expanded infrastructure such as mass transit, highways or major roadways or intensive extractive industry that could generate excessive groundborne vibration or groundborne noise levels and impact vibration sensitive uses in the surrounding area.

Therefore, the project will not expose persons to or generate excessive groundborne vibration or groundborne noise levels on a project or cumulative level.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

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- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

**Less Than Significant Impact:** The project involves the following permanent noise sources that may increase the ambient noise level: residential air conditioners. As indicated in the response listed under Section XI Noise, Question a., the project would not expose existing or planned noise sensitive areas in the vicinity to a substantial permanent increase in noise levels that exceed the allowable limits of the County of San Diego General Plan, County of San Diego Noise Ordinance, and other applicable local, State, and Federal noise control. Also, the project is not expected to expose existing or planned noise sensitive areas to noise 10 dB CNEL over existing ambient noise levels based on review of the project by County staff. The project will increase the ambient noise levels by 1 dB CNEL or less. Studies completed by the Organization of Industry Standards (ISO 362; ISO 1996 1-3; ISO 3095; and ISO 3740-3747) state an increase of 10 dB is perceived as twice as loud and is perceived as a significant increase in the ambient noise level.

The project will not result in cumulatively noise impacts because a list of past, present and future projects within the vicinity were evaluated. It was determined that the project in combination with a list of past, present and future project would not expose existing or planned noise sensitive areas to noise 10 dB CNEL over existing ambient noise levels. Refer to XVII. Mandatory Findings of Significance for a comprehensive list of the projects considered.

- d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

**Less Than Significant Impact:** The project does not involve any uses that may create substantial temporary or periodic increases in ambient noise levels in the project vicinity including but not limited to extractive industry; outdoor commercial or industrial uses that involve crushing, cutting, drilling, grinding, or blasting of raw materials; truck depots, transfer stations or delivery areas; or outdoor sound systems.

Also, general construction noise is not expected to exceed the construction noise limits of the County of San Diego Noise Ordinance (Section 36-410), which are derived from State regulations to address human health and quality of life concerns. Construction

operations will occur only during permitted hours of operation pursuant to Section 36-410. Also, it is not anticipated that the project will operate construction equipment in excess of an average sound level of 75 dB between the hours of 7:00 AM and 7:00 PM. Therefore, the project would not result in a substantial temporary or periodic increase in existing ambient noise levels in the project vicinity.

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:

**No Impact:** The proposed project is not located within a Comprehensive Land Use Plan (CLUP) for airports or within 2 miles of a public airport or public use airport. Therefore, the project will not expose people residing or working in the project area to excessive airport-related noise levels.

- f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:

**No Impact:** The proposed project is not located within a one-mile vicinity of a private airstrip; therefore, the project will not expose people residing or working in the project area to excessive airport-related noise levels.

**XII. POPULATION AND HOUSING** – Would the project:

- a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:



**No Impact:** The proposed project will not induce substantial population growth in an area because the project does not propose any physical or regulatory change that would remove a restriction to or encourage population growth in an area including, but limited to the following: new or extended infrastructure or public facilities; new commercial or industrial facilities; large-scale residential development; accelerated conversion of homes to commercial or multi-family use; or regulatory changes including General Plan amendments, specific plan amendments, zone reclassifications, sewer or water annexations; or LAFCO annexation actions.

- b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:

**No Impact:** The proposed project will not displace any existing housing since the site is currently vacant. The addition of 10 dwelling units will yield a net gain of available housing.

- c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:

**No Impact:** The proposed project will not displace a substantial number of people since the site is currently vacant.

### **XIII. PUBLIC SERVICES**

- a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance service ratios, response times or other performance objectives for any of the public services:

- i. Fire protection?
- ii. Police protection?
- iii. Schools?

- iv. Parks?
- v. Other public facilities?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

**Discussion/Explanation:**

**No Impact:** Based on the service availability forms received for the project, the proposed project will not result in the need for significantly altered services or facilities. Service availability forms have been provided which indicate existing services are available to the project from the following agencies/districts: Helix Water District, Spring Valley Sanitation Maintenance District, San Miguel Consolidated Fire Protection District, Grossmont Union High School District, and La Mesa-Spring Valley School District. The project does not involve the construction of new or physically altered governmental facilities including but not limited to fire protection facilities, sheriff facilities, schools, or parks in order to maintain acceptable service ratios, response times or other performance service ratios or objectives for any public services. Therefore, the project will not have an adverse physical effect on the environment because the project does not require new or significantly altered services or facilities to be constructed.

**XIV. RECREATION**

- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

**Discussion/Explanation:**

**Less Than Significant Impact:** The project involves a residential subdivision for the development of ten condominiums that will increase the use of existing neighborhood and regional parks or other recreational facilities. To avoid substantial physical deterioration of local recreation facilities the project will be required to pay fees or dedicate land for local parks to the County pursuant to the Park Land Dedication Ordinance (PLDO). The Park Land Dedication Ordinance (PLDO) is the mechanism that enables the funding or dedication of local parkland in the County. The PLDO establishes several methods by which developers may satisfy their park requirements. Options include the payment of park fees, the dedication of a public park, the provision of private recreational facilities, or a combination of these methods. PLDO funds must be used for the acquisition, planning, and development of local parkland and recreation facilities. Local parks are intended to serve the recreational needs of the communities

in which they are located. The proposed project opted to pay park fees. Therefore, the project meets the requirements set forth by the PLDO for adequate parkland dedication and thereby reducing impacts, including cumulative impacts to local recreational facilities. The project will not result in significant cumulative impacts, because all past, present and future residential projects are required to comply with the requirements of PLDO. Refer to XVII. Mandatory Findings of Significance for a comprehensive list of the projects considered.

There is an existing surplus of County Regional Parks. Currently, there is over 21,765 acres of regional parkland owned by the County, which far exceeds the General Plan standard of 15 acres per 1,000 population. In addition, there are over one million acres of publicly owned land in San Diego County dedicated to parks or open space including Federal lands, State Parks, special districts, and regional river parks. Due to the extensive surplus of existing publicly owned lands that can be used for recreation the project will not result in substantial physical deterioration of regional recreational facilities or accelerate the deterioration of regional parkland. Moreover, the project will not result any cumulatively considerable deterioration or accelerated deterioration of regional recreation facilities because even with all past, present and future residential projects a significant surplus of regional recreational facilities will remain.

- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:

**No Impact:** The project does not include recreational facilities or require the construction or expansion of recreational facilities. Therefore, the construction or expansion of recreational facilities cannot have an adverse physical effect on the environment.

**XV. TRANSPORTATION/TRAFFIC** -- Would the project:

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

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

## Discussion/Explanation:

**Less Than Significant:** The project will generate approximately an additional 80 ADT which (per SANDAG traffic rates: proposed 10 condominium units times 8 ADT per unit = 80 ADT). The project was reviewed by DPW and was determined not to result in a substantial increase in the number of vehicle trips, volume of capacity ratio on roads, or congestion at intersections in relation to existing conditions for the following reasons:

Currently there is approximately 28,000 ADT on Sweetwater Road. The existing level of service on Sweetwater Road is "D". The level of service with the project will be level of service "D". The increase of 80 ADT will not be a substantial increase.

- b) Exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency and/or as identified by the County of San Diego Transportation Impact Fee Program for designated roads or highways?

☐ Potentially Significant Impact

☐ Less than Significant Impact

☒ Potentially Significant Unless Mitigation Incorporated

☐ No Impact

## Discussion/Explanation:

**Potentially Significant Impact Unless Mitigation Incorporated:** The proposed project will result in an additional 80 ADT. The project was reviewed by the Department of Public Works and was determined not to exceed a level of service (LOS) standard at the direct project level. Therefore, the project will not have a significant direct project-level impact on the LOS standards established by the County congestion management agency for designated roads or highways.

The County of San Diego has developed an overall programmatic solution that addresses existing and projected future road deficiencies in the unincorporated portion of San Diego County. This program includes the adoption of a Transportation Impact Fee (TIF) program to fund improvements to roadways necessary to mitigate potential cumulative impacts caused by traffic from future development. Based on SANDAG regional growth and land use forecasts, the SANDAG Regional Transportation Model was utilized to analyze projected build-out (year 2030) development conditions on the existing circulation element roadway network throughout the unincorporated area of the County. Based on the results of the traffic modeling, funding necessary to construct transportation facilities that will mitigate cumulative impacts from new development was identified. Existing roadway deficiencies will be corrected through improvement projects funded by other public funding sources, such as TransNet, gas tax, and grants. Potential cumulative impacts to the region's freeways have been addressed in SANDAG's Regional Transportation Plan (RTP). This plan, which considers freeway buildout over the next 30 years, will use funds from TransNet, state, and federal funding to improve freeways to projected level of service objectives in the RTP.

The proposed project generates approximately an additional 80 ADT. These trips will be distributed on circulation element roadways in the County that were analyzed by the TIF program, some of which currently or are projected to operate at inadequate levels of service. These project trips therefore contribute to a potential significant cumulative impact and mitigation is required. The potential growth represented by this project was included in the growth projections upon which the TIF program is based. Therefore, payment of the TIF, which will be required at issuance of building permits, in combination with other components of the program described above, will mitigate potential cumulative traffic impacts to less than significant. In order to mitigate its incremental contribution to significant cumulative traffic impacts, the proposed project will pay the TIF prior to obtaining building permits.

- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:

**No Impact:** The proposed project is located outside of an Airport Master Plan Zone and is not adjacent to any public or private airports; therefore, the project will not result in a change in air traffic patterns.

- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

**Less Than Significant Impact:** There are no significant impacts to traffic safety since adequate sight distance will be required along Sweetwater Road looking in both directions from the project entrance. All road improvements will be constructed according to the County of San Diego Public and Private Road Standards. Roads used to access the proposed project site are up to County standards. The proposed project will not place incompatible uses (e.g., farm equipment) on existing roadways. Therefore, the proposed project will not significantly increase hazards due to design features or incompatible uses.

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## e) Result in inadequate emergency access?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

## Discussion/Explanation:

**Less Than Significant:** The proposed project will not result in inadequate emergency access. The San Miguel Consolidated Fire Protection District has reviewed the proposed project and associated emergency access roadways and has determined that there is adequate emergency fire access proposed. Additionally, roads used will be required to be improved to County standards.

## f) Result in inadequate parking capacity?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

## Discussion/Explanation:

**Less Than Significant Impact:** The Zoning Ordinance Section 6758 Parking Schedule requires provision for two on-site parking spaces for multi-family dwelling units with three or more bedrooms. Each dwelling unit has an attached two car garage. Additionally, there are eight additional parking spaces, of which one is ADA compliant, located on the project site. Therefore, the proposed project is providing adequate on-site parking.

## g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

## Discussion/Explanation:

**Less Than Significant Impact:** The project does not propose any hazards or barriers for pedestrians or bicyclists. Any required improvements will be constructed to maintain existing conditions as it relates to pedestrians and bicyclists.

**XVI. UTILITIES AND SERVICE SYSTEMS** – Would the project:

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

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- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

**Less Than Significant Impact:** The project proposes to discharge domestic waste to a community sewer system that is permitted to operate by the Regional Water Quality Control Board (RWQCB). A project facility availability form has been received from Spring Valley Sanitation Maintenance District that indicates the district will serve the project. Therefore, because the project will be discharging wastewater to a RWQCB permitted community sewer system and will be required to satisfy the conditions listed above, the project is consistent with the wastewater treatment requirements of the RWQCB, including the Regional Basin Plan.

- b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

- |   |   |
|---|---|
| <input type="checkbox"/> Potentially Significant Impact                         | <input type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input checked="" type="checkbox"/> No Impact         |

Discussion/Explanation:

**No Impact:** The project does not include new or expanded water or wastewater treatment facilities. In addition, the project does not require the construction or expansion of water or wastewater treatment facilities. Based on the service availability forms received, the project will not require construction of new or expanded water or wastewater treatment facilities. Service availability forms have been provided which indicate adequate water and wastewater treatment facilities are available to the project from the Helix Water District and Spring Valley Sanitation Maintenance District, respectively. Therefore, the project will not require any construction of new or expanded facilities, which could cause significant environmental effects.

- c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

- |   |  |
|---|--|
| <input type="checkbox"/> Potentially Significant Impact                         | <input checked="" type="checkbox"/> Less than Significant Impact |
| <input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated | <input type="checkbox"/> No Impact                               |

Discussion/Explanation:

**Less Than Significant Impact:** The project involves new and expanded storm water drainage facilities. The new facilities include a catch basin insert that will be installed to treat contaminated water before it enters the drainage system. Refer to the Storm water Management Plan prepared by Fereydoon Alipanah, dated March 2006, for more information. However, as outlined in this Environmental Analysis Form Section I-XVII, the new and expanded facilities will not result in adverse physical effect on the environment.

- d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

<input type="checkbox"/> Potentially Significant Impact	<input checked="" type="checkbox"/> Less than Significant Impact
<input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated	<input type="checkbox"/> No Impact

Discussion/Explanation:

**Less Than Significant Impact:** The project requires water service from the Helix Water District. A Service Availability Letter from the Helix Water District has been provided, indicating adequate water resources and entitlements are available to serve the requested water resources. Therefore, the project will have sufficient water supplies available to serve the project.

- e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

<input type="checkbox"/> Potentially Significant Impact	<input checked="" type="checkbox"/> Less than Significant Impact
<input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated	<input type="checkbox"/> No Impact

Discussion/Explanation:

**Less Than Significant Impact:** The project requires wastewater service from the Spring Valley Sanitation Maintenance District. A Service Availability Letter from the District has been provided, indicating adequate wastewater service capacity is available to serve the requested demand. Therefore, the project will not interfere with any wastewater treatment provider's service capacity.

- f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

<input type="checkbox"/> Potentially Significant Impact	<input checked="" type="checkbox"/> Less than Significant Impact
<input type="checkbox"/> Potentially Significant Unless Mitigation Incorporated	<input type="checkbox"/> No Impact



## Discussion/Explanation:

**Less Than Significant Impact:** Implementation of the project will generate solid waste. All solid waste facilities, including landfills require solid waste facility permits to operate. In San Diego County, the County Department of Environmental Health, Local Enforcement Agency issues solid waste facility permits with concurrence from the California Integrated Waste Management Board (CIWMB) under the authority of the Public Resources Code (Sections 44001-44018) and California Code of Regulations Title 27, Division 2, Subdivision 1, Chapter 4 (Section 21440et seq.). There are five, permitted active landfills in San Diego County with remaining capacity. Therefore, there is sufficient existing permitted solid waste capacity to accommodate the project's solid waste disposal needs.

- g) Comply with federal, state, and local statutes and regulations related to solid waste?

- ☐ Potentially Significant Impact  
☐ Potentially Significant Unless Mitigation Incorporated

- ☒ Less than Significant Impact  
☐ No Impact

## Discussion/Explanation:

**Less than Significant Impact:** Implementation of the project will generate solid waste. All solid waste facilities, including landfills require solid waste facility permits to operate. In San Diego County, the County Department of Environmental Health, Local Enforcement Agency issues solid waste facility permits with concurrence from the California Integrated Waste Management Board (CIWMB) under the authority of the Public Resources Code (Sections 44001-44018) and California Code of Regulations Title 27, Division 2, Subdivision 1, Chapter 4 (Section 21440et seq.). The project will deposit all solid waste at a permitted solid waste facility and therefore, will comply with Federal, State, and local statutes and regulations related to solid waste.

**XVII. MANDATORY FINDINGS OF SIGNIFICANCE:**

- a) 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 or animal or eliminate important examples of the major periods of California history or prehistory?

- ☐ Potentially Significant Impact  
☐ Potentially Significant Unless Mitigation Incorporated

- ☒ Less than Significant Impact  
☐ No Impact

## Discussion/Explanation:

**Less than Significant Impact:** Per the instructions for evaluating environmental impacts in this Initial Study, 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory were considered in the response to each question in sections IV and V of this form. In addition to project specific impacts, this evaluation considered the projects potential for significant cumulative effects. There is no substantial evidence that there are biological or cultural resources that are affected or associated with this project. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

- b) 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, the effects of other current projects, and the effects of probable future projects)?

- ☐ Potentially Significant Impact  
☒ Potentially Significant Unless Mitigation Incorporated

- ☐ Less than Significant Impact  
☐ No Impact

Discussion/Explanation:

**FOR ALL RESPONSES**

The following list of past, present and future projects were considered and evaluated as a part of this Initial Study:

PROJECT NAME	PERMIT/MAP NUMBER
Herremans Residential Addition	ZAP 06-005
Conrado Duplex	S03-076
Kevin's Auto Body Site Plan	S04-065
Coushetta Lane	S05-001
Wayne's Used Cars	S05-002
Palmieri Duplex	S05-024
Renteria Metal Building	S06-010
Ezcarzaga Family Residence Addition	S06-017
Huguley TPM	TPM 20589
Eaton Development	TPM 20757
Lamar Street TPM	TPM 20880
Kvaas Project	TPM 20939
Spring Valley Vistas	R03-010; TM 5336; S03-055
Valencia Square Condo Conversion	TM 5404; S04-076
Valencia Gardens Condo Conversion	TM 5420; S05-005

Ildica Street Condo Conversion	TM 5491; S06-015
Presioca Condo Conversion	TM 5400
Kinzeler Subdivision	TM 5477
Ildica Condominiums	TM 5486
Sugarbush Specific Plan	SP 03-003; TM 5295
Highlands' Ranch	SPA 02-002; TM 5299; S02-023

**Potentially Significant Unless Mitigation Incorporated:** Per the instructions for evaluating environmental impacts in this Initial Study, the potential for adverse cumulative effects were considered in the response to each question in sections I through XVI of this form. In addition to project specific impacts, this evaluation considered the projects potential for incremental effects that are cumulatively considerable. As a result of this evaluation, there were determined to be potentially significant cumulative effects related to transportation and traffic. However, mitigation has been included that clearly reduces these cumulative effects to a level below significance. This mitigation includes payment of the TIF, which will be required prior to obtaining building permits. As a result of this evaluation, there is no substantial evidence that, after mitigation, there are cumulative effects associated with this project. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

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

☐ Potentially Significant Impact

☐ Less than Significant Impact

☒ Potentially Significant Unless Mitigation Incorporated

☐ No Impact

Discussion/Explanation:

**Potentially Significant Unless Mitigation Incorporated:** In the evaluation of environmental impacts in this Initial Study, the potential for adverse direct or indirect impacts to human beings were considered in the response to certain questions in sections I. Aesthetics, III. Air Quality, VI. Geology and Soils, VII. Hazards and Hazardous Materials, VIII Hydrology and Water Quality XI. Noise, XII. Population and Housing, and XV. Transportation and Traffic. As a result of this evaluation, there were determined to be potentially significant effects to human beings related to the potential noise and transportation/traffic impacts. This mitigation includes a noise protection easement requiring an acoustical analysis be performed by a County certified acoustical engineer, demonstrating that the present and anticipated future noise levels for the interior of the above residential dwelling units will not exceed the allowable sound level limit of the Noise Element of the San Diego County General Plan and construction of a noise attenuation wall along the perimeter of the rear exterior noise sensitive areas for units 1 through 8. Also, the applicant is required to pay the Transportation Impact Fee, which will be required prior to obtaining building permits. As a result of this evaluation,

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there is no substantial evidence that, after mitigation, there are adverse effects to human beings associated with this project. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

## **XVIII. REFERENCES USED IN THE COMPLETION OF THE INITIAL STUDY CHECKLIST**

All references to Federal, State and local regulation are available on the Internet. For Federal regulation refer to <http://www4.law.cornell.edu/uscode/>. For State regulation refer to [www.leginfo.ca.gov](http://www.leginfo.ca.gov). For County regulation refer to [www.amlegal.com](http://www.amlegal.com). All other references are available upon request.

### **STUDIES PREPARED FOR THE PROJECT**

Alpanah, Fereydoon, *Stormwater Management Plan for TM 5392RPL3; STP 04-050; ER04-18-008*, March 2006.

Bricken, Gordon *Third Revised Acoustical Analysis – Sweetwater Road Project*, November 7, 2005.

MV Consulting Engineers, Inc., *CEQA Preliminary Hydrology/Drainage Study for Tract Number 5392*, May 2005.

RC Biological Consulting, Inc., *Sensitive Plant Survey Report for 2049 Sweetwater Road – TM 5392*, June 2, 2005.

### **AESTHETICS**

California Street and Highways Code [California Street and Highways Code, Section 260-283.  
[\(http://www.leginfo.ca.gov/\)](http://www.leginfo.ca.gov/)

California Scenic Highway Program, California Streets and Highways Code, Section 260-283.  
<http://www.dot.ca.gov/hq/LandArch/scenic/scpr.htm>

County of San Diego, Department of Planning and Land Use. The Zoning Ordinance of San Diego County. Sections 5200-5299; 5700-5799; 5900-5910, 6322-6326.  
[\(\(www.co.san-diego.ca.us\)](http://www.co.san-diego.ca.us)

County of San Diego, Board Policy I-73: Hillside Development Policy. [www.co.san-diego.ca.us](http://www.co.san-diego.ca.us)

County of San Diego, Board Policy I-104: Policy and Procedures for Preparation of Community Design Guidelines, Section 396.10 of the County Administrative Code and Section 5750 et seq. of the County Zoning Ordinance. [www.co.san-diego.ca.us](http://www.co.san-diego.ca.us)

County of San Diego, General Plan, Scenic Highway Element VI and Scenic Highway Program. [ceres.ca.gov](http://ceres.ca.gov)

County of San Diego Light Pollution Code, Title 5, Division 9 (Sections 59.101-59.115 of the County Code of Regulatory Ordinances) as added by Ordinance No 6900, effective January 18, 1985, and amended July 17, 1986 by Ordinance No. 7155. [www.amlegal.com](http://www.amlegal.com)

County of San Diego Wireless Communications Ordinance [San Diego County Code of Regulatory Ordinances.  
[www.amlegal.com](http://www.amlegal.com)

Design Review Guidelines for the Communities of San Diego County. (Alpine, Bonsall, Fallbrook, Julian, Lakeside, Ramona, Spring Valley, Sweetwater, Valley Center).

Federal Communications Commission, Telecommunications Act of 1996 [Telecommunications Act of 1996, Pub. LA. No. 104-104, 110 Stat. 56 (1996).  
<http://www.fcc.gov/Reports/tcom1996.txt>

Institution of Lighting Engineers, Guidance Notes for the Reduction of Light Pollution, Warwickshire, UK, 2000  
<http://www.dark-skies.org/file-gd-e.htm>

International Light Inc., Light Measurement Handbook, 1997.  
[www.int-light.com](http://www.int-light.com)

Rensselaer Polytechnic Institute, Lighting Research Center, National Lighting Product Information Program (NLPIP), Lighting Answers, Volume 7, Issue 2, March 2003.  
[www.lrc.rpi.edu](http://www.lrc.rpi.edu)

US Census Bureau, Census 2000, Urbanized Area Outline Map, San Diego, CA.  
<http://www.census.gov/geo/www/maps/ua2kmaps.htm>

US Department of the Interior, Bureau of Land Management (BLM) modified Visual Management System.  
[www.blm.gov](http://www.blm.gov)

US Department of Transportation, Federal Highway Administration (FHWA) Visual Impact Assessment for Highway Projects.

US Department of Transportation, National Highway System Act of 1995 [Title III, Section 304. Design Criteria for the National Highway System.  
<http://www.fhwa.dot.gov/legregs/nhsdatoc.html>

### **AGRICULTURE RESOURCES**

California Department of Conservation, Farmland Mapping and Monitoring Program, "A Guide to the Farmland Mapping and Monitoring Program," November 1994.  
[www.consrv.ca.gov](http://www.consrv.ca.gov)

California Department of Conservation, Office of Land Conversion, "California Agricultural Land Evaluation and Site Assessment Model Instruction Manual," 1997.  
[www.consrv.ca.gov](http://www.consrv.ca.gov)

California Farmland Conservancy Program, 1996.  
[www.consrv.ca.gov](http://www.consrv.ca.gov)

California Land Conservation (Williamson) Act, 1965.  
[www.ceres.ca.gov](http://www.ceres.ca.gov), [www.consrv.ca.gov](http://www.consrv.ca.gov)

California Right to Farm Act, as amended 1996.  
[www.op.gov.bc.ca](http://www.op.gov.bc.ca)

County of San Diego Agricultural Enterprises and Consumer Information Ordinance, 1994, Title 6, Division 3, Ch. 4. Sections 63.401-63.408. ([www.amlegal.com](http://www.amlegal.com))

County of San Diego, Department of Agriculture, Weights and Measures, "2002 Crop Statistics and Annual Report," 2002. ([www.sdcountry.ca.gov](http://www.sdcountry.ca.gov))

United States Department of Agriculture, Natural Resource Conservation Service LESA System. ([www.nrcs.usda.gov](http://www.nrcs.usda.gov), [www.swcs.org](http://www.swcs.org)).

United States Department of Agriculture, Soil Survey for the San Diego Area, California. 1973. ([soils.usda.gov](http://soils.usda.gov))

#### AIR QUALITY

CEQA Air Quality Analysis Guidance Handbook, South Coast Air Quality Management District, Revised November 1993. ([www.aqmd.gov](http://www.aqmd.gov))

County of San Diego Air Pollution Control District's Rules and Regulations, updated August 2003. ([www.co.san-diego.ca.us](http://www.co.san-diego.ca.us))

Federal Clean Air Act US Code; Title 42; Chapter 85 Subchapter 1. ([www4.law.cornell.edu](http://www4.law.cornell.edu))

#### BIOLOGY

California Department of Fish and Game (CDFG). Southern California Coastal Sage Scrub Natural Community Conservation Planning Process Guidelines. CDFG and California Resources Agency, Sacramento, California. 1993. ([www.dfg.ca.gov](http://www.dfg.ca.gov))

County of San Diego, An Ordinance Amending the San Diego County Code to Establish a Process for Issuance of the Coastal Sage Scrub Habitat Loss Permits and Declaring the Urgency Thereof to Take Effect Immediately, Ordinance No. 8365. 1994, Title 8, Div 6, Ch. 1. Sections 86.101-86.105, 87.202.2. ([www.amlegal.com](http://www.amlegal.com))

County of San Diego, Biological Mitigation Ordinance, Ord. Nos. 8845, 9246, 1998 (new series). ([www.co.san-diego.ca.us](http://www.co.san-diego.ca.us))

County of San Diego, Implementing Agreement by and between United States Fish and Wildlife Service, California Department of Fish and Game and County of San Diego. County of San Diego, Multiple Species Conservation Program, 1998.

County of San Diego, Multiple Species Conservation Program, County of San Diego Subarea Plan, 1997.

Holland, R.R. Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California, Resources Agency, Department of Fish and Game, Sacramento, California, 1986.

Memorandum of Understanding [Agreement Between United States Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), California Department of Forestry and Fire Protection (CDF), San Diego County Fire Chief's Association and the Fire District's Association of San Diego County.

Stanislaus Audubon Society, Inc. v County of Stanislaus (5<sup>th</sup> Dist. 1995) 33 Cal.App.4<sup>th</sup> 144, 155-159 [39 Cal. Rptr.2d 54]. ([www.ceres.ca.gov](http://www.ceres.ca.gov))

U.S. Army Corps of Engineers Environmental Laboratory. Corps of Engineers Wetlands Delineation Manual. U.S. Army Corps of Engineers, Wetlands Research Program Technical Report Y-87-1. 1987. (<http://www.wes.army.mil/>)

U.S. Environmental Protection Agency. America's wetlands: our vital link between land and water. Office of Water, Office of Wetlands, Oceans and Watersheds. EPA843-K-95-001. 1995b. ([www.epa.gov](http://www.epa.gov))

U.S. Fish and Wildlife Service and National Marine Fisheries Service. Habitat Conservation Planning Handbook. Department of Interior, Washington, D.C. 1996. ([endangered.fws.gov](http://endangered.fws.gov))

U.S. Fish and Wildlife Service and National Marine Fisheries Service. Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act. Department of Interior, Washington, D.C. 1998. ([endangered.fws.gov](http://endangered.fws.gov))

U.S. Fish and Wildlife Service. Environmental Assessment and Land Protection Plan for the Vernal Pools Stewardship Project. Portland, Oregon. 1997.

U.S. Fish and Wildlife Service. Vernal Pools of Southern California Recovery Plan. U.S. Department of Interior, Fish and Wildlife Service, Region One, Portland, Oregon, 1998. ([ecos.fws.gov](http://ecos.fws.gov))

U.S. Fish and Wildlife Service. Birds of conservation concern 2002. Division of Migratory. 2002. ([migratorybirds.fws.gov](http://migratorybirds.fws.gov))

#### CULTURAL RESOURCES

California Health & Safety Code. §18950-18961, State Historic Building Code. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California Health & Safety Code. §5020-5029, Historical Resources. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California Health & Safety Code. §7050.5, Human Remains. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California Native American Graves Protection and Repatriation Act, (AB 978), 2001. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California Public Resources Code §5024.1, Register of Historical Resources. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California Public Resources Code. §5031-5033, State Landmarks. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California Public Resources Code. §5097-5097.6, Archaeological, Paleontological, and Historic Sites. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California Public Resources Code. §5097.9-5097.991, Native American Heritage. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

City of San Diego. Paleontological Guidelines. (revised) August 1998.

County of San Diego, Local Register of Historical Resources (Ordinance 9493), 2002. ([www.co.san-diego.ca.us](http://www.co.san-diego.ca.us))

Demere, Thomas A., and Stephen L. Walsh. Paleontological Resources San Diego County. Department of Paleontology, San Diego Natural History Museum. 1994.

Moore, Ellen J. Fossil Mollusks of San Diego County. San Diego Society of Natural history. Occasional; Paper 15. 1968.

U.S. Code including: American Antiquities Act (16 USC §431-433) 1906. Historic Sites, Buildings, and Antiquities Act (16 USC §461-467), 1935. Reservoir Salvage Act (16 USC §469-469c) 1960. Department of Transportation Act (49 USC §303) 1966. National Historic Preservation Act (16 USC §470 et seq.) 1966. National Environmental Policy Act (42 USC §4321) 1969. Coastal Zone Management Act (16 USC §1451) 1972. National Marine Sanctuaries Act (16 USC §1431) 1972. Archaeological and Historical Preservation Act (16 USC §469-469c) 1974. Federal Land Policy and Management Act (43 USC §35) 1976. American Indian Religious Freedom Act (42 USC §1996 and 1996a) 1978. Archaeological Resources Protection Act (16 USC §470aa-mm) 1979. Native American Graves Protection and Repatriation Act (25 USC §3001-3013) 1990. Intermodal Surface Transportation Efficiency Act (23 USC §101, 109) 1991. American Battlefield Protection Act (16 USC 469k) 1996. ([www4.law.cornell.edu](http://www4.law.cornell.edu))

### GEOLOGY & SOILS

California Department of Conservation, Division of Mines and Geology, California Alquist-Priolo Earthquake Fault Zoning Act, Special Publication 42, Revised 1997. ([www.consrv.ca.gov](http://www.consrv.ca.gov))

California Department of Conservation, Division of Mines and Geology, Fault-Rupture Hazard Zones in California, Special Publication 42, revised 1997. ([www.consrv.ca.gov](http://www.consrv.ca.gov))

California Department of Conservation, Division of Mines and Geology, Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California, 1997. ([www.consrv.ca.gov](http://www.consrv.ca.gov))

County of San Diego Code of Regulatory Ordinances Title 6, Division 8, Chapter 3, Septic Ranks and Seepage Pits. ([www.amlegal.com](http://www.amlegal.com))

County of San Diego Department of Environmental Health, Land and Water Quality Division, February 2002. On-site Wastewater Systems (Septic Systems): Permitting Process and Design Criteria. ([www.sdcountry.ca.gov](http://www.sdcountry.ca.gov))

County of San Diego Natural Resource Inventory, Section 3, Geology.

United States Department of Agriculture, Soil Survey for the San Diego Area, California. 1973. ([soils.usda.gov](http://soils.usda.gov))

### HAZARDS & HAZARDOUS MATERIALS

American Planning Association, Zoning News, "Saving Homes from Wildfires: Regulating the Home Ignition Zone," May 2001.

California Building Code (CBC), Seismic Requirements, Chapter 16 Section 162. ([www.buildersbook.com](http://www.buildersbook.com))

California Education Code, Section 17215 and 81033. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California Government Code. § 8585-8589, Emergency Services Act. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California Hazardous Waste and Substances Site List. April 1998. ([www.dtsc.ca.gov](http://www.dtsc.ca.gov))

California Health & Safety Code Chapter 6.95 and §25117 and §25316. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California Health & Safety Code § 2000-2067. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California Health & Safety Code. §17922.2. Hazardous Buildings. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California Public Utilities Code, SDCRAA. Public Utilities Code, Division 17, Sections 170000-170084. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California Resources Agency, "OES Dam Failure Inundation Mapping and Emergency Procedures Program", 1996. ([ceres.ca.gov](http://ceres.ca.gov))

County of San Diego, Consolidated Fire Code Health and Safety Code §13869.7, including Ordinances of the 17 Fire Protection Districts as Ratified by the San Diego County Board of Supervisors, First Edition, October 17, 2001 and Amendments to the Fire Code portion of the State Building Standards Code, 1998 Edition.

County of San Diego, Department of Environmental Health Community Health Division Vector Surveillance and Control. Annual Report for Calendar Year 2002. March 2003. ([www.sdcountry.ca.gov](http://www.sdcountry.ca.gov))

County of San Diego, Department of Environmental Health, Hazardous Materials Division. California Accidental Release Prevention Program (CalARP) Guidelines. (<http://www.sdcountry.ca.gov>, [www.oes.ca.gov](http://www.oes.ca.gov))

County of San Diego, Department of Environmental Health, Hazardous Materials Division. Hazardous Materials Business Plan Guidelines. ([www.sdcountry.ca.gov](http://www.sdcountry.ca.gov))

County of San Diego Code of Regulatory Ordinances, Title 3, Div 5, CH. 3, Section 35.39100.030, Wildland/Urban Interface Ordinance, Ord. No.9111, 2000. ([www.amlegal.com](http://www.amlegal.com))

Robert T. Stafford Disaster Relief and Emergency Assistance Act as amended October 30, 2000, US Code, Title 42, Chapter 68, 5121, et seq. ([www4.law.cornell.edu](http://www4.law.cornell.edu))

Unified San Diego County Emergency Services Organization Operational Area Emergency Plan, March 2000.

Unified San Diego County Emergency Services Organization Operational Area Energy Shortage Response Plan, June 1995.

Uniform Building Code. ([www.buildersbook.com](http://www.buildersbook.com))

Uniform Fire Code 1997 edition published by the Western Fire Chiefs Association and the International Conference of Building Officials, and the National Fire Protection Association Standards 13 & 13-D, 1996 Edition, and 13-R, 1996 Edition. ([www.buildersbook.com](http://www.buildersbook.com))

### HYDROLOGY & WATER QUALITY

American Planning Association, Planning Advisory Service Report Number 476 Non-point Source Pollution: A Handbook for Local Government

California Department of Water Resources, California Water Plan Update. Sacramento: Dept. of Water Resources State of California. 1998. ([rubicon.water.ca.gov](http://rubicon.water.ca.gov))

California Department of Water Resources, California's Groundwater Update 2003 Bulletin 118, April 2003. ([www.groundwater.water.ca.gov](http://www.groundwater.water.ca.gov))

California Department of Water Resources, Water Facts, No. 8, August 2000. ([www.dpla2.water.ca.gov](http://www.dpla2.water.ca.gov))

California Disaster Assistance Act. Government Code, § 8680-8692. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California State Water Resources Control Board, NPDES General Permit Nos. CAS000001 INDUSTRIAL ACTIVITIES (97-03-DWQ) and CAS000002 Construction Activities (No. 99-08-DWQ) ([www.swrcb.ca.gov](http://www.swrcb.ca.gov))

California Storm Water Quality Association, California Storm Water Best Management Practice Handbooks, 2003.

California Water Code, Sections 10754, 13282, and 60000 et seq. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

Colorado River Basin Regional Water Quality Control Board, Region 7, Water Quality Control Plan. ([www.swrcb.ca.gov](http://www.swrcb.ca.gov))

County of San Diego Regulatory Ordinance, Title 8, Division 7, Grading Ordinance. Grading, Clearing and Watercourses. ([www.amlegal.com](http://www.amlegal.com))

County of San Diego, Groundwater Ordinance. #7994. ([www.sdcounty.ca.gov](http://www.sdcounty.ca.gov), <http://www.amlegal.com/>)

County of San Diego, Project Clean Water Strategic Plan, 2002. ([www.projectcleanwater.org](http://www.projectcleanwater.org))

County of San Diego, Watershed Protection, Storm Water Management, and Discharge Control Ordinance, Ordinance Nos. 9424 and 9426. Chapter 8, Division 7, Title 6 of the San Diego County Code of Regulatory Ordinances and amendments. ([www.amlegal.com](http://www.amlegal.com))

County of San Diego. Board of Supervisors Policy I-68. Diego Proposed Projects in Flood Plains with Defined Floodways. ([www.co.san-diego.ca.us](http://www.co.san-diego.ca.us))

Federal Water Pollution Control Act (Clean Water Act), 1972, Title 33, Ch.26, Sub-Ch.1. ([www4.law.cornell.edu](http://www4.law.cornell.edu))

Freeze, Allan and Cherry, John A., Groundwater, Prentice-Hall, Inc. New Jersey, 1979.

Heath, Ralph C., Basic Ground-Water Hydrology, United States Geological Survey Water-Supply Paper; 2220, 1991.

National Flood Insurance Act of 1968. ([www.fema.gov](http://www.fema.gov))

National Flood Insurance Reform Act of 1994. ([www.fema.gov](http://www.fema.gov))

Porter-Cologne Water Quality Control Act, California Water Code Division 7. Water Quality. ([ceres.ca.gov](http://ceres.ca.gov))

San Diego Association of Governments, Water Quality Element, Regional Growth Management Strategy, 1997. ([www.sandag.org](http://www.sandag.org))

San Diego Regional Water Quality Control Board, NPDES Permit No. CAS0108758. ([www.swrcb.ca.gov](http://www.swrcb.ca.gov))

San Diego Regional Water Quality Control Board, Water Quality Control Plan for the San Diego Basin. ([www.swrcb.ca.gov](http://www.swrcb.ca.gov))

#### LAND USE & PLANNING

California Department of Conservation Division of Mines and Geology, Open File Report 96-04, Update of Mineral Land Classification: Aggregate Materials in the Western San Diego County Production Consumption Region, 1996. ([www.consrv.ca.gov](http://www.consrv.ca.gov))

California Environmental Quality Act, CEQA Guidelines, 2003. ([ceres.ca.gov](http://ceres.ca.gov))

California Environmental Quality Act, Public Resources Code 21000-21178; California Code of Regulations, Guidelines for Implementation of CEQA, Appendix G, Title 14, Chapter 3, §15000-15387. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California General Plan Glossary of Terms, 2001. ([ceres.ca.gov](http://ceres.ca.gov))

California State Mining and Geology Board, SP 51, California Surface Mining and Reclamation Policies and Procedures, January 2000. ([www.consrv.ca.gov](http://www.consrv.ca.gov))

County of San Diego Code of Regulatory Ordinances, Title 8, Zoning and Land Use Regulations. ([www.amlegal.com](http://www.amlegal.com))

County of San Diego, Board of Supervisors Policy I-84: Project Facility. ([www.sdcounty.ca.gov](http://www.sdcounty.ca.gov))

County of San Diego, Board Policy I-38, as amended 1989. ([www.sdcounty.ca.gov](http://www.sdcounty.ca.gov))

County of San Diego, Department of Planning and Land Use. The Zoning Ordinance of San Diego County. ([www.co.san-diego.ca.us](http://www.co.san-diego.ca.us))

County of San Diego, General Plan as adopted and amended from September 29, 1971 to April 5, 2000. ([ceres.ca.gov](http://ceres.ca.gov))

County of San Diego. Resource Protection Ordinance, compilation of Ord. Nos. 7968, 7739, 7685 and 7631. 1991.

Design Review Guidelines for the Communities of San Diego County.

Guide to the California Environmental Quality Act (CEQA) by Michael H. Remy, Tina A. Thomas, James G. Moore, and Whitman F. Manley, Point Arena, CA: Solano Press Books, 1999. ([ceres.ca.gov](http://ceres.ca.gov))

#### MINERAL RESOURCES

National Environmental Policy Act, Title 42, 36.401 et. seq. 1969. ([www4.law.cornell.edu](http://www4.law.cornell.edu))

Subdivision Map Act, 2003. ([ceres.ca.gov](http://ceres.ca.gov))

U.S. Geologic Survey, Causey, J. Douglas, 1998, MAS/MILS Mineral Location Database.

U.S. Geologic Survey, Frank, David G., 1999, (MRDS) Mineral Resource Data System.

#### NOISE

California State Building Code, Part 2, Title 24, CCR, Appendix Chapter 3, Sound Transmission Control, 1988. ([www.buildersbook.com](http://www.buildersbook.com))

County of San Diego Code of Regulatory Ordinances, Title 3, Div 6, Chapter 4, Noise Abatement and Control, effective February 4, 1982. ([www.amlegal.com](http://www.amlegal.com))

County of San Diego General Plan, Part VIII, Noise Element, effective December 17, 1980. ([ceres.ca.gov](http://ceres.ca.gov))

Federal Aviation Administration, Federal Aviation Regulations, Part 150 Airport Noise Compatibility Planning (revised January 18, 1985). (<http://www.access.gpo.gov/>)

Harris Miller Miller and Hanson Inc., *Transit Noise and Vibration Impact Assessment*, April 1995. (<http://ntl.bts.gov/data/rail05/rail05.html>)

International Standard Organization (ISO), ISO 362; ISO 1996 1-3; ISO 3095; and ISO 3740-3747. ([www.iso.ch](http://www.iso.ch))

U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch. "Highway Traffic Noise Analysis and Abatement Policy and Guidance," Washington, D.C., June 1995. (<http://www.fhwa.dot.gov/>)

#### POPULATION & HOUSING

Housing and Community Development Act of 1974, 42 USC 5309, Title 42—The Public Health And Welfare, Chapter 69—Community Development, United States Congress, August 22, 1974. ([www4.law.cornell.edu](http://www4.law.cornell.edu))

National Housing Act (Cranston-Gonzales), Title 12, Ch. 13. ([www4.law.cornell.edu](http://www4.law.cornell.edu))

San Diego Association of Governments Population and Housing Estimates, November 2000. ([www.sandag.org](http://www.sandag.org))

US Census Bureau, Census 2000. (<http://www.census.gov/>)

#### RECREATION

County of San Diego Code of Regulatory Ordinances, Title 8, Division 10, Chapter PLDO, §810.101 et seq. Park Lands Dedication Ordinance. ([www.amlegal.com](http://www.amlegal.com))

#### TRANSPORTATION/TRAFFIC

California Aeronautics Act, Public Utilities Code, Section 21001 et seq. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California Department of Transportation, Division of Aeronautics, California Airport Land Use Planning Handbook, January 2002.

California Department of Transportation, Environmental Program Environmental Engineering – Noise, Air Quality, and Hazardous Waste Management Office. "Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects," October 1998. ([www.dot.ca.gov](http://www.dot.ca.gov))

California Public Utilities Code, SDCRAA. Public Utilities Code, Division 17, Sections 170000-170084. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

California Street and Highways Code. California Street and Highways Code, Section 260-283. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

County of San Diego, Alternative Fee Schedules with Pass-By Trips Addendum to Transportation Impact Fee Reports, March 2005. (<http://www.sdcounty.ca.gov/dpw/land/pdf/TransImpactFee/attach.pdf>)

County of San Diego Transportation Impact Fee Report, January 2005. (<http://www.sdcounty.ca.gov/dpw/permits-forms/manuals.html>)

Fallbrook & Ramona Transportation Impact Fee Report, County of San Diego, January 2005. (<http://www.sdcounty.ca.gov/dpw/permits-forms/manuals.html>)

Office of Planning, Federal Transit Administration, Transit Noise and Vibration Impact Assessment, Final Report, April 1995.

San Diego Association of Governments, 2020 Regional Transportation Plan. Prepared by the San Diego Association of Governments. ([www.sandag.org](http://www.sandag.org))

San Diego Association of Governments, Comprehensive Land Use Plan for Borrego Valley Airport (1986), Brown Field (1995), Fallbrook Community Airpark (1991), Gillespie Field (1989), McClellan-Palomar Airport (1994). ([www.sandag.org](http://www.sandag.org))

US Code of Federal Regulations, Federal Aviation Regulations (FAR), Objects Affecting Navigable Airspace, Title 14, Chapter 1, Part 77. ([www.gpoaccess.gov](http://www.gpoaccess.gov))

#### UTILITIES & SERVICE SYSTEMS

California Code of Regulations (CCR), Title 14. Natural Resources Division, CIWMB Division 7; and Title 27, Environmental Protection Division 2, Solid Waste. ([ccr.oal.ca.gov](http://ccr.oal.ca.gov))

California Integrated Waste Management Act. Public Resources Code, Division 30, Waste Management, Sections 40000-41956. ([www.leginfo.ca.gov](http://www.leginfo.ca.gov))

County of San Diego, Board of Supervisors Policy I-78: Small Wastewater. ([www.sdcounty.ca.gov](http://www.sdcounty.ca.gov))

Unified San Diego County Emergency Services Organization Annex T Emergency Water Contingencies, October 1992. ([www.co.san-diego.ca.us](http://www.co.san-diego.ca.us))

United States Department of Agriculture, Natural Resource Conservation Service LESA System.

United States Department of Agriculture, Soil Survey for the San Diego Area, California. 1973.

US Census Bureau, Census 2000.

US Code of Federal Regulations, Federal Aviation Regulations (FAR), Objects Affecting Navigable Airspace, Title 14, Chapter 1, Part 77.

US Department of the Interior, Bureau of Land Management (BLM) modified Visual Management System.

US Department of Transportation, Federal Highway Administration (FHWA) Visual Impact Assessment for Highway Projects.

ND03-07\0418008-ISF:jcr



## REVIEW FOR APPLICABILITY OF/COMPLIANCE WITH ORDINANCES/POLICIES

FOR PURPOSES OF CONSIDERATION OF  
Sweetwater Road Condominiums, TM 5392RPL3, S04-050, ER 04-18-008

January 11, 2007

**I. HABITAT LOSS PERMIT ORDINANCE** – Does the proposed project conform to the Habitat Loss Permit/Coastal Sage Scrub Ordinance findings?

YES

☐

NO

☐

NOT APPLICABLE/EXEMPT

☒

Discussion:

The proposed project and any off-site improvements are located within the boundaries of the Multiple Species Conservation Program. Therefore, conformance to the Habitat Loss Permit/Coastal Sage Scrub Ordinance findings is not required...

**II. MSCP/BMO** - Does the proposed project conform to the Multiple Species Conservation Program and Biological Mitigation Ordinance?

YES

☒

NO

☐

NOT APPLICABLE/EXEMPT

☐

Discussion:

The proposed project conforms to the MSCP. Refer to the MSCP findings for additional information.

**III. GROUNDWATER ORDINANCE** - Does the project comply with the requirements of the San Diego County Groundwater Ordinance?

YES

☐

NO

☐

NOT APPLICABLE/EXEMPT

☒

Discussion:

The project will obtain its water supply from the Helix Water District which obtains water from surface reservoirs and/or imported sources. The project will not use any groundwater for any purpose, including irrigation or domestic supply.

Sweetwater Road Condominiums  
TM 5392, S04-050, ER 04-18-008

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January 11, 2007

**IV. RESOURCE PROTECTION ORDINANCE** - Does the project comply with:

The wetland and wetland buffer regulations (Article IV, Sections 1 & 2) of the Resource Protection Ordinance?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	NOT APPLICABLE/EXEMPT <input type="checkbox"/>
The Floodways and Floodplain Fringe section (Article IV, Section 3) of the Resource Protection Ordinance?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	NOT APPLICABLE/EXEMPT <input type="checkbox"/>
The Steep Slope section (Article IV, Section 5)?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	NOT APPLICABLE/EXEMPT <input type="checkbox"/>
The Sensitive Habitat Lands section (Article IV, Section 6) of the Resource Protection Ordinance?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	NOT APPLICABLE/EXEMPT <input type="checkbox"/>
The Significant Prehistoric and Historic Sites section (Article IV, Section 7) of the Resource Protection Ordinance?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	NOT APPLICABLE/EXEMPT <input type="checkbox"/>

**Discussion:**

***Wetland and Wetland Buffers:***

The site contains no wetland habitats as defined by the San Diego County Resource Protection Ordinance. The site does not have a substratum of predominately undrained hydric soils, the land does not support, even periodically, hydric plants, nor does the site have a substratum that is non-soil and is saturated with water or covered by water at some time during the growing season of each year.

***Floodways and Floodplain Fringe:***

The project is not within the floodways, flood plain fringe as defined in the Resource Protection Ordinance.

***Steep Slopes:***

The average slope for the property is less than 25 percent gradient. Slopes with a gradient of 25 percent or greater and 50 feet or higher in vertical height are required to be placed in open space easements by the San Diego County Resource Protection Ordinance (RPO). There are no steep slopes on the property. The project is in conformance with the RPO.

***Sensitive Habitats:***

Sensitive habitat lands were identified on the site as determined on a site visit conducted by staff biologist Greg Krzys. Impacts will occur to 0.70 acres of non-native grasslands. This impact will be mitigated at ½:1 ratio off-site in an approved mitigation bank. Therefore, it has been found that the proposed project complies with Article IV, Item 6 of the Resource Protection Ordinance.

Sweetwater Road Condominiums  
TM 5392, S04-050, ER 04-18-008

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***Significant Prehistoric and Historic Sites:***

The property has been reviewed by a County of San Diego staff archaeologist, Gail Wright, and it has been determined that the property does not contain any archaeological/ historical sites.

**V. STORMWATER ORDINANCE (WPO)** - Does the project comply with the County of San Diego Watershed Protection, Stormwater Management and Discharge Control Ordinance (WPO)?

YES  
☒

NO  
☐

NOT APPLICABLE  
☐

**Discussion:**

The project is located in a County Urban Area as defined by the WPO. The project Storm Water Management Plan dated March 2006 was reviewed for this project and appears to be complete and in compliance with the WPO. The project will implement site design measures, source control, and/or treatment control BMPs to reduce potential pollutants, including sediment from erosion or siltation, to the maximum extent practicable from entering storm water runoff. These measures will control erosion and sedimentation and satisfy waste discharge requirements as required by the Land-Use Planning for New Development and Redevelopment Component of the San Diego Municipal Permit (SDRWQCB Order No. 2001-01), as implemented by the San Diego County Jurisdictional Urban Runoff Management Program (JURMP) and Standard Urban Storm Water Mitigation Plan (SUSMP).

**VI. NOISE ORDINANCE** - Does the project comply with the County of San Diego Noise Element of the General Plan and the County of San Diego Noise Ordinance?

YES  
☒

NO  
☐

NOT APPLICABLE  
☐

**Discussion:**

The County of San Diego General Plan, Noise Element, Policy 4b addresses noise sensitive areas and requires an acoustical study to be prepared for any use that may expose noise sensitive area to noise in excess of a Community Noise Equivalent Level (CNEL) of 60 decibels (dBA). Moreover, if the project is excess of CNEL 60 dB(A), modifications must be made to project to reduce noise levels. Noise sensitive areas include residences, hospitals, schools, libraries or a similar facility where quiet is an important attribute. Based on a Noise Analysis prepared by Gordon Bricken and dated February 7, 2007, project implementation may expose existing or planned noise sensitive areas to roadway noise associated with Sweetwater Road and State Route 125 in excess of the CNEL 60 dB(A). A noise protection easement requiring an acoustical analysis be performed by a County certified acoustical engineer,

Sweetwater Road Condominiums  
TM 5392, S04-050, ER 04-18-008

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demonstrating that the present and anticipated future noise levels for the interior of the above residential dwelling units will not exceed the allowable sound level limit of the Noise Element of the San Diego County General Plan (interior [45 dB CNEL]) has been conditioned for the project as mitigation of potential noise impacts to less than significant levels.

Additionally, to reduce the future CNEL to acceptable levels, the Site Plan (S04-050) requires the construction of a 6-foot tall sound attenuation barrier along the south property line, two-story buildings for these residential condominiums, and balcony sound attenuation barriers (42-inch and 60-inch heights in order to supplement the existing noise control features (berms and walls) in the vicinity of the subdivision.

The implementation of these measures will result in noise impacts to the proposed project from adjacent land uses to not exceed the property line sound level limits of the County of San Diego Noise Ordinance.

ND03-07\0418008-ORDCHKLST;jcr

**FINDINGS OF CONFORMANCE  
MULTIPLE SPECIES CONSERVATION PROGRAM  
For Sweet Homes  
TM 5392**

April 20, 2006

**I. Introduction**

The proposed project is a 10-unit condominium on 1.15 acres in the community of Spring Valley within the County of San Diego. The project site is located east of State Route (SR) 125 and Sweetwater Road and south of Ildica Street and north of Jamacha Road. The project will consist of two buildings, one with seven attached units and the other with three attached units.

Surrounding the site is existing residential and commercial development. The immediate area is primarily single- and multi-family residential development. Immediately to the north of the project site is a eight unit duplex development within four buildings. To the east of the project site are various multi-family developments and south of the site is a mobile home park. Mount Miguel High School is located south of the project site and on the western side of SR 125. The extension of SR 125 parallels Sweetwater Road, which runs along the western property boundary of the site.

The project site consists of 0.30 acres of non-native vegetation, 0.15 acres of urban-developed, and 0.70 acres of non-native grasslands. A spring rare plant survey was conducted by RC Biological Consulting on June 2, 2005. No sensitive, narrow endemic or listed species were observed or are expected to occur. The entire site will be impacted through development and mitigation for impacts to non-native grasslands will occur at a ½:1 ratio in an approved mitigation bank for a total of 0.35 acres. Mitigation will be in-kind or with a higher tier habitat type. The project conditions may be found in the mitigated negative declaration.

Table 1. Impacts to Habitat and Required Mitigation

Habitat Type	Tier Level	Existing On-site (ac.)	Proposed Impacts (ac.)	Mitigation Ratio	Required Mitigation
Urban-Developed	IV	0.15	0.15	--	--
Non-native grasslands	IV	0.70	0.70	½:1	0.35
Non-native vegetation	IV	0.30	0.30	--	--
<b>Total:</b>	--	1.15	1.15	--	0.35

The findings contained within this document are based on County records and staff field site visits and a spring rare plant survey completed by RC Biological Consulting on June 2, 2005. The information contained within these Findings is correct to the best of staff's knowledge at the time the findings were completed. Any subsequent environmental review completed due to changes in the proposed project or changes

in circumstance shall need to have new findings completed based on the environmental conditions at that time.

The project has been found to conform to the County's Multiple Species Conservation Program (MSCP) Subarea Plan, the Biological Mitigation Ordinance (BMO) and the Implementation Agreement between the County of San Diego, the CA Department of Fish and Game and the US Fish and Wildlife Service. Third Party Beneficiary Status and the associated take authorization for incidental impacts to sensitive species (pursuant to the County's Section 10 Permit under the Endangered Species Act) shall be conveyed only after the project has been approved by the County, these MSCP Findings are adopted by the hearing body and all MSCP-related conditions placed on the project have been satisfied.

## **II. Biological Resource Core Area Determination**

The impact area and the mitigation site shall be evaluated to determine if either or both sites qualify as a Biological Resource Core Area (BRCA) pursuant to the BMO, Section 86.506(a)(1).

### **A. Report the factual determination as to whether the proposed Impact Area qualifies as a BRCA. The Impact Area shall refer only to that area within which project-related disturbance is proposed, including any on and/or off-site impacts.**

The Impact Area does not qualify as a BRCA since it does not meet any of the following BRCA criteria:

#### **i. The land is shown as Pre-Approved Mitigation Area on the wildlife agencies' Pre-Approved Mitigation Area map.**

The site is not within a PAMA.

#### **ii. The land is located within an area of habitat that contains biological resources that support or contribute to the long-term survival of sensitive species and is adjacent or contiguous to preserved habitat that is within the Pre-Approved Mitigation Area on the wildlife agencies' Pre-Approved Mitigation Area map.**

The land is completely surrounded by commercial and residential development.

#### **iii. The land is part of a regional linkage/corridor. A regional linkage/corridor is either:**

##### **a. Land that contains topography that serves to allow for the movement of all sizes of wildlife, including large animals on a regional scale;**

- and contains adequate vegetation cover providing visual continuity so as to encourage the use of the corridor by wildlife; or
- b. Land that has been identified as the primary linkage/corridor between the northern and southern regional populations of the California gnatcatcher in the population viability analysis for the California gnatcatcher, MSCP Resource Document Volume II, Appendix A-7 (Attachment I of the BMO.)

The land is surrounded by development and is not connected to other habitat through any type of linkage or corridor.

- iv. The land is shown on the Habitat Evaluation Map (Attachment J to the BMO) as very high or high and links significant blocks of habitat, except that land which is isolated or links small, isolated patches of habitat and land that has been affected by existing development to create adverse edge effects shall not qualify as BRCA.

The land is mapped as developed.

- v. The land consists of or is within a block of habitat greater than 500 acres in area of diverse and undisturbed habitat that contributes to the conservation of sensitive species.

The site is surrounded by development.

- vi. The land contains a high number of sensitive species and is adjacent or contiguous to surrounding undisturbed habitats, or contains soil derived from the following geologic formations which are known to support sensitive species:

- a. Gabbroic rock;
- b. Metavolcanic rock;
- c. Clay;
- d. Coastal sandstone

The underlying soils are Placentia sandy loam and Auld stony clay but no sensitive species are present as determined by a rare plant survey in June 2005.

**B. Report the factual determination as to whether the Mitigation Site qualifies as a BRCA.**

Mitigation shall occur within an approved mitigation bank in the MSCP. Therefore, the mitigation site is a BRCA.

### III. Biological Mitigation Ordinance Findings

The proposed project will not impact any critical or sensitive plant populations, narrow endemic animal or plant species, or a biological resource core area. Therefore, the project design criteria and attachments G and H are not required.

### IV. Subarea Plan Findings

Conformance with the objectives of the County Subarea Plan is demonstrated by the following findings:

1. **The project will not conflict with the no-net-loss-of-wetlands standard in satisfying State and Federal wetland goals and policies.**

No jurisdictional resources are located on-site. Therefore, the project will not conflict with the no-net-loss policy.

2. **The project includes measures to maximize the habitat structural diversity of conserved habitat areas including conservation of unique habitats and habitat features.**

The project site is 1.15 acres in size and completely surrounded by development with no connectivity to other resources. Impacts will occur to 0.70 acres of non-native grasslands. The mitigation will occur in an approved mitigation bank in the MSCP. Approved banks have measures implemented to maximize structural diversity and conserve unique habitat types and features.

3. **The project provides for conservation of spatially representative examples of extensive patches of Coastal sage scrub and other habitat types that were ranked as having high and very high biological values by the MSCP habitat evaluation model.**

Only tier IV habitat types are found on-site and the site is mapped as developed. The project's impacts and mitigation occur to non-native grasslands and do not involve any habitats mapped as high to very high value. Therefore, compliance with this finding has been met.

4. **The project provides for the creation of significant blocks of habitat to reduce edge effects and maximize the ratio of surface area to the perimeter of conserved habitats.**

Project impacts will be mitigated off-site in an approved mitigation bank in the MSCP. Approved banks have measures implemented to reduce edge effects and indirect impacts.



**5. The project provides for the development of the least sensitive habitat areas.**

The project will impact all 1.15 acres. The site consists entirely of tier IV habitat types. Therefore, development on this site will impact the least sensitive habitat types in the MSCP.

**6. The project provides for the conservation of key regional populations of covered species, and representations of sensitive habitats and their geographic sub-associations in biologically functioning units.**

No sensitive species occur or are expected to occur on site. Impacts to 0.70 acres of non-native grasslands will be mitigated off-site in an approved mitigation bank. Project impacts will be mitigated off-site in an approved mitigation bank in the MSCP. Approved banks have measures implemented to conserve sensitive species and habitat types.

**7. Conserves large interconnecting blocks of habitat that contribute to the preservation of wide-ranging species such as Mule deer, Golden eagle, and predators as appropriate. Special emphasis will be placed on conserving adequate foraging habitat near Golden eagle nest sites.**

The site is too small and surrounded by development to contribute towards species movement. However, the proposed off-site mitigation will occur within an approved bank in the MSCP. This mitigation will contribute to the assembly of the preserve and conservation of wildlife movement routes.

**8. All projects within the San Diego County Subarea Plan shall conserve identified critical populations and narrow endemics to the levels specified in the Subarea Plan. These levels are generally no impact to the critical populations and no more than 20 percent loss of narrow endemics and specified rare and endangered plants.**

No narrow endemics occur on-site.

**9. No project shall be approved which will jeopardize the possible or probable assembly of a preserve system within the Subarea Plan.**

The site is not part of the PAMA and the proposed development will not affect the preserve assembly. Off-site mitigation in an approved bank will contribute to preserve assembly.

**10. All projects that propose to count on-site preservation toward their mitigation responsibility must include provisions to reduce edge effects.**

Project impacts will be mitigated off-site in an approved mitigation bank in the MSCP. Approved banks have measures implemented to reduce edge effects and indirect impacts.

**11. Every effort has been made to avoid impacts to BRCAs, to sensitive resources, and to specific sensitive species as defined in the BMO.**

Development of the site will not impact a BRCA, sensitive species or sensitive resources. All impacts occur to tier IV habitats and those occurring to non-native grasslands will be mitigated off-site in an approved mitigation bank. Therefore, every effort has been made to avoid impacts.

Greg Krzys

Department of Planning and Land Use

ND03-07\0418008-MSCP

February 6, 2007

FOURTH VERSION  
=====

ACOUSTICAL ANALYSIS  
=====

SWEETWATER ROAD PROJECT  
=====

COUNTY OF SAN DIEGO  
=====

Prepared by:

Gordon Bricken  
President

/mmmb

Prepared for:

MR. HOSS EFTEKHARI  
HOSS, WILLIAM AND ASSOCIATES, INC  
100 South Anaheim Blvd., Ste 360  
Anaheim, California 92805

SDC DPLU RCVD 02-22-07  
TM5392  
S04-050

## S U M M A R Y

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This analysis has been completed to determine the exterior and interior noise exposure and the potential mitigation measures for the proposed project on Sweetwater Road in the County of San Diego. A list of findings is given in the following summary. Details are discussed in the body of the report. The noise models were developed for a mirror image of the project site and do not materially affects the results that were generated by the Sound 32 program.

### A. NOISE CONTROL BY BARRIER DESIGN

Calculations indicate that the ground level exterior noise level will slightly exceed 60 dBA CNEL in the patios. Wall heights greater than those used in the report calculations do not significantly alter the resulting exterior noise levels. This is due to an intrinsic limit in the Sound32 program in addressing multiple independent barriers along any line to a receptor for any source. The barriers used to compute the noise levels were as follows:

SR25 Wall. - This is the wall that runs north and south and is programmed from Station 153 to the north termination at Station 156.40

SR25 Berm. - This is the extension of the barrier from Station 156.40 to Station 157.40.

Sweetwater MHP wall. - This is the wall on the east side of Sweetwater Road running in front of the Mobile Home Park and ending at Station 155.40.

Sweetwater Site Berm. - This is the berm in front of the site running from Station 155.40 to Station 156.15.

Sweetwater Wall North of the Site. - This is the wall on the east side of Sweetwater Road running from Station 156.40 to Station 157.40.

South Side of Bldg 1 Units 1-7. - This is the south side of the building approximated by a 20 foot free standing wall.

North Side Bldg 1 Units 1-7. - This is the north side of the building approximated by a 20 foot free standing wall.

South MHP P/L Wall. - This is the six foot wall running east and west along the south common property line.

Unit 1 Wall. - This is the six foot wall along the west side of the patio and parallel to Sweetwater Road

### B. NOISE CONTROL BARRIER CONSTRUCTION MATERIALS

The required noise control barriers may be constructed using one of the following materials:

- (1) Masonry block
- (2) Stucco on wood frame
- (3) 3/4" plywood
- (4) 1/4" glass or 1/2" LEXAN
- (5) Earth Berm
- (6) Any combination of these materials or any material rated 3.5 pounds per square foot surface weight or greater.

Each completed noise control barrier must present a solid face from top-to-bottom. Cut outs and openings are not permitted except for drain holes.

Balconies B8 - B14 will have 42 inch high, solid railing and balconies B15, B16, and B17 will have 60 inch solid railing. As indicated in Section 5 public open spaces are below 60 dBA CNEL and meet the requirements of the County of San Diego. Note that the two open spaces together have an area of more than 1,200 square feet, which is more than the required 1,000 square feet.

#### C. INTERIOR NOISE CONTROL

The interior levels of 45 dBA CNEL can be met. Window Sound Transmission Class ratings as high as STC 24 will be required.

## 1.0 INTRODUCTION

This report presents the results of a revised noise impact and design study of the proposed project located in the County of San Diego east of State Route 125.

Included in this report is a discussion of the expected exterior community noise environment and the recommendations for control of noise in the exterior and interior areas.

A vicinity map showing the general location of the construction site is presented on Exhibit 1 -- Site Location Map. The site is located on the East side of Sweetwater Road north of Blossom Lane. The site is also across from State Route (SR) 125. The site plan is shown on Exhibit 2.

The physical characteristics of the site are displayed in a series of photos as follows:

1. Exhibit 3 is a view of the existing site. It slopes upward from Sweetwater Road. There is a berm in the foreground along with a portion of the wall.
2. Exhibit 4 is a view taken from the project site behind the berm. Sweetwater Road is not visible from this point. The sound wall along SR 125 is seen in the background. The freeway is elevated above Sweetwater Road from Jamacha Road to a point north of the project site about 1,000 feet. The wall extends north (right in the picture) to just beyond the private access road to the Aqua Dulce Terrace homes to the north of the project site. North of the wall termination is a berm that extends north alongside the freeway. The freeway wall is seven feet high and the berm is five feet high relative to the freeway grade.
3. Exhibit 5 shows the wall sections north and south of the site. Walls or berms are all along Sweetwater Road. The walls are of the same block as the freeway sound wall. It is reported that these walls and berms were erected in conjunction with the freeway construction. The height of the walls north and south of the project site is about six feet from sidewalk grade. It appears that the berm across the site is about seven feet high.
4. Exhibit 6 shows a composite photo of the vacant project site, Aqua Dulce Terrace and Terrace Estates, which is the mobile home park on the south side of the project.

## 2.0 APPLICABLE NOISE CRITERIA

The County of San Diego's Noise Element Policy 4b outlines the requirements to be applied to the project, which are as follows:

### Part 3

If the acoustical study shows that noise levels at any noise sensitive area will exceed CNEL equal to 60 decibels, the project should not be approved unless the following findings are made:

- A. Modifications to the development have been or will be made which reduce the exterior noise levels below CNEL equal to 60 decibels, or
- B. If with the current noise abatement technology, it is infeasible to reduce the exterior CNEL to 60 decibels, then modifications to the development have been or will be made which reduce the interior level below CNEL equal to 45 decibels, and
- C. If finding "B" above is made, a further finding is made that there are specifically identified overriding social or economic considerations which warrant approval of the development without modification as described in "A" above.

The Building Code requires that interior noise levels in multifamily projects not exceed 45 dBA CNEL.

## 3.0 MEASURED NOISE LEVELS

A measurement was conducted at a single location on the site for a period of one hour commencing at 2:00 P.M. and ending at 3:00 P.M. on Wednesday, May 4, 2005. The measurements are used to calibrate the Caltrans Sound32 model as outlined in Caltrans Protocol N-3100. Caltrans Protocol N-3320 allows a sampling time to vary from 10 to 30 minutes depending on the traffic volume. A sampling period of one hour was used just to be conservative. The measurement point was located exactly where the middle of the west yard of Unit 1 is located as shown on Exhibit 2. The measurement was conducted using an Ono-Sokki Model LA1250 Integrating Sound Level Meter. The meter was in calibration and field calibration was conducted at the start and finish of the measurement.

Since machine counts for the freeway are not feasible, manual hand counts were taken by observation from the over-crossing at Troy Street at the same time that the hour-long measurement was being conducted. The one-hour traffic data set is given in Table 1. At the end of the hour, the average noise level was 60.7 dBA Leq.

TABLE 1

OBSERVED TWO WAY TRAFFIC DATA

<u>ROADWAY</u>	<u>AUTOS</u>	<u>MEDIUM TRUCKS</u>	<u>HEAVY TRUCKS</u>
State Route 125	8,046	174	276
Sweetwater Road	888	54	12

Exhibit 7 shows a portion of the chart run during the measurement. The sound levels are almost constant, being mainly set by the freeway.

The purpose of the measurements is to allow for the calibration of the Caltrans Sound32 Highway Noise Model. The model was set up using the physical parameters described on the sections provided by the client, which are contained in Appendix 1. The calculations are contained in Appendix 2. The results are given in Table 2. To avoid confusion the various existing barrier descriptions are added to the Appendix sheets.

TABLE 2

COMPARISON OF CALCULATED AND  
MEASURED AVERAGE NOISE LEVELS

<u>POSITION</u>	<u>MEASURED</u>	<u>CALCULATED</u>	<u>DIFFERENCE</u>
1	60.7	65.0	4.3

The calculated value is higher than the measured value so the raw data will be adjusted when the CNEL calculations are addressed in the report.

## 4.0 CNEL FOR THE VACANT SITE

Several types of data must be provided to calculate the CNEL values. This includes traffic mixes, speeds and distribution of traffic by time of day. State Route 125 was opened in late 2003. The only data prior to that was for Sweetwater Road, which would not apply after the freeway, opened. Caltrans has not yet published traffic volumes or traffic mixes for State Route 125. SANDAG does not publish 2005 traffic forecasts. However, Mr. Bill McFarlane, of the SANDAG Transportation Modeling and Analysis Section, provided an estimate of the traffic volumes. Other parameters are based on information previously provided by the County for similar roadways. The freeway traffic mix was based on the values observed during the measurements. The Sweetwater traffic mix is based on data supplied by the County. The County also supplied the Day/Night mix. The data is given in Tables 3 and 4 on the following page.



TABLE 3

## TRAFFIC PARAMETERS (1)

<u>ROADWAY</u>	<u>AUTOS</u>	<u>MEDIUM TRUCKS</u>	<u>HEAVY TRUCKS</u>
State Route 125	94.7%	2.0%	3.2%
Sweetwater Road	93.7%	4.5%	1.8%

- (1) Day carries 87 percent of the traffic and  
Night carries 13 percent of the traffic.

TABLE 4

## EXISTING TRAFFIC VOLUMES

<u>ROADWAY</u>	<u>VOLUMES</u>
State Route 125	118,000
Sweetwater Road	18,100

The Sound32 program does not compute CNEL directly. To arrive at a CNEL value for SR 125, it is necessary to employ the Caltrans Protocol N-2231. This protocol involves the following equation:

$$\text{CNEL} = \text{Leq}(h)_{pk} + 10\log(10) [4.17/P] + 10\log(10) [D + 10N] \quad (1)$$

where  $\text{Leq}(h)_{pk}$  = Peak Hour  $\text{Leq}$   
 $P$  = Peak Hour Percentage of ADT  
 $D$  = Day fraction of ADT  
 $N$  = Night fraction of ADT

In this calculation,  $P = 10$ ,  $D = 0.87$ , and  $N = 0.13$ . Equation 1 reduces to:

$$\text{CNEL} = \text{Leq}(h)_{pk} - 3.8 + 3.4 = \text{Leq}(h)_{pk} - 0.4 \quad (2)$$

The CNEL is nearly equal to the peak hour  $\text{Leq}$  assuming the peak hour volume is 10 percent of the ADT. The same method can be employed for Sweetwater Road with the same result. The result of the method and the distributions of Table 3 yield the list in Table 5 that is inserted into the Sound 32 program.

TABLE 5

## EXISTING TRAFFIC DISTRIBUTION (1)

<u>ROADWAY</u>	<u>AUTOS</u>	<u>MEDIUM TRUCKS</u>	<u>HEAVY TRUCKS</u>
State Route 125	11,174	236	328
Sweetwater Road	1,696	82	33

- (1) SR 125 will be split into two lanes

In addition, both the 4.3 dBA correction from Table 2 plus the 0.4 dBA corrections from Equation 2 are employed as a total 4.7 dBA adjustment in the K-Factor in the program. Knowing the parameters for the conversion, the Caltrans Sound32 model can be set up based on single calculation. The model was employed using the Plan sets contained in Appendix 1. The speeds for the freeway were taken as 65 miles per hour since this is the limitation of the model. Sweetwater Road was modeled at 55 miles per hour.

The calculations for the existing condition are contained in Appendix 3. The result at the measurement point, the future back yard of Unit 1, would be 62.4 dBA CNEL.

The future CNEL levels are based on the SANDAG 2030 forecast data listed on the graphic contained in Appendix 4. The volumes are given in Table 6.

TABLE 6

2030 TRAFFIC VOLUMES

<u>ROADWAY</u>	<u>VOLUMES</u>
State Route 125	171,000
Sweetwater Road	21,100

Using the same procedure as used in the existing calculations the volumes employed for the future are those listed in Table 7.

TABLE 7

2030 TRAFFIC VOLUMES (1)

<u>ROADWAY</u>	<u>AUTOS</u>	<u>MEDIUM TRUCKS</u>	<u>HEAVY TRUCKS</u>
State Route 125	16,192	478	546
Sweetwater Road	1,977	95	38

(1) SR 125 will be split into two lanes.

The calculations, contained in Appendix 5 yield a noise level of 63.7 dBA CNEL at the measurement point.

#### 5.0 CNEL LEVELS ON PROJECT

The calculations were carried out for 20 points as shown on Exhibit 8. The 20 points are at the rear and front of every unit. The rear areas are patios that would be required to meet the 60 dBA CNEL requirement if it were feasible. The other locations are intended to provide a profile of the noise levels everywhere on the site.

The initial calculations were for the ground level height at five feet above the pad and second floor height at 15 feet above the pad for the vacant site. These calculations are attached in Appendices 6 and 7. The results are listed in Tables 8 and 9 on the following page.

TABLE 8

VACANT SITE FUTURE NOISE LEVELS AT  
20 LOCATIONS AT GROUND LEVEL

<u>LOCATION</u>	<u>CNEL</u>
1	63.7
2	63.2
3	63.3
4	63.1
5	62.9
6	62.6
7	62.6
8	62.4
9	62.6
10	62.7
11	62.8
12	62.7
13	62.5
14	62.5
15	62.1
16	62.2
17	62.3
18	61.4
19	61.4
20	61.3

TABLE 9

VACANT SITE FUTURE NOISE LEVELS AT  
20 LOCATIONS AT SECOND FLOOR LEVEL

<u>LOCATION</u>	<u>CNEL</u>
1	66.0
2	65.1
3	65.0
4	64.7
5	64.4
6	63.7
7	63.5
8	66.2
9	64.7
10	64.4
11	64.3
12	64.0
13	63.6
14	63.5
15	63.1
16	62.9
17	63.2
18	62.1
19	62.2
20	62.1

The ground floor exterior levels are in the range of 61.3 to 63.7 dBA CNEL. This means that the future conditions of the vacant site at ground level never reach 65 dBA CNEL. The second floor levels for the vacant site range from 62.1 to 66.2 dBA CNEL that is only slightly higher than 65 dBA CNEL. The 60 dBA CNEL point is at 660 feet from freeway centerline at ground level and 710 feet at the second floor level.

The physical model used to calculate for the vacant site noise levels were modified by installing the building and wall structures. The buildings are all two stories as can be seen on Exhibit 9. The peak of the roofs are 24 feet eight inches and the eave 19 feet.

The Sound32 program does not model bulk barriers. It is necessary to categorize a barrier by the most relevant wall section. The buildings were modeled using the front and back walls as 20-foot high barriers, rather than just the eave or peak roof heights since the roof would contribute some noise reduction. Thus, the barriers used for the calculations in addition to those that were used on the vacant site are as follows:

1. The south wall of the building with Units 1 through 7 at 20 feet high.
2. The north wall of the building with Units 1 through 7 at 20 feet high.
3. The east-west wall common to the project site and the Mobile Home Park taken at six feet high.

4. The short wall on the west side of the Unit 1 patio taken at six feet high.

Calculations at the 20 ground floor locations are contained in Appendix 8 and the results given in Table 10(6) on the following page. The results for the 20, second floor locations are contained in Appendix 9 and the results given in Table 11.

TABLE        10

BUILT SITE FUTURE NOISE LEVELS AT  
20 LOCATIONS AT GROUND LEVEL

<u>LOCATION</u>	<u>CNEL</u>
1	60.9
2	61.2
3	61.4
4	61.3
5	61.2
6	60.8
7	61.3
8	61.0
9	61.0
10	61.0
11	61.2
12	61.1
13	60.8
14	60.8
15	60.9
16	61.4
17	61.5
18	49.1
19	49.1
20	49.1

TABLE 11

BUILT SITE FUTURE NOISE LEVELS AT  
20 LOCATIONS AT SECOND FLOOR LEVEL

<u>LOCATION</u>	<u>CNEL</u>
1	64.3
2	63.6
3	63.8
4	63.5
5	63.3
6	62.6
7	62.8
8	66.3
9	64.5
10	64.0
11	64.0
12	63.7
13	63.2
14	63.1
15	62.7
16	62.9
17	59.2
18	58.1
19	56.7
20	52.1

The results for the built site typically show about a two (2) dBA reduction from the vacant site. Actual reductions are most likely greater because of the fundamental limit on barrier calculation within the Sound 32 program. The program cannot calculate two parallel barriers. Thus, the independent reductions contributed by each barrier are reduced to the single barrier that provides the highest noise reduction.

Further calculation for private open spaces (balconies) after consideration of railing, and public open spaces (play lot and barbeque pit) are carried in Attachment D. the results given in Tables 5,6,9, and 11 of this attachment indicates a range from 55.4 to 59.7 dBA CNEL for balconies, 58.2 dBA CNEL for the play lot (location 21) and 54.5 dBA CNEL for the barbeque pit (Location 22).

## 6.0 MITIGATION MEASURES

### 6.1 EXTERIOR

While the calculations indicate that the CNEL levels in the patios are slightly higher than 60 dBA CNEL, it is likely the actual values are less than 60 dBA CNEL owing to the intrinsic limitation of the Sound32 model in calculating multiple barriers. Ideally, raising the freeway barrier would address the matter but that is not possible. No additional exterior mitigation is required as long as all the walls are constructed.

The required noise control barriers may be constructed using one of the following materials:

- (1) Masonry block
- (2) Stucco on wood frame
- (3) 3/4" plywood
- (4) 1/4" glass or 1/2" LEXAN
- (5) Earth Berm
- (6) Any combination of these materials or any material rated 3.5 pounds per square foot surface weight or greater.

Each completed noise control barrier must present a solid face from top-to-bottom. Cutouts and openings are not permitted except for drain holes.

Balconies B8 - B14 will have 42 inch high, solid railing and balconies B15, B16, and B17 will have 60 inch solid railing. As indicated in Section 5 public open spaces are below 60 dBA CNEL and meet the requirements of the County of San Diego. Note that the two open spaces together have an area of more than 1,200 square feet, which is more than the required 1,000 square feet.

## 6.2 INTERIOR

The County's exposure criteria requires that the interior noise environment, attributable to outside transportation sources, be limited to 45 dBA CNEL. Analysis and recommendations for control of outdoor-to-indoor noise intrusion are presented in this section.

The exterior-to-interior noise reduction expected for the planned construction was based on a detailed analysis of sample rooms and units planned for the development. Calculations of the expected typical

noise reduction performance were performed for sample rooms. The analysis was based on the typical spectra expected for the primary sources of community noise impact, the typical octave-band transmission loss for each element in the planned building shell, the relative square footage of each element of the planned building shell, the expected typical interior surface treatment, and the acoustical absorption coefficient for each interior surface treatment. Corrections for the "A" Weighted room absorption factors are also included.

Each component of the building shell (e.g. exterior wall, windows, doors, etc.) provides a different amount of transmission loss for each "A" Weighted octave-band of community noise. With the knowledge of the building shell components and their individual octave band transmission loss values for the noise sources, calculations of the composite building shell transmission loss can be made for each room.

The floor plans and elevations were not provided. The basic construction of the building will be that shown in Table 12.

TABLE 12

BASIC BUILDING SHELL CHARACTERISTICS

<u>PANEL</u>	<u>CONSTRUCTION</u>
Exterior Wall	Stucco, 2" x 4" studs, R-13 fiberglass insulation, drywall
Windows	Double pane
Sliding Glass Door	Double pane
Roof	Tile over sheathing, fiberglass insulation, drywall
Floor	Carpeted

The design noise reductions are given in Table 13

TABLE 13

NOISE REDUCTION REQUIREMENTS

<u>LOCATION</u>	<u>FIRST FLOOR</u>	<u>SECOND FLOOR</u>
1	15.9	19.3
2	16.2	18.3
3	16.4	18.8
4	16.3	18.5
5	16.2	18.3
6	15.8	17.6
7	16.3	17.8
8	16.0	21.3
9	16.0	19.5
10	16.0	19.0
11	16.2	19.0
12	16.1	18.7
13	15.8	18.2
14	15.8	18.1
15	15.9	17.7
16	16.4	17.9
17	16.5	14.7
18	4.1	13.1
19	4.1	11.7
20	4.1	7.1

Calculations, contained in Appendix 10, were carried out for a representative floor plan. The results are given in Table 14. Note that the Sound Transmission Class (STC) rating was used as the variable since noise reductions in the range required will be controlled by the window transmission loss.



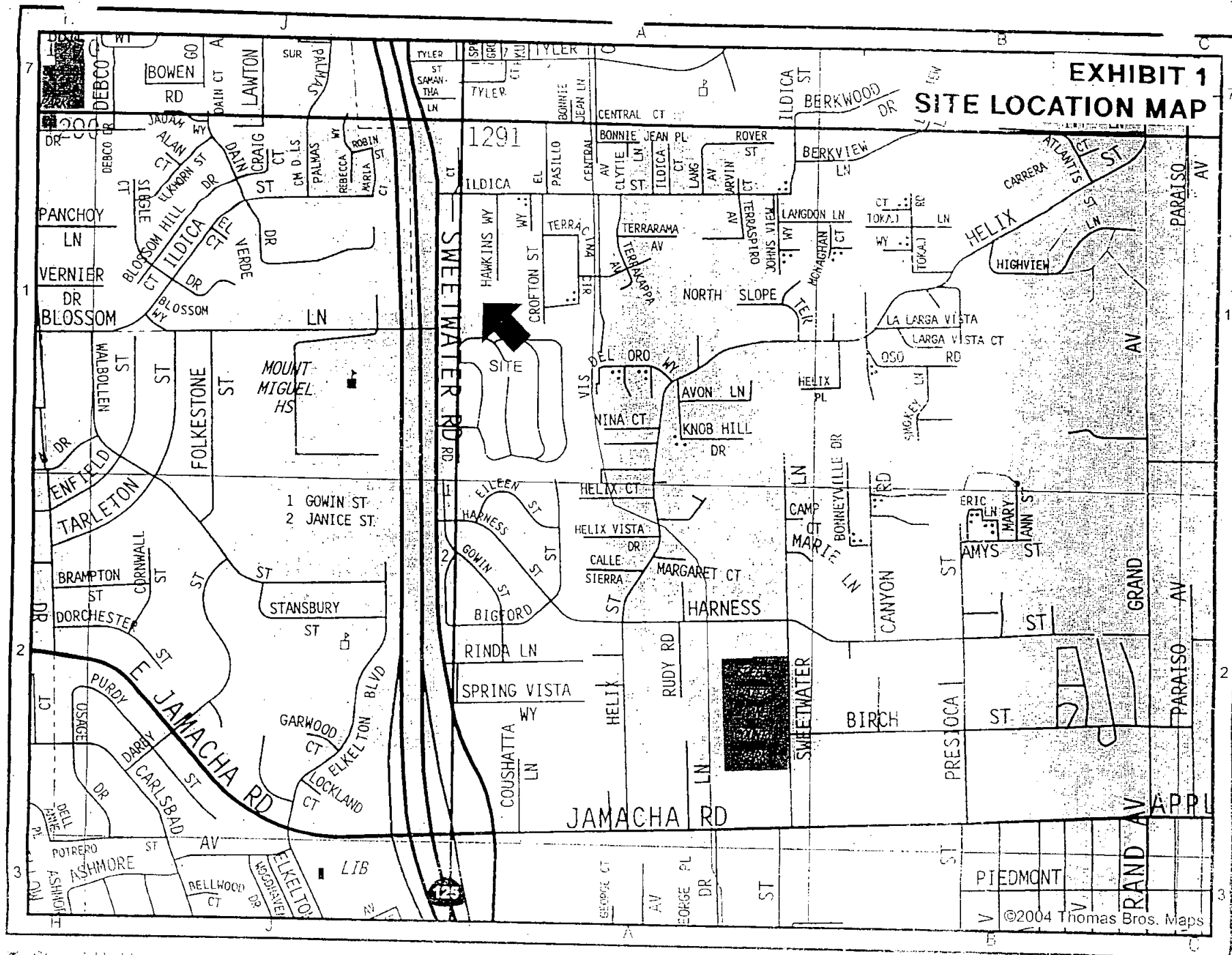
TABLE 14

ROOM NOISE REDUCTION VALUES (1)

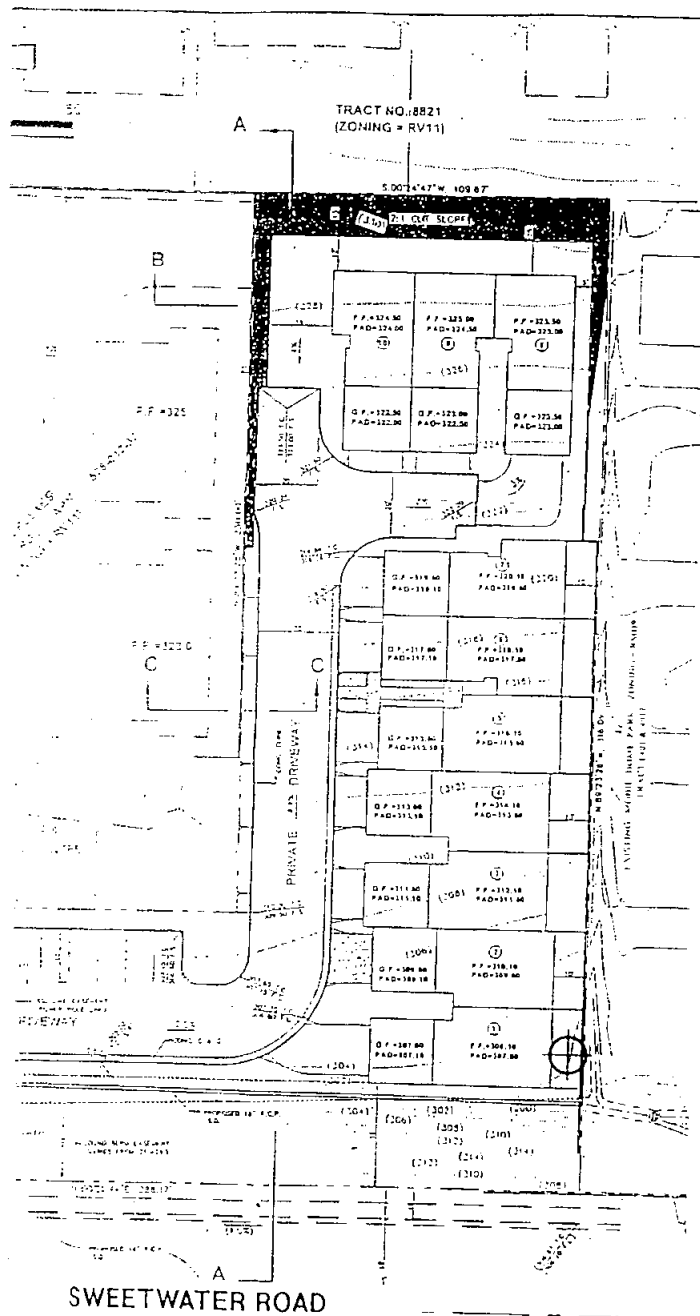
<u>PLAN</u>	<u>ROOM</u>	<u>WINDOW STC VALUE</u>						
		<u>24</u>	<u>26</u>	<u>28</u>	<u>30</u>	<u>32</u>	<u>34</u>	<u>36</u>
All	Living/Dining	23	24	26	28	30	32	33
	Bedroom	23	25	26	28	30	31	32

Inspection of Table 13 indicates that all the noise reduction requirements would be met with windows rated STC 24.

**EXHIBIT 1  
SITE LOCATION MAP**



# EXHIBIT 2 SITE MAP



SCALE 1" = 60'

EXHIBIT 3  
SITE WALL

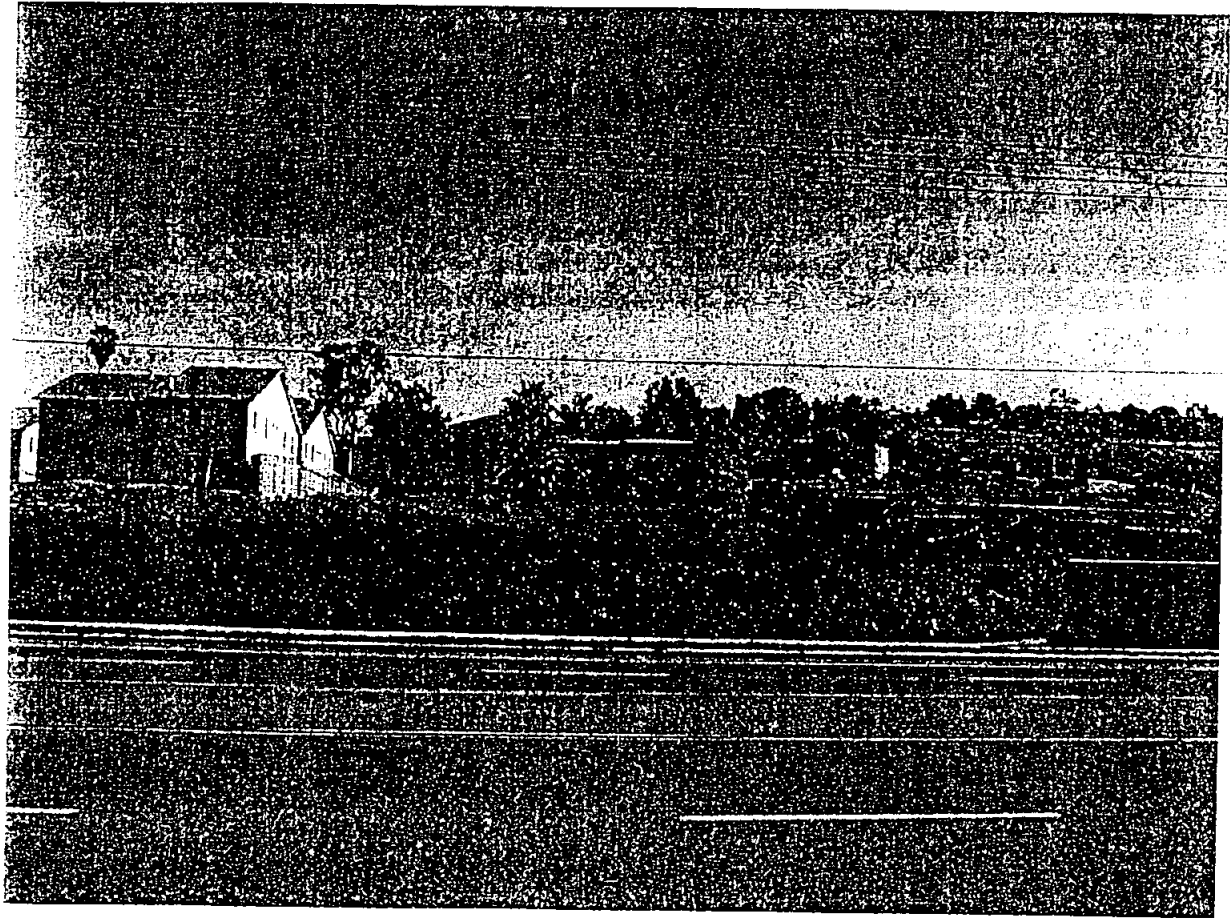


EXHIBIT 4  
FREEWAY VIEW

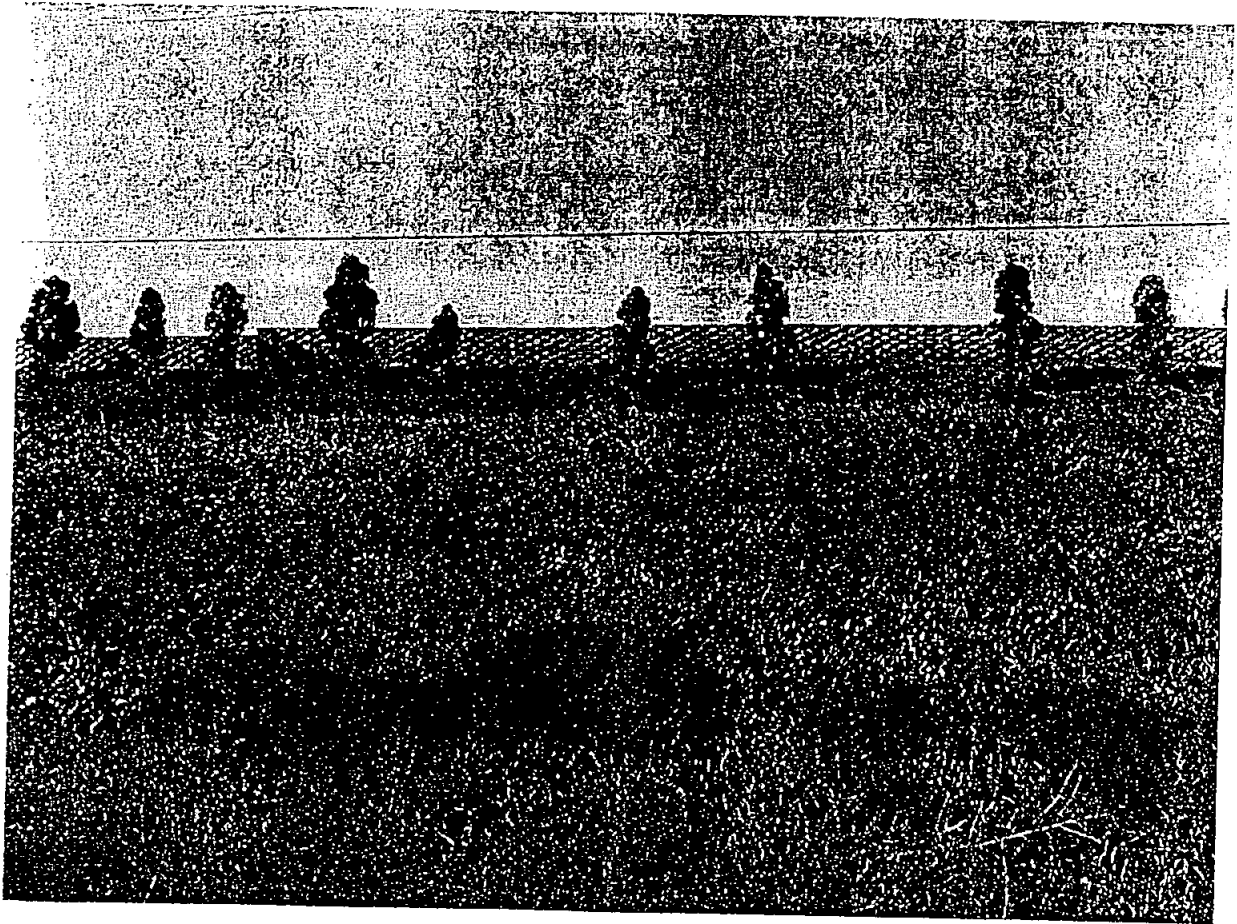


EXHIBIT 5

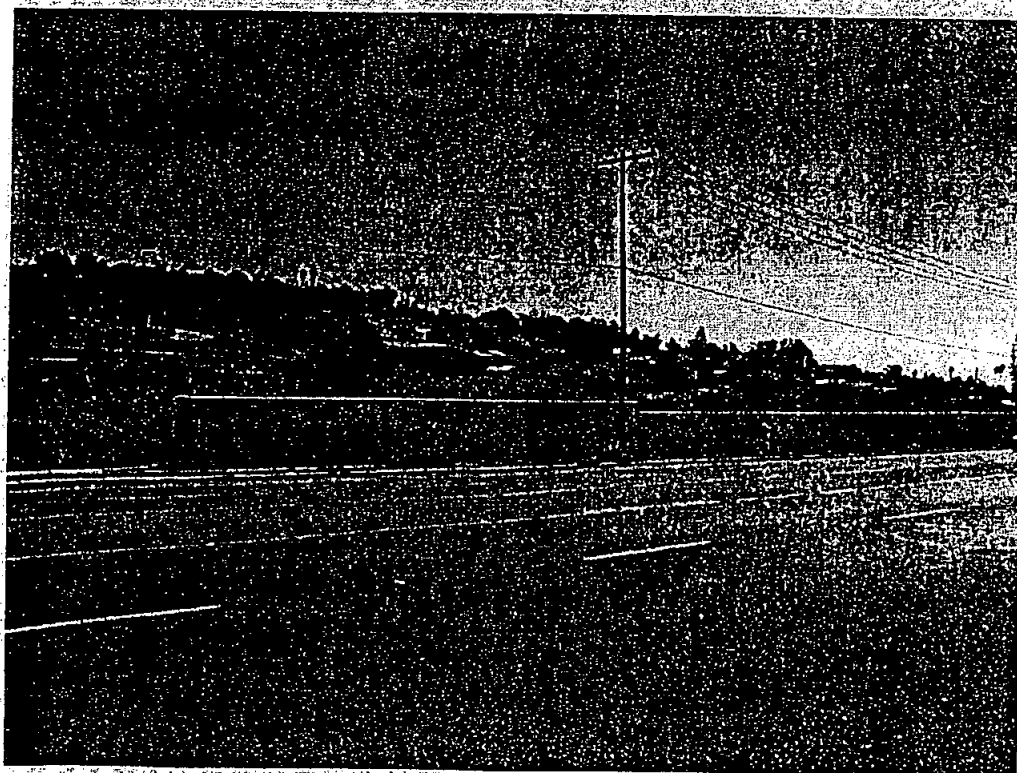
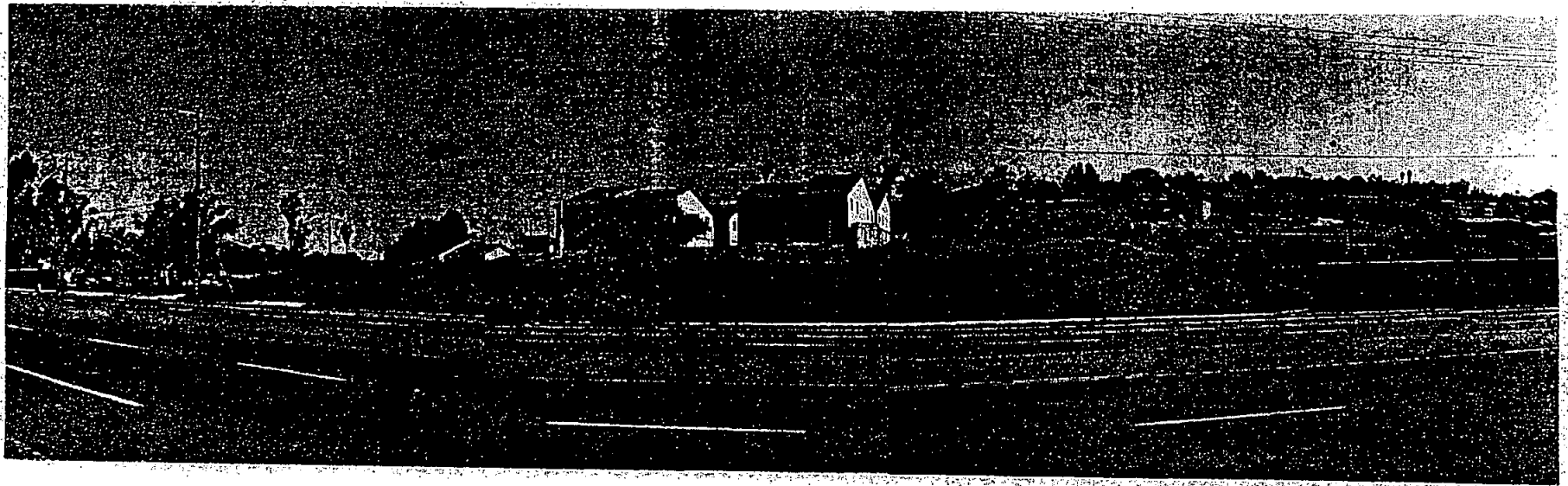
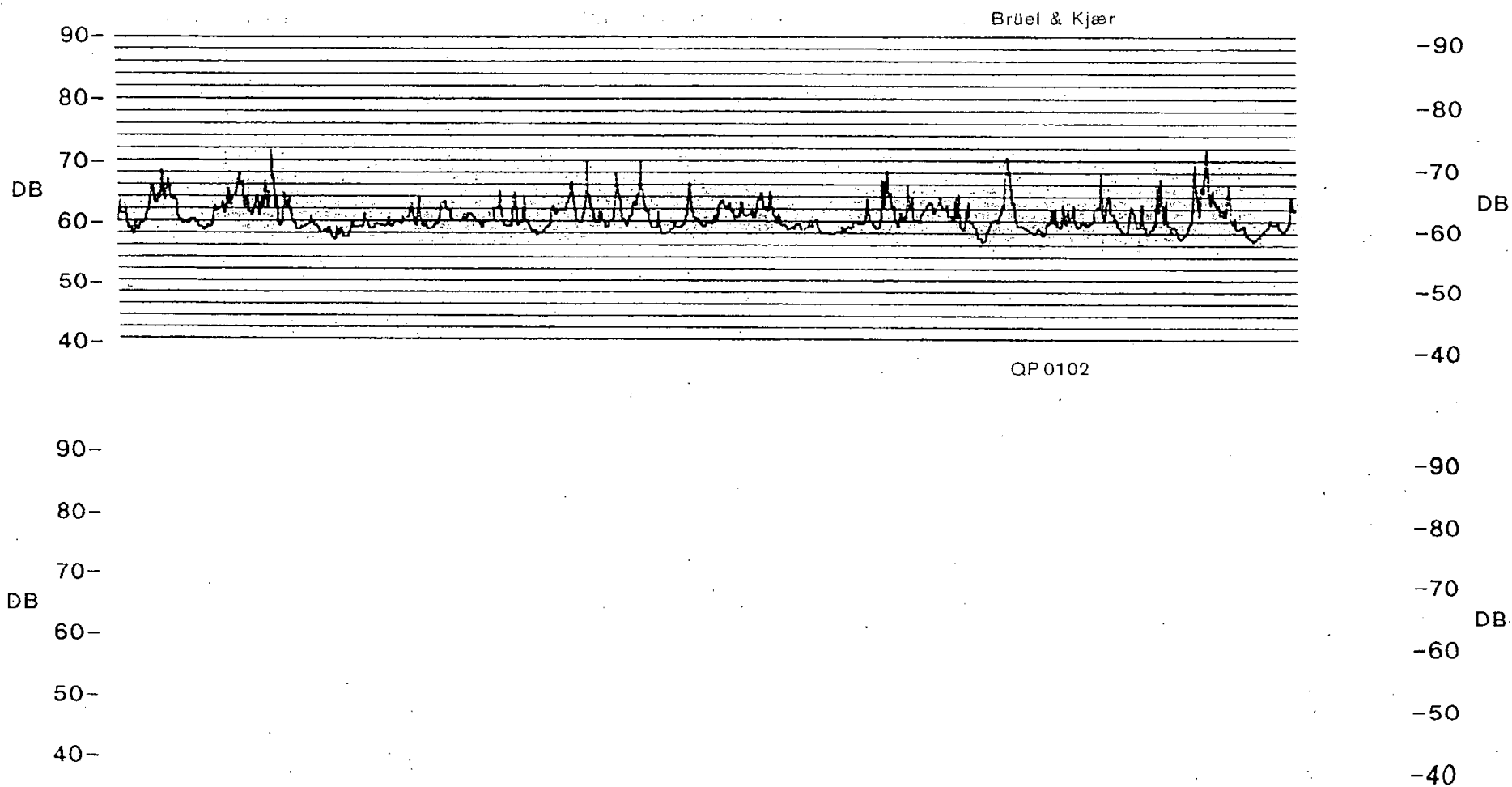
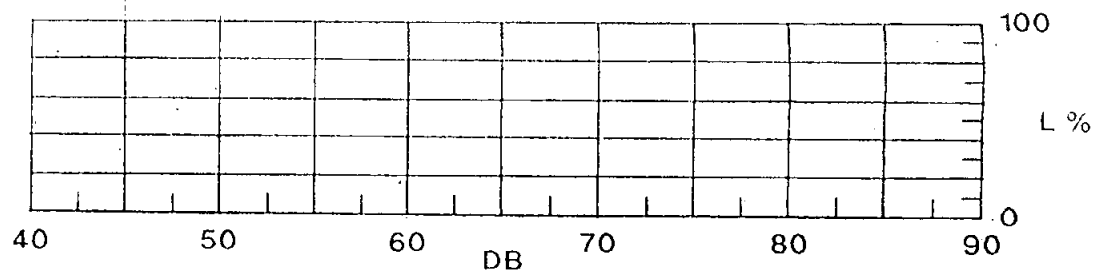


EXHIBIT 6



# EXHIBIT 7

DATE 5/4/05  
CHART SPEED .3mm  
SCALE A  
LOCATION SWEETWATER

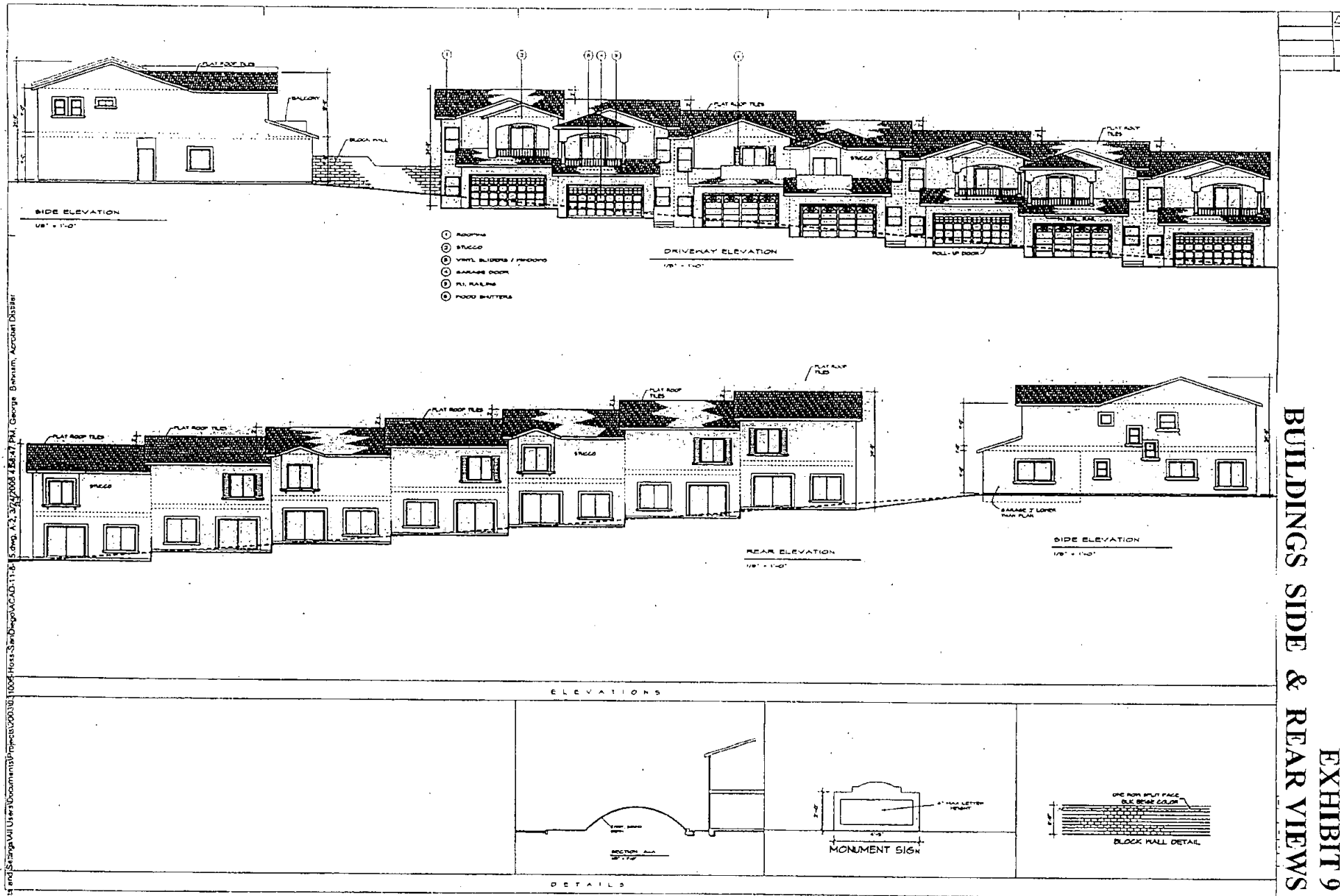




## SITE CALCULATION LOCATIONS



SCALE 1" = 60'

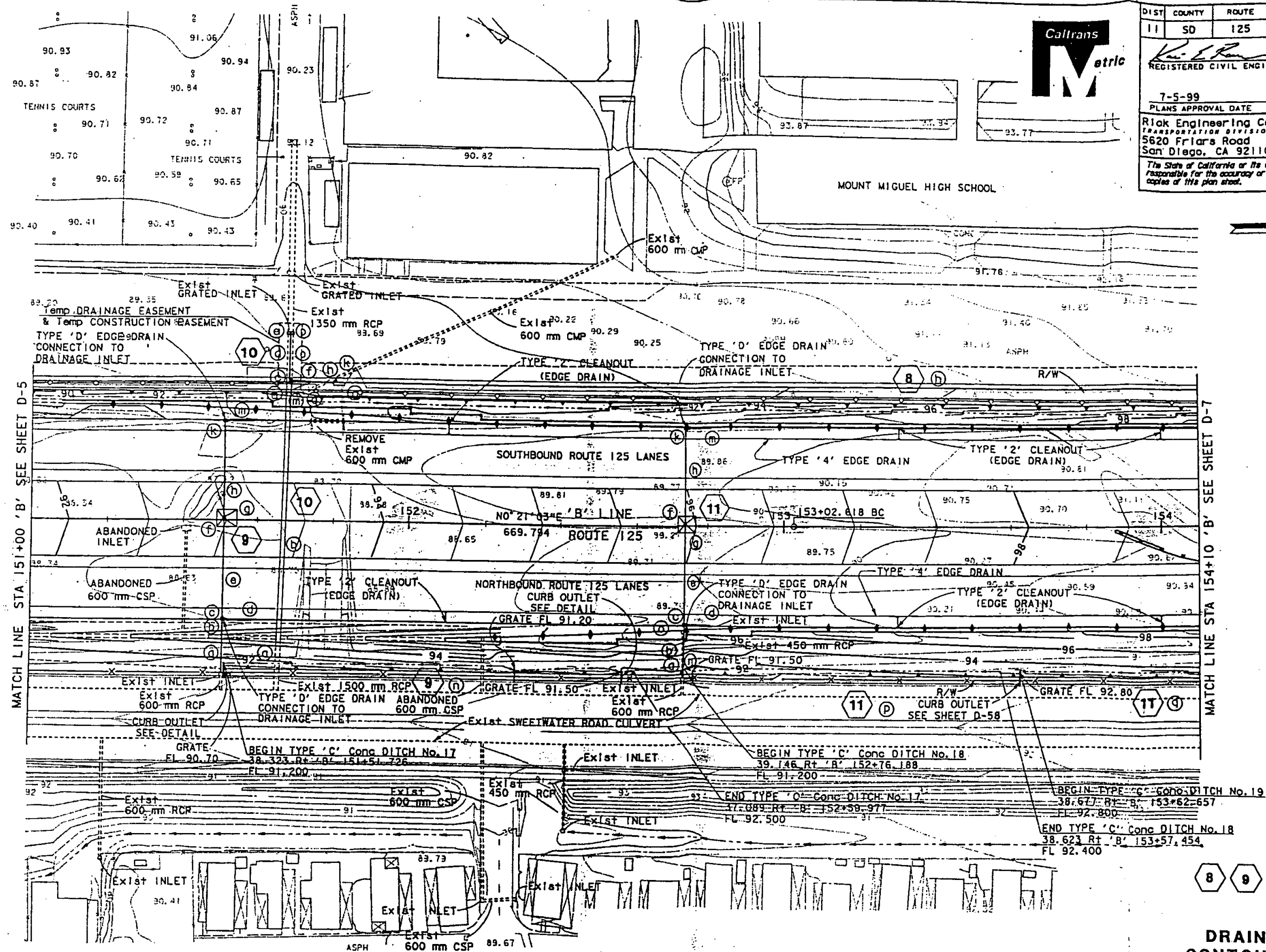


**BUILDINGS SIDE & REAR VIEWS**

**EXHIBIT 9**

A P P E N D I X      1  
= = = = = = = =      =

FREEWAY MAPS



OR-9

DIST	COUNTY	ROUTE	KILOMETERS POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	125	19.4/22.1	73	466

3-29-99  
REGISTERED CIVIL ENGINEER

7-5-99  
PLANS APPROVAL DATE

Rick Engineering Company  
TRANSPORTATION DIVISION  
5620 Friars Road  
San Diego, CA 92110-2596

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

MATCH LINE STA 151+00 'B' SEE SHEET D-5

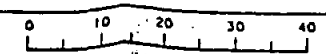
MATCH LINE STA 154+10 'B' SEE SHEET D-7

NOTE: 1. THIS PLAN ACCURATE FOR DRAINAGE AND CONTOUR GRADING ONLY.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

DRAINAGE AND CONTOUR GRADING  
SCALE: 1:500  
D-6

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS



USERNAME: r11m  
DCN FILE: d00193106\_13081402

CU 11220

EA 001931

DATE PLOTTED: 13-JUL-1999  
TIME PLOTTED: 08:24

DATE: 03-29-99  
REVISIONS:  
BY: K. M. JEWEL  
CHECKED BY:  
DESIGNED BY:  
CALCULATED BY:  
DESIGN OVERSIGHT:  
DATE: 03-29-99

DESIGNED BY:  
CHECKED BY:  
DESIGN OVERSIGHT:  
DATE: 03-29-99

DEPARTMENT OF TRANSPORTATION



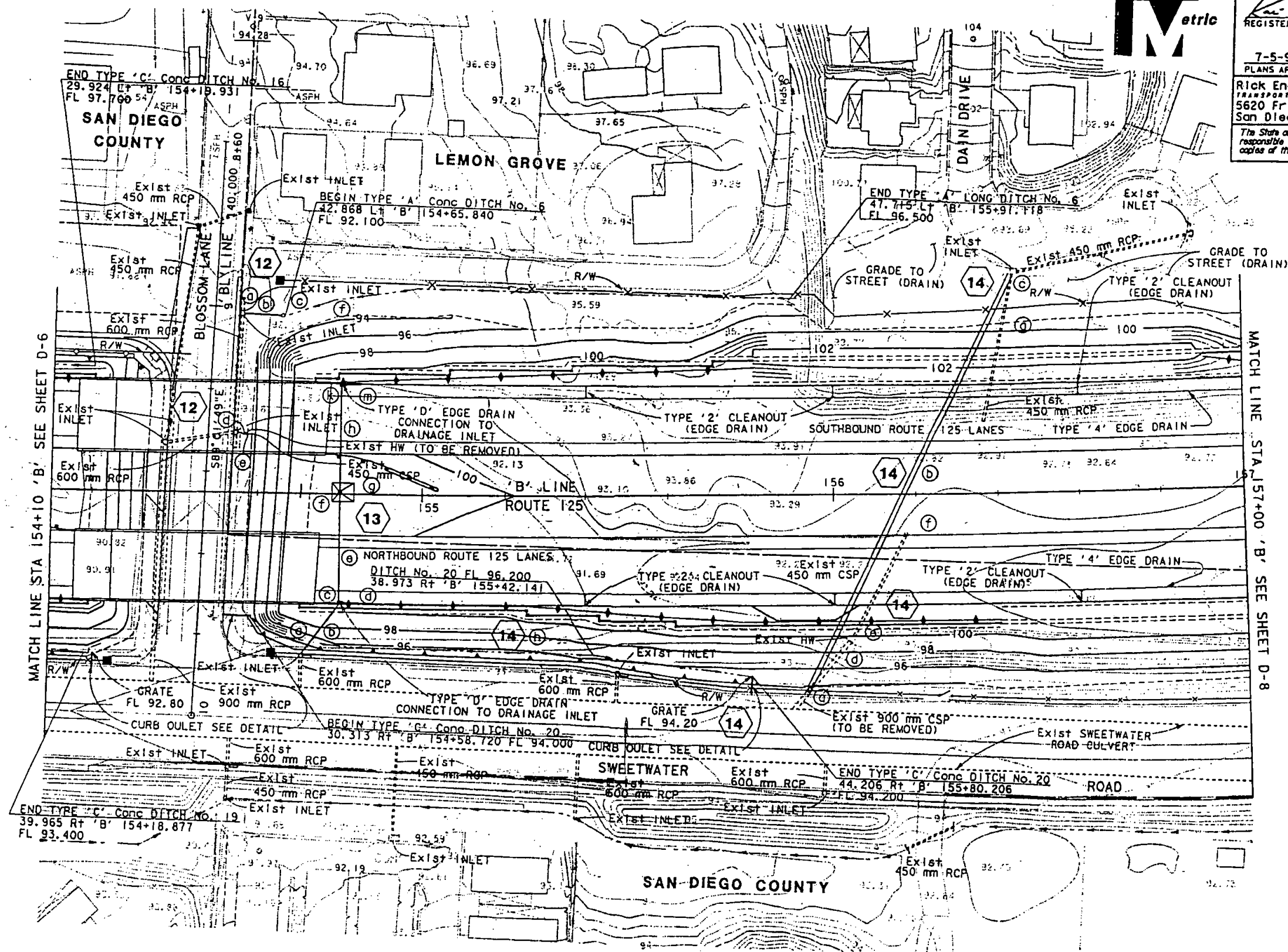
DIST	COUNTY	ROUTE	KILOMETERS POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	125	19.4/22.1	74	4

Kai E. Han 3-29-99  
REGISTERED CIVIL ENGINEER PROFESSIONAL

7-5-99  
PLANS APPROVAL DATE

Rick Engineering Company  
TRANSPORTATION DIVISION  
5620 Friars Road  
San Diego, CA 92110-2596

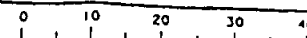
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



NOTE: 1. THIS PLAN ACCURATE FOR DRAINAGE  
AND CONTOUR GRADING ONLY.

ALL DIMENSIONS ARE IN METERS  
UNLESS OTHERWISE SHOWN.

FOR REDUCED PLANS ORIGINAL  
SCALE IS IN MILLIMETERS



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      USERNAME -> Trilm
      DGN FILE  -> D00193107_13081408

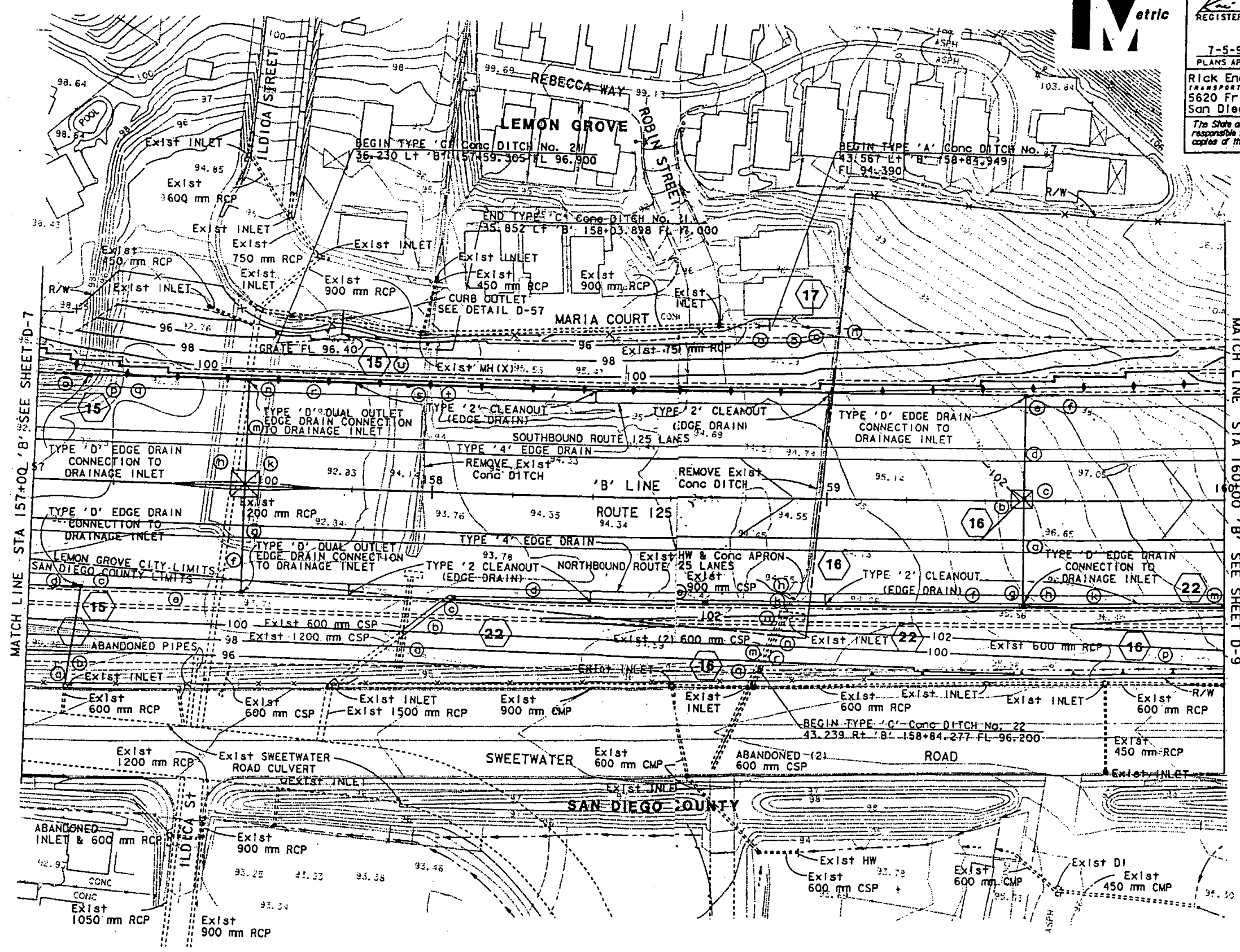
```

## DRAINAGE AND CONTOUR GRADING

SCALE: 1:500

**D-7**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
Caltrans  
DESIGN OVERSIGHT  
K. M. JEWEL  
CALCULATED/DESIGNED BY  
CHECKED BY  
DATE REVISION  
DATE REVISION



DIST	COUNTY	ROUTE	KILOMETERS TOTAL PROJECT	POST NO.	SHEET NO.	TOTAL SHEETS
11	SD	125	19.4/22.1	75	466	

REGISTERED CIVIL ENGINEER  
3-29-99  
7-5-99  
PLANS APPROVAL DATE  
Rick Engineering Company  
TRANSPORTATION DIVISION  
5620 Friars Road  
San Diego, CA 92110-2596  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

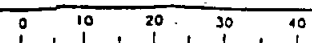
REGISTERED PROFESSIONAL ENGINEER  
KAI E. BAKER  
No. 44146  
Exp. 6-30-01  
CIVIL  
STATE OF CALIFORNIA

NOTE: 1. THIS PLAN ACCURATE FOR DRAINAGE AND CONTOUR GRADING ONLY.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

**DRAINAGE AND CONTOUR GRADING**  
SCALE: 1:500  
D-8

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS



USERNAME => tr11m  
DGN FILE => 000193108.13081414

CU 11220

EA 001931

DATE PLOTTED -> 13-JUL-1999  
TIME PLOTTED -> 08:27  
03-29-99

A P P E N D I X      2  
= = = = = = = =

MEASUREMENT CALIBRATION CALCULATIONS

BARRIER NAMING NOMENCLATURE

1. SR125 Wall. - This is the wall that runs north and south and is programmed from Station 153 to the north termination at Station 156.40
2. SR125 Berm. - This is the extension of the barrier from Station 156.40 to Station 157.40.
3. Sweetwater MHP wall. - This is the wall on the south side of Sweetwater Road running in front of the Mobile Home Park and ending at Station 155.40.
4. Sweetwater Site Berm. - This is the berm in front of the site running from Station 155.40 to Station 156.15.
5. Sweetwater Wall North of the Site. - This is the wall on the east side of Sweetwater Road running from Station 156.40 to Station 157.40.
6. South Side of Bldg 1 Units 1-7. - This is the south side of the building approximated by a 20 foot free standing wall.
7. North Side Bldg 1 Units 1-7. - This is the north side of the building approximated by a 20 foot free standing wall.
8. South MHP P/L Wall. - This is the six foot wall running east and west along the south common property line.
9. Unit 1 Wall. - This is the six foot wall along the west side of the patio and parallel to Sweetwater Road

INPUT DATA FILE : HOSS5M  
 BARRIER COST FILE : CALIF\$.DTA  
 DATE : 08-11-2005

SITE MEASUREMENT CALIBRATION

=====

TRAFFIC DATA

-----

LANE NO.	AUTO		MEDIUM TRKS		HEAVY TRKS		DESCRIPTION
	VPH	MPH	VPH	MPH	VPH	MPH	
1	888	55	54	55	12	55	SWEETWATER
2	4023	65	87	65	138	65	SR125 NORTHBOUND
3	4023	65	87	65	138	65	SR125 SOUTHBOUND

=====

LANE DATA

-----

LANE NO.	SEG. NO.	GRADE COR.	X	Y	Z	SEGMENT DESCRIPTION
1	1	NO	-500.0	178.0	304.0	153
	2	NO	0.0	178.0	304.0	154+40
	3	NO	36.0	178.0	304.0	154+50
	4	NO	169.0	178.0	308.0	155
	5	NO	312.0	182.0	308.0	SITE
	6	NO	334.0	182.0	308.0	155+40
	7	NO	489.0	195.0	309.0	156
	8	NO	539.0	195.0	309.0	156+15
	9	NO	623.0	195.0	309.0	156+40
	10	NO	809.0	204.0	309.0	157
		934.0	204.0	309.0	157+40	
2	1	NO	-500.0	60.0	328.0	153
	2	NO	0.0	60.0	328.0	154+40
	3	NO	36.0	60.0	328.0	154+50
	4	NO	169.0	60.0	328.0	155
	5	NO	312.0	60.0	328.0	SITE
	6	NO	334.0	60.0	328.0	155+40
	7	NO	489.0	60.0	328.0	156
	8	NO	539.0	60.0	328.0	156+15
	9	NO	623.0	60.0	328.0	156+40
	10	NO	809.0	60.0	328.0	157
		934.0	60.0	328.0	157+40	
3	1	NO	-500.0	-60.0	328.0	153
	2	NO	0.0	-60.0	328.0	154+40
	3	NO	36.0	-60.0	328.0	154+50
	4	NO	169.0	-60.0	328.0	155
	5	NO	312.0	-60.0	328.0	SITE
	6	NO	334.0	-60.0	328.0	155+40
	7	NO	489.0	-60.0	328.0	156
	8	NO	539.0	-60.0	328.0	156+15
	9	NO	623.0	-60.0	328.0	156+40
	10	NO	809.0	-60.0	328.0	157



## BARRIER DATA

Barrier No. 1 Description: SR25 WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	-500.0	89.0	328.0	336.0 *153	* 8
2	0.0	89.0	328.0	336.0 *154+40	* 8
3	36.0	89.0	328.0	336.0 *154+50	* 8
4	169.0	89.0	328.0	336.0 *155	* 8
5	312.0	98.0	328.0	336.0 *SITE	* 8
6	334.0	98.0	328.0	336.0 *155+40	* 8
7	489.0	107.0	328.0	336.0 *156	* 8
8	539.0	98.0	328.0	336.0 *156+15	* 8
	623.0	98.0	328.0	336.0 *156+40	* 8

Barrier No. 2 Description: SR25 BERM  
 Type - (1) BERM  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	623.0	98.0	328.0	336.0 *156+40	* 8
2	809.0	98.0	328.0	336.0 *157	* 8
	934.0	98.0	328.0	336.0 *157+40	* 8

Barrier No. 3 Description: SWEETWATER MHP SOUTH WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	-500.0	226.0	304.0	310.0 *153	* 6
2	0.0	226.0	304.0	310.0 *154+40	* 6
3	36.0	226.0	304.0	310.0 *154+50	* 6
4	169.0	226.0	308.0	314.0 *155	* 6
5	312.0	226.0	308.0	314.0 *SITE	* 6
	334.0	226.0	308.0	314.0 *155+40	* 6

Barrier No. 4 Description: SWEETWATER SITE BERM  
 Type - (1) BERM  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	334.0	242.0	308.0	314.5 *155+40	* 7
2	489.0	255.0	308.0	315.0 *156	* 7

339.0

255.0

308.0

315.0 \*156+15 \* 7

Barrier No. 5

Description: SWEETWATER WALL NORTH OF SITE

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	623.0	243.0	308.0	314.0 *156+40	* 6
2	809.0	252.0	308.0	314.0 *157	* 6
	934.0	252.0	308.0	314.0 *157+40	* 6

## RECEIVER DATA

REC.

NO.	X	Y	Z	DNL PEOPLE	ID
1	312.0	274.0	312.6	67 500	UNIT 1

## DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

K - CONSTANTS

) LANE RECEIVER/PAIRS = 0.0 DBA

TITLE:  
SITE MEASUREMENT CALIBRATIONEFFECTIVENESS / COST RATIOS  
\*\*\*\*\*

BAR ELE	0	1	2	3	4	5	6	7
1	-	0.*						153
2	-	0.*						154+40
3	-	0.*						154+50
4	-	0.*						155
5	-	0.*						SITE
6	-	0.*						155+40
7	-	0.*						156
8	-	0.*						156+15
9	-	0.*						156+40
10	-	0.*						157
11	-	0.*						153
12	-	0.*						154+40
13	-	0.*						154+50
14	-	0.*						155
15	-	0.*						SITE
16	-	0.*						155+40
17	-	0.*						156
18	-	0.*						156+40
19	-	0.*						157

0 1 2 3 4 5 6 7

1

BARRIER DATA  
\*\*\*\*\*

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
1	-	8.*							153	500.0	MASONRY
2	-	8.*							154+40	36.0	MASONRY
3	-	8.*							154+50	133.0	MASONRY
4	-	8.*							155	143.3	MASONRY
5	-	8.*							SITE	22.0	MASONRY
6	-	8.*							155+40	155.3	MASONRY
7	-	8.*							156	50.8	MASONRY
8	-	8.*							156+15	84.0	MASONRY
9	-	8.*							156+40	186.0	BERM
10	-	8.*							157	125.0	BERM
11	-	6.*							153	500.0	MASONRY
12	-	6.*							154+40	36.0	MASONRY
13	-	6.*							154+50	133.1	MASONRY

14 - 6.\*  
 15 - 6.\*

155 143.0 MASONRY  
 SITE 22.0 MASONRY

16 - 7.\*  
 17 - 7.\*

155+40 155.5 BERM  
 156 50.0 BERM

18 - 6.\*  
 19 - 6.\*

156+40 186.2 MASONRY  
 157 125.0 MASONRY

1 0 1 2 3 4 5 6 7

REC REC ID DNL PEOPLE LEQ(CAL)  
 1 UNIT 1 67. 500. 65.0

BARRIER TYPE COST  
 BERM 13758.  
 MASONRY 138721.  
 MASONRY/JERSEY 0.  
 CONCRETE 0.

TOTAL COST = \$ 152000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION  
 8. 8. 8. 8. 8. 8. 8. 8. 8. 6. 6. 6. 6. 6. 7. 7. 6. 6.

A P P E N D I X     3  
= = = = =

EXISTING LDN CALCULATIONS VACANT SITE  
AT MEASUREMENT LOCATION

BARRIER NAMING NOMENCLATURE

1. SR125 Wall. - This is the wall that runs north and south and is programmed from Station 153 to the north termination at Station 156.40
2. SR125 Berm. - This is the extension of the barrier from Station 156.40 to Station 157.40.
3. Sweetwater MHP wall. - This is the wall on the south side of Sweetwater Road running in front of the Mobile Home Park and ending at Station 155.40.
4. Sweetwater Site Berm. - This is the berm in front of the site running from Station 155.40 to Station 156.15.
5. Sweetwater Wall North of the Site. - This is the wall on the east side of Sweetwater Road running from Station 156.40 to Station 157.40.
6. South Side of Bldg 1 Units 1-7. - This is the south side of the building approximated by a 20 foot free standing wall.
7. North Side Bldg 1 Units 1-7. - This is the north side of the building approximated by a 20 foot free standing wall.
8. South MHP P/L Wall. - This is the six foot wall running east and west along the south common property line.
9. Unit 1 Wall. - This is the six foot wall along the west side of the patio and parallel to Sweetwater Road

INPUT DATA FILE : HOSS5M  
BARRIER COST FILE : CALIFS.DTA  
DATE : 08-11-2005

SITE MEASUREMENT CALIBRATION

TRAFFIC DATA

LANE NO.	AUTO		MEDIUM TRKS		HEAVY TRKS		DESCRIPTION
	VPH	MPH	VPH	MPH	VPH	MPH	
1	888	55	54	55	12	55	SWEETWATER
2	4023	65	87	65	138	65	SR125 NORTHBOUND
3	4023	65	87	65	138	65	SR125 SOUTHBOUND

LANE DATA

LANE NO.	SEG. NO.	GRADE COR.	X	Y	Z	SEGMENT DESCRIPTION
1	1	NO	-500.0	178.0	304.0	153
	2	NO	0.0	178.0	304.0	154+40
	3	NO	36.0	178.0	304.0	154+50
	4	NO	169.0	178.0	308.0	155
	5	NO	312.0	182.0	308.0	SITE
	6	NO	334.0	182.0	308.0	155+40
	7	NO	489.0	195.0	309.0	156
	8	NO	539.0	195.0	309.0	156+15
	9	NO	623.0	195.0	309.0	156+40
	10	NO	809.0	204.0	309.0	157
2	1	NO	-500.0	60.0	328.0	153
	2	NO	0.0	60.0	328.0	154+40
	3	NO	36.0	60.0	328.0	154+50
	4	NO	169.0	60.0	328.0	155
	5	NO	312.0	60.0	328.0	SITE
	6	NO	334.0	60.0	328.0	155+40
	7	NO	489.0	60.0	328.0	156
	8	NO	539.0	60.0	328.0	156+15
	9	NO	623.0	60.0	328.0	156+40
	10	NO	809.0	60.0	328.0	157
3	1	NO	-500.0	-60.0	328.0	153
	2	NO	0.0	-60.0	328.0	154+40
	3	NO	36.0	-60.0	328.0	154+50
	4	NO	169.0	-60.0	328.0	155
	5	NO	312.0	-60.0	328.0	SITE
	6	NO	334.0	-60.0	328.0	155+40
	7	NO	489.0	-60.0	328.0	156
	8	NO	539.0	-60.0	328.0	156+15
	9	NO	623.0	-60.0	328.0	156+40
	10	NO	809.0	-60.0	328.0	157

## BARRIER DATA

Barrier No. 1

Description: SR25 WALL

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	-500.0	89.0	328.0	336.0 *153	* 8
2	0.0	89.0	328.0	336.0 *154+40	* 8
3	36.0	89.0	328.0	336.0 *154+50	* 8
4	169.0	89.0	328.0	336.0 *155	* 8
5	312.0	98.0	328.0	336.0 *SITE	* 8
6	334.0	98.0	328.0	336.0 *155+40	* 8
7	489.0	107.0	328.0	336.0 *156	* 8
8	539.0	98.0	328.0	336.0 *156+15	* 8
	623.0	98.0	328.0	336.0 *156+40	* 8

Barrier No. 2

Description: SR25 BERM

Type - (1) BERM

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	623.0	98.0	328.0	336.0 *156+40	* 8
2	809.0	98.0	328.0	336.0 *157	* 8
	934.0	98.0	328.0	336.0 *157+40	* 8

Barrier No. 3

Description: SWEETWATER MHP SOUTH WALL

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	-500.0	226.0	304.0	310.0 *153	* 6
2	0.0	226.0	304.0	310.0 *154+40	* 6
3	36.0	226.0	304.0	310.0 *154+50	* 6
4	169.0	226.0	308.0	314.0 *155	* 6
5	312.0	226.0	308.0	314.0 *SITE	* 6
	334.0	226.0	308.0	314.0 *155+40	* 6

Barrier No. 4

Description: SWEETWATER SITE BERM

Type - (1) BERM

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	334.0	242.0	308.0	314.5 *155+40	* 7
2	489.0	255.0	308.0	315.0 *156	* 7

339.0

255.0

308.0

315.0 \*156+15 \* 7

Barrier No. 5

Type - (2) MASONRY

Description: SWEETWATER WALL NORTH OF SITE

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	623.0	243.0	308.0	314.0 *156+40	* 6
2	809.0	252.0	308.0	314.0 *157	* 6
	934.0	252.0	308.0	314.0 *157+40	* 6

## RECEIVER DATA

REC. NO.	X	Y	Z	DNL PEOPLE	ID
1	312.0	274.0	312.6	67 500	UNIT 1

## DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

## K - CONSTANTS

LANE RECEIVER/PAIRS = 0.0 DBA



TITLE:  
SITE MEASUREMENT CALIBRATION

EFFECTIVENESS / COST RATIOS  
\*\*\*\*\*

BAR ELE	0	1	2	3	4	5	6	7
1	-	0.*						153
2	-	0.*						154+40
3	-	0.*						154+50
4	-	0.*						155
5	-	0.*						SITE
6	-	0.*						155+40
7	-	0.*						156
8	-	0.*						156+15
9	-	0.*						156+40
10	-	0.*						157
11	-	0.*						153
12	-	0.*						154+40
13	-	0.*						154+50
14	-	0.*						155
15	-	0.*						SITE
16	-	0.*						155+40
17	-	0.*						156
18	-	0.*						156+40
19	-	0.*						157

1  
BARRIER DATA  
\*\*\*\*\*

BAR ELE	0	1	BARRIER HEIGHTS							BAR ID	LENGTH	TYPE
1	-	8.*								153	500.0	MASONRY
2	-	8.*								154+40	36.0	MASONRY
3	-	8.*								154+50	133.0	MASONRY
4	-	8.*								155	143.3	MASONRY
5	-	8.*								SITE	22.0	MASONRY
6	-	8.*								155+40	155.3	MASONRY
7	-	8.*								156	50.8	MASONRY
8	-	8.*								156+15	84.0	MASONRY
9	-	8.*								156+40	186.0	BERM
10	-	8.*								157	125.0	BERM
11	-	6.*								153	500.0	MASONRY
12	-	6.*								154+40	36.0	MASONRY
13	-	6.*								154+50	133.1	MASONRY

14 - 6.\*  
 15 - 6.\*  
 16 - 7.\*  
 17 - 7.\*  
 18 - 6.\*  
 19 - 6.\*

155 SITE 143.0 MASONRY  
 22.0 MASONRY  
 155+40 155.5 BERM  
 156 50.0 BERM  
 156+40 186.2 MASONRY  
 157 125.0 MASONRY

1 0 1 2 3 4 5 6 7

REC REC ID DNL PEOPLE LEQ(CAL)  
 1 UNIT 1 67. 500. 65.0

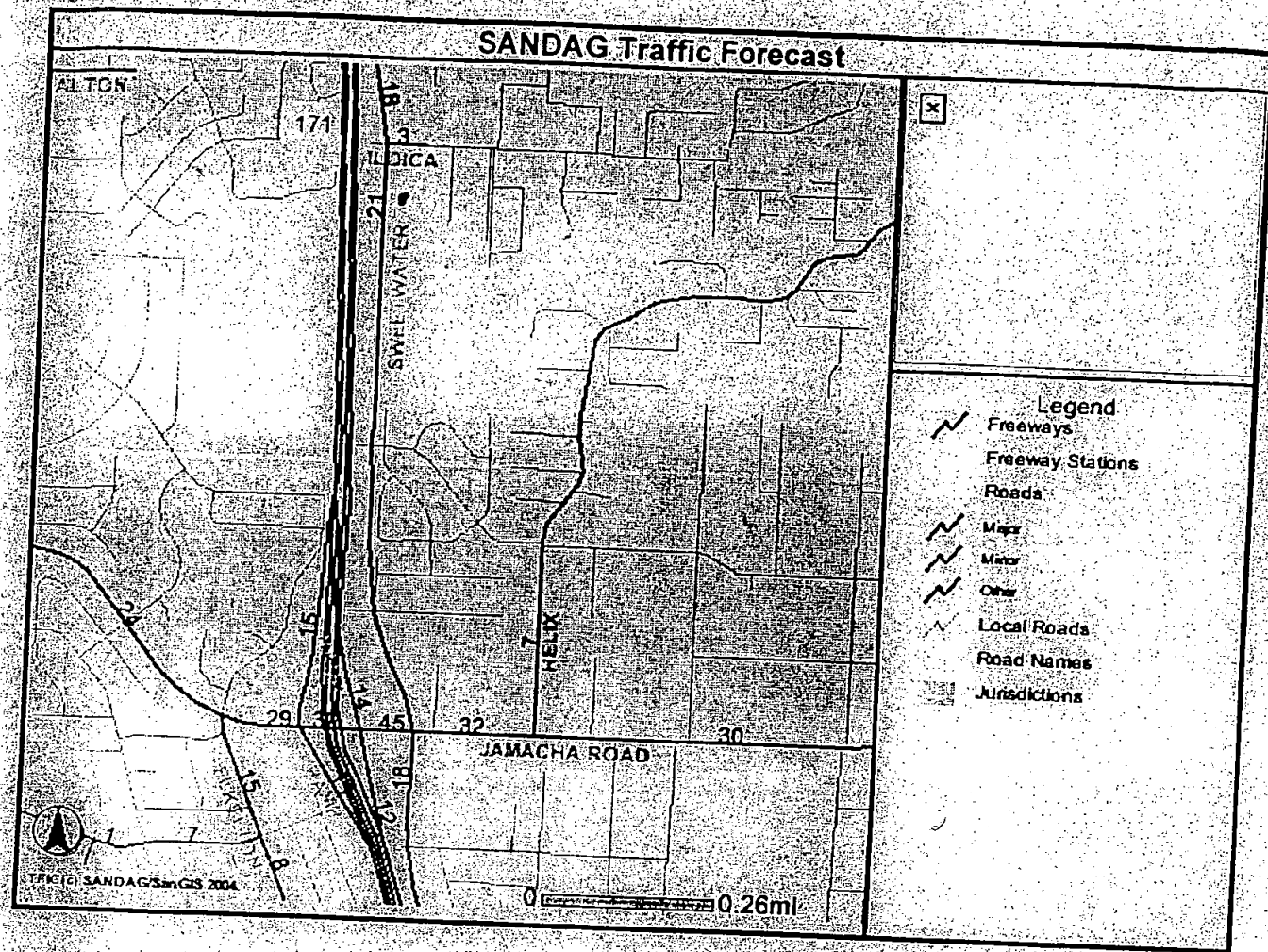
BARRIER TYPE COST  
 BERM 13758.  
 MASONRY 138721.  
 MASONRY/JERSEY 0.  
 CONCRETE 0.

TOTAL COST = \$ 152000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION  
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION  
 8. 8. 8. 8. 8. 8. 8. 8. 8. 6. 6. 6. 6. 6. 7. 7. 6. 6.

A P P E N D I X 4  
= = = = =

2030 SANDAG TRAFFIC VOLUMES



## A P P E N D I X 5

= = = = =

### 2030 CNEL CALCULATIONS AT MEASUREMENT POINT

#### BARRIER NAMING NOMENCLATURE

1. SR125 Wall. - This is the wall that runs north and south and is programmed from Station 153 to the north termination at Station 156.40.
2. SR125 Berm. -- This is the extension of the barrier from Station 156.40 to Station 157.40.
3. Sweetwater MHP wall. -- This is the wall on the east side of Sweetwater Road running in front of the Mobile Home Park and ending at Station 155.40.
4. Sweetwater Site Berm. -- This is the berm in front of the site running from Station 155.40 to Station 156.15.
5. Sweetwater Wall North of the Site. -- This is the wall on the east side of Sweetwater Road running from Station 156.40 to Station 157.40.
6. South Side of Bldg 1 Units 1-7. - This is the south side of the building approximated by a 20 foot free standing wall.
7. North Side Bldg 1 Units 1-7. -- This is the north side of the building approximated by a 20 foot free standing wall.
8. South MHP P/L Wall. -- This is the six foot wall running east and west along the south common property line.
9. Unit 1 Wall. -- This is the six foot wall along the west side of the patio and parallel to Sweetwater Road.



\* \* SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) \* \*

INPUT DATA FILE : HOSS3M  
 BARRIER COST FILE : CALIFS.DTA  
 DATE : 08-12-2005

SITE FUTURE LDN AT MEASUREMENT POINT

=====

TRAFFIC DATA

LANE NO	AUTO		MEDIUM TRKS		HEAVY TRKS		DESCRIPTION
	VPH	MPH	VPH	MPH	VPH	MPH	
1	1977	55	95	55			
2	8096	65	239	65	38	55	SWEETWATER
3	8096	65	239	65	273	65	SR125 NORTHBOUND
					273	65	SR125 SOUTHBOUND

=====

LANE DATA

LANE NO	SEG NO	GRADE COR	SEGMENT			DESCRIPTION
			X	Y	Z	
1	1	NO	-500.0			
	2	NO	0.0	178.0	304.0	153
	3	NO	36.0	178.0	304.0	154+40
	4	NO	169.0	178.0	304.0	154+50
	5	NO	312.0	178.0	308.0	155
	6	NO	334.0	182.0	308.0	SITE
	7	NO	489.0	182.0	308.0	155+40
	8	NO	539.0	195.0	309.0	156
	9	NO	623.0	195.0	309.0	156+15
	10	NO	809.0	195.0	309.0	156+40
2	1	NO	-500.0			
	2	NO	0.0	60.0	328.0	153
	3	NO	36.0	60.0	328.0	154+40
	4	NO	169.0	60.0	328.0	154+50
	5	NO	312.0	60.0	328.0	155
	6	NO	334.0	60.0	328.0	SITE
	7	NO	489.0	60.0	328.0	155+40
	8	NO	539.0	60.0	328.0	156
	9	NO	623.0	60.0	328.0	156+15
	10	NO	809.0	60.0	328.0	156+40
3	1	NO	-500.0			
	2	NO	0.0	60.0	328.0	153
	3	NO	36.0	60.0	328.0	154+40
	4	NO	169.0	60.0	328.0	154+50
	5	NO	312.0	60.0	328.0	155
	6	NO	334.0	60.0	328.0	SITE
	7	NO	489.0	60.0	328.0	155+40
	8	NO	539.0	60.0	328.0	156
	9	NO	623.0	60.0	328.0	156+15
	10	NO	809.0	60.0	328.0	156+40

10 NO 809.0 -60.0 328.0 157  
 934.0 -60.0 328.0 157+40

# BARRIER DATA

Barrier No. 1 Description: SR25 WALL  
 Type (2) MASONRY No. Height Changes (P)=0  
 Height Increment (DELZ)=0.0

SEG	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	500.0	89.0	328.0	336.0 *153	* 8
2	0.0	89.0	328.0	336.0 *154+40	* 8
3	36.0	89.0	328.0	336.0 *154+50	* 8
4	169.0	89.0	328.0	336.0 *155	* 8
5	312.0	98.0	328.0	336.0 *SITE	* 8
6	334.0	98.0	328.0	336.0 *155+40	* 8
7	489.0	107.0	328.0	336.0 *156	* 8
8	539.0	98.0	328.0	336.0 *156+15	* 8
	623.0	98.0	328.0	336.0 *156+40	* 8

Barrier No. 2 Description: SR25 BERM  
 Type (1) BERM No. Height Changes (P)=0  
 Height Increment (DELZ)=0.0

SEG	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	623.0	98.0	328.0	336.0 *156+40	* 8
2	809.0	98.0	328.0	336.0 *157	* 8
	934.0	98.0	328.0	336.0 *157+40	* 8

Barrier No. 3 Description: SWEETWATER MHP SOUTH WALL  
 Type (2) MASONRY No. Height Changes (P)=0  
 Height Increment (DELZ)=0.0

SEG	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	500.0	226.0	304.0	310.0 *153	* 6
2	0.0	226.0	304.0	310.0 *154+40	* 6
3	36.0	226.0	304.0	310.0 *154+50	* 6
4	169.0	226.0	308.0	314.0 *155	* 6
5	312.0	226.0	308.0	314.0 *SITE	* 6
	334.0	226.0	308.0	314.0 *155+40	* 6

Barrier No. 4 Description: SWEETWATER SITE BERM  
 Type (1) BERM No. Height Changes (P)=0  
 Height Increment (DELZ)=0.0

SEG	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	334.0	242.0	308.0	314.5 *155+40	* 7



2      489.0      255.0      308.0      315.0 \*156      \* 7  
       539.0      255.0      308.0      315.0 \*156+15      \* 7

Barrier No. 5  
 Type (2) MASONRY

Description: SWEETWATER WALL NORTH OF SITE

Flight Increment (DELZ) = 0.0

No. Height Changes (P) = 0

SEG	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	623.0	243.0	308.0	314.0 *156+40	* 6
2	809.0	252.0	308.0	314.0 *157	* 6
	934.0	252.0	308.0	314.0 *157+40	* 6

# RECEIVER DATA

REC NO.	X	Y	Z	DNL PEOPLE	ID
1	312.0	274.0	312.6	67 500	UNIT 1

# DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

# CONSTANTS

ALL LANE/RECEIVER/PAIRS = -4.7 DBA



TITLE:  
SITE FUTURE LDN AT MEASUREMENT POINT

## EFFECTIVENESS / COST RATIOS

\*\*\*\*\*

BAR ELE	0	1	2	3	4	5	6	7	
1	-	0.*							153
2	-	0.*							154+40
3	-	0.*							154+50
4	-	0.*							155
5	-	0.*							SITE
6	-	0.*							155+40
7	-	0.*							156
8	-	0.*							156+15
9	-	0.*							156+40
10	-	0.*							157
11	-	0.*							153
12	-	0.*							154+40
13	-	0.*							154+50
14	-	0.*							155
15	-	0.*							SITE
16	-	0.*							155+40
17	-	0.*							156
18	-	0.*							156+40
19	-	0.*							157
	0	1	2	3	4	5	6	7	

## BARRIER DATA

\*\*\*\*\*

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
1	-	8.*							153	500.0	MASONRY
2	-	8.*							154+40	36.0	MASONRY
3	-	8.*							154+50	133.0	MASONRY
4	-	8.*							155	143.3	MASONRY
5	-	8.*							SITE	22.0	MASONRY
6	-	8.*							155+40	155.3	MASONRY
7	-	8.*							156	50.8	MASONRY
8	-	8.*							156+15	84.0	MASONRY
9	-	8.*							156+40	186.0	BERM
10	-	8.*							157	125.0	BERM
11	-	6.*							153	500.0	MASONRY
12	-	6.*							154+40	36.0	MASONRY
13	-	6.*							154+50	133.1	MASONRY

14 - 6.\*  
 15 - 6.\*  
 16 - 7.\*  
 17 - 7.\*  
 18 - 6.\*  
 19 - 6.\*

155 143.0 MASONRY  
 SITE 22.0 MASONRY  
 155+40 155.5 BERM  
 156 50.0 BERM  
 156+40 186.2 MASONRY  
 157 125.0 MASONRY

1 0 1 2 3 4 5 6 7

REC REC ID DNL PEOPLE LEQ(CAL)

1 UNIT 1 67. 500. 63.7

BARRIER TYPE COST

BERM 13758.  
 MASONRY 138721.  
 MASONRY/JERSEY 0.  
 CONCRETE 0.

TOTAL COST = \$ 152000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION  
 8. 8. 8. 8. 8. 8. 8. 8. 8. 6. 6. 6. 6. 6. 7. 7. 6. 6.

A P P E N D I X      6  
= = = = = = = =

2030 CNEL CALCULATIONS FOR VACANT SITE  
AT 20 GROUND LEVEL LOCATIONS AND FOR CURVE PLOTTING

BARRIER NAMING NOMENCLATURE

1. SR125 Wall. - This is the wall that runs north and south and is programmed from Station 153 to the north termination at Station 156.40.
2. SR125 Berm. - This is the extension of the barrier from Station 156.40 to Station 157.40.
3. Sweetwater MHP wall. - This is the wall on the east side of Sweetwater Road running in front of the Mobile Home Park and ending at Station 155.40.
4. Sweetwater Site Berm. - This is the berm in front of the site running from Station 155.40 to Station 156.15.
5. Sweetwater Wall North of the Site. - This is the wall on the east side of Sweetwater Road running from Station 156.40 to Station 157.40.
6. South Side of Bldg 1 Units 1-7. - This is the south side of the building approximated by a 20 foot free standing wall.
7. North Side Bldg 1 Units 1-7. - This is the north side of the building approximated by a 20 foot free standing wall.
8. South MHP P/L Wall. - This is the six foot wall running east and west along the south common property line.
9. Unit 1 Wall. - This is the six foot wall along the west side of the patio and parallel to Sweetwater Road.

\* \* SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) \* \*

INPUT DATA FILE : HOSS2GM  
 CARRIER COST FILE : CALIF\$.DTA  
 DATE : 08-12-2005

SITE FUTURE LDN AT 20 POINTS GROUND LEVEL FOR VACANT SITE

TRAFFIC DATA

LANE NO.	AUTO		MEDIUM TRKS		HEAVY TRKS		DESCRIPTION
	VPH	MPH	VPH	MPH	VPH	MPH	
1	1977	55	95	55	38	55	SWEETWATER
2	8096	65	239	65	273	65	SR125 NORTHBOUND
3	8096	65	239	65	273	65	SR125 SOUTHBOUND

LANE DATA

LANE NO.	SEG. NO.	GRADE COR.	X	Y	Z	SEGMENT DESCRIPTION
1	1	NO	-500.0	178.0	304.0	153
	2	NO	0.0	178.0	304.0	154+40
	3	NO	36.0	178.0	304.0	154+50
	4	NO	169.0	178.0	308.0	155
	5	NO	312.0	182.0	308.0	SITE
	6	NO	334.0	182.0	308.0	155+40
	7	NO	489.0	195.0	309.0	156
	8	NO	539.0	195.0	309.0	156+15
	9	NO	623.0	195.0	309.0	156+40
	10	NO	809.0	204.0	309.0	157
2	1	NO	934.0	204.0	309.0	157+40
	2	NO	-500.0	60.0	328.0	153
	3	NO	0.0	60.0	328.0	154+40
	4	NO	36.0	60.0	328.0	154+50
	5	NO	169.0	60.0	328.0	155
	6	NO	312.0	60.0	328.0	SITE
	7	NO	334.0	60.0	328.0	155+40
	8	NO	489.0	60.0	328.0	156
	9	NO	539.0	60.0	328.0	156+15
	10	NO	623.0	60.0	328.0	156+40
3	1	NO	809.0	60.0	328.0	157
	2	NO	934.0	60.0	328.0	157+40
	3	NO	-500.0	-60.0	328.0	153
	4	NO	0.0	-60.0	328.0	154+40
	5	NO	36.0	-60.0	328.0	154+50
	6	NO	169.0	-60.0	328.0	155
	7	NO	312.0	-60.0	328.0	SITE
	8	NO	334.0	-60.0	328.0	155+40
	9	NO	489.0	-60.0	328.0	156
	10	NO	539.0	-60.0	328.0	156+15
	11	NO	623.0	-60.0	328.0	156+40

10 NO 809.0 -60.0 328.0 157  
934.0 -60.0 328.0 157+40

# BARRIER DATA

Barrier No. 1 Description: SR25 WALL  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	-500.0	89.0	328.0	336.0 *153	* 8
2	0.0	89.0	328.0	336.0 *154+40	* 8
3	36.0	89.0	328.0	336.0 *154+50	* 8
4	169.0	89.0	328.0	336.0 *155	* 8
5	312.0	98.0	328.0	336.0 *SITE	* 8
6	334.0	98.0	328.0	336.0 *155+40	* 8
7	489.0	107.0	328.0	336.0 *156	* 8
8	539.0	98.0	328.0	336.0 *156+15	* 8
	623.0	98.0	328.0	336.0 *156+40	* 8

Barrier No. 2 Description: SR25 BERM  
Type - (1) BERM  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	623.0	98.0	328.0	336.0 *156+40	* 8
2	809.0	98.0	328.0	336.0 *157	* 8
	934.0	98.0	328.0	336.0 *157+40	* 8

Barrier No. 3 Description: SWEETWATER MHP SOUTH WALL  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	-500.0	226.0	304.0	310.0 *153	* 6
2	0.0	226.0	304.0	310.0 *154+40	* 6
3	36.0	226.0	304.0	310.0 *154+50	* 6
4	169.0	226.0	308.0	314.0 *155	* 6
5	312.0	226.0	308.0	314.0 *SITE	* 6
	334.0	226.0	308.0	314.0 *155+40	* 6

Barrier No. 4 Description: SWEETWATER SITE BERM  
Type - (1) BERM  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	334.0	242.0	308.0	314.5 *155+40	* 7

2 489.0 255.0 308.0 315.0 \*156 \* 7  
 539.0 255.0 308.0 315.0 \*156+15 \* 7

Barrier No. 5  
 Type - (2) MASONRY

Description: SWEETWATER WALL NORTH OF SITE

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	623.0	243.0	308.0	314.0 *156+40	* 6
2	809.0	252.0	308.0	314.0 *157	* 6
	934.0	252.0	308.0	314.0 *157+40	* 6

# RECEIVER DATA

REC. NO.	X	Y	Z	DNL	PEOPLE	ID
1	312.0	274.0	312.6	67	500	1 REAR
2	312.0	300.0	314.6	67	500	2 REAR
3	312.0	314.0	316.6	67	500	3 REAR
4	312.0	338.0	318.6	67	500	4 REAR
5	312.0	364.0	320.6	67	500	5 REAR
6	312.0	396.0	322.6	67	500	6 REAR
7	312.0	412.0	324.6	67	500	7 REAR
8	382.0	274.0	312.1	67	500	8 FRONT
9	382.0	300.0	314.1	67	500	9 FRONT
10	382.0	324.0	316.1	67	500	10 FRONT
11	382.0	338.0	318.1	67	500	11 FRONT
12	382.0	364.0	320.1	67	500	12 FRONT
13	382.0	396.0	322.1	67	500	13 FRONT
14	382.0	412.0	324.1	67	500	14 FRONT
15	376.0	452.0	327.0	67	500	15 FRONT
16	356.0	452.0	327.5	67	500	16 FRONT
17	329.0	452.0	328.0	67	500	17 FRONT
18	329.0	516.0	330.0	67	500	18 REAR
19	356.0	516.0	329.5	67	500	19 REAR
20	376.0	516.0	329.0	67	500	20 REAR

# DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

# K - CONSTANTS

ALL LANE RECEIVER/PAIRS = -4.7 DBA

TITLE:  
SITE FUTURE LDN AT 20 POINTS GROUND LEVEL FOR VACANT SITE

EFFECTIVENESS / COST RATIOS  
\*\*\*\*\*

BAR ELE	0	1	2	3	4	5	6	7
1	-	0.*						153
2	-	0.*						154+40
3	-	0.*						154+50
4	-	0.*						155
5	-	0.*						SITE
6	-	0.*						155+40
7	-	0.*						156
8	-	0.*						156+15
9	-	0.*						156+40
10	-	0.*						157
11	-	0.*						153
12	-	0.*						154+40
13	-	0.*						154+50
14	-	0.*						155
15	-	0.*						SITE
16	-	0.*						155+40
17	-	0.*						156
18	-	0.*						156+40
19	-	0.*						157

BARRIER DATA  
\*\*\*\*\*

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
1	-	8.*							153	500.0	MASONRY
2	-	8.*							154+40	36.0	MASONRY
3	-	8.*							154+50	133.0	MASONRY
4	-	8.*							155	143.3	MASONRY
5	-	8.*							SITE	22.0	MASONRY
6	-	8.*							155+40	155.3	MASONRY
7	-	8.*							156	50.8	MASONRY
8	-	8.*							156+15	84.0	MASONRY
9	-	8.*							156+40	186.0	BERM
10	-	8.*							157	125.0	BERM
11	-	6.*							153	500.0	MASONRY
12	-	6.*							154+40	36.0	MASONRY
13	-	6.*							154+50	133.1	MASONRY



14 - 6.\*  
 15 - 6.\*  
 16 - 7.\*  
 17 - 7.\*  
 18 - 6.\*  
 19 - 6.\*

155 SITE 143.0 MASONRY  
 22.0 MASONRY  
 155+40 155.5 BERM  
 156 50.0 BERM  
 156+40 186.2 MASONRY  
 157 125.0 MASONRY

1 0 1 2 3 4 5 6 7

REC REC ID DNL PEOPLE LEQ(CAL)

1	1	REAR	67.	500.	63.7
2	2	REAR	67.	500.	63.2
3	3	REAR	67.	500.	63.3
4	4	REAR	67.	500.	63.1
5	5	REAR	67.	500.	62.9
6	6	REAR	67.	500.	62.6
7	7	REAR	67.	500.	62.6
8	8	FRONT	67.	500.	62.4
9	9	FRONT	67.	500.	62.6
10	10	FRONT	67.	500.	62.7
11	11	FRONT	67.	500.	62.8
12	12	FRONT	67.	500.	62.7
13	13	FRONT	67.	500.	62.5
14	14	FRONT	67.	500.	62.5
15	15	FRONT	67.	500.	62.1
16	16	FRONT	67.	500.	62.2
17	17	FRONT	67.	500.	62.3
18	18	REAR	67.	500.	61.4
19	19	REAR	67.	500.	61.4
20	20	REAR	67.	500.	61.3

BARRIER TYPE

COST

BERM 13758.  
 MASONRY 138721.  
 MASONRY/JERSEY 0.  
 CONCRETE 0.

TOTAL COST = \$ 152000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION  
 8. 8. 8. 8. 8. 8. 8. 8. 8. 6. 6. 6. 6. 6. 7. 7. 6. 6.



INPUT DATA FILE : HOSS2GP  
 BARRIER COST FILE : CALIFS.DTA  
 DATE : 08-23-2005

SITE FUTURE LDN CURVE WITH DISTANCE POINTS GROUND LEVEL

TRAFFIC DATA

LANE NO.	AUTO VPH	MPH	MEDIUM TRKS VPH	TRKS MPH	HEAVY TRKS VPH	TRKS MPH	DESCRIPTION
1	1977	55	95	55	38	55	SWEETWATER
2	8096	65	239	65	273	65	SR125 NORTHBOUND
3	8096	65	239	65	273	65	SR125 SOUTHBOUND

LANE DATA

LANE NO.	SEG. NO.	GRADE COR.	X	Y	Z	SEGMENT DESCRIPTION
1	1	NO	-500.0	178.0	304.0	153
	2	NO	0.0	178.0	304.0	154+40
	3	NO	36.0	178.0	304.0	154+50
	4	NO	169.0	178.0	308.0	155
	5	NO	312.0	182.0	308.0	SITE
	6	NO	334.0	182.0	308.0	155+40
	7	NO	489.0	195.0	309.0	156
	8	NO	539.0	195.0	309.0	156+15
	9	NO	623.0	195.0	309.0	156+40
	10	NO	809.0	204.0	309.0	157
2	1	NO	-500.0	60.0	328.0	153
	2	NO	0.0	60.0	328.0	154+40
	3	NO	36.0	60.0	328.0	154+50
	4	NO	169.0	60.0	328.0	155
	5	NO	312.0	60.0	328.0	SITE
	6	NO	334.0	60.0	328.0	155+40
	7	NO	489.0	60.0	328.0	156
	8	NO	539.0	60.0	328.0	156+15
	9	NO	623.0	60.0	328.0	156+40
	10	NO	809.0	60.0	328.0	157
3	1	NO	-500.0	-60.0	328.0	153
	2	NO	0.0	-60.0	328.0	154+40
	3	NO	36.0	-60.0	328.0	154+50
	4	NO	169.0	-60.0	328.0	155
	5	NO	312.0	-60.0	328.0	SITE
	6	NO	334.0	-60.0	328.0	155+40
	7	NO	489.0	-60.0	328.0	156
	8	NO	539.0	-60.0	328.0	156+15
	9	NO	623.0	-60.0	328.0	156+40

A P P E N D I X     7  
= = = = =

2030 CNEL CALCULATIONS FOR VACANT SITE  
AT 20 SECOND FLOOR LOCATIONS AND FOR CURVE PLOTTING

BARRIER NAMING NOMENCLATURE

1. SR125 Wall. - This is the wall that runs north and south and is programmed from Station 153 to the north termination at Station 156.40.
2. SR125 Berm. - This is the extension of the barrier from Station 156.40 to Station 157.40.
3. Sweetwater MHP wall. - This is the wall on the east side of Sweetwater Road running in front of the Mobile Home Park and ending at Station 155.40.
4. Sweetwater Site Berm. - This is the berm in front of the site running from Station 155.40 to Station 156.15.
5. Sweetwater Wall North of the Site. - This is the wall on the east side of Sweetwater Road running from Station 156.40 to Station 157.40.
6. South Side of Bldg 1 Units 1-7. - This is the south side of the building approximated by a 20 foot free standing wall.
7. North Side Bldg 1 Units 1-7. - This is the north side of the building approximated by a 20 foot free standing wall.
8. South MHP P/L Wall. - This is the six foot wall running east and west along the south common property line.
9. Unit 1 Wall. - This is the six foot wall along the west side of the patio and parallel to Sweetwater Road.

\* \* SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) \* \*

INPUT DATA FILE : HOSS2SM  
BARRIER COST FILE : CALIF\$.DTA  
DATE : 08-12-2005

SITE FUTURE LDN AT 20 POINTS 2ND LEVEL FOR VACANT SITE

TRAFFIC DATA

LANE NO.	AUTO		MEDIUM TRKS		HEAVY TRKS		DESCRIPTION
	VPH	MPH	VPH	MPH	VPH	MPH	
1	1977	55	95	55	38	55	SWEETWATER
2	8096	65	239	65	273	65	SR125 NORTHBOUND
3	8096	65	239	65	273	65	SR125 SOUTHBOUND

LANE DATA

LANE SEG. GRADE

NO.	NO.	COR.	X			Y			Z			SEGMENT DESCRIPTION
1	1	NO	-500.0			178.0			304.0			153
	2	NO	0.0			178.0			304.0			154+40
	3	NO	36.0			178.0			304.0			154+50
	4	NO	169.0			178.0			308.0			155
	5	NO	312.0			182.0			308.0			SITE
	6	NO	334.0			182.0			308.0			155+40
	7	NO	489.0			195.0			309.0			156
	8	NO	539.0			195.0			309.0			156+15
	9	NO	623.0			195.0			309.0			156+40
	10	NO	809.0			204.0			309.0			157
2	1	NO	-500.0			60.0			328.0			153
	2	NO	0.0			60.0			328.0			154+40
	3	NO	36.0			60.0			328.0			154+50
	4	NO	169.0			60.0			328.0			155
	5	NO	312.0			60.0			328.0			SITE
	6	NO	334.0			60.0			328.0			155+40
	7	NO	489.0			60.0			328.0			156
	8	NO	539.0			60.0			328.0			156+15
	9	NO	623.0			60.0			328.0			156+40
	10	NO	809.0			60.0			328.0			157
3	1	NO	-500.0			-60.0			328.0			153
	2	NO	0.0			-60.0			328.0			154+40
	3	NO	36.0			-60.0			328.0			154+50
	4	NO	169.0			-60.0			328.0			155
	5	NO	312.0			-60.0			328.0			SITE
	6	NO	334.0			-60.0			328.0			155+40
	7	NO	489.0			-60.0			328.0			156
	8	NO	539.0			-60.0			328.0			156+15
	9	NO	623.0			-60.0			328.0			156+40
						-60.0			328.0			

10 NO

809.0  
934.0-60.0  
-60.0328.0 157  
328.0 157+40

## BARRIER DATA

Barrier No. 1

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

Description: SR25 WALL

No. Height Changes (P)=0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	-500.0	89.0	328.0	336.0 *153	* 8
2	0.0	89.0	328.0	336.0 *154+40	* 8
3	36.0	89.0	328.0	336.0 *154+50	* 8
4	169.0	89.0	328.0	336.0 *155	* 8
5	312.0	98.0	328.0	336.0 *SITE	* 8
6	334.0	98.0	328.0	336.0 *155+40	* 8
7	489.0	107.0	328.0	336.0 *156	* 8
8	539.0	98.0	328.0	336.0 *156+15	* 8
	623.0	98.0	328.0	336.0 *156+40	* 8

Barrier No. 2

Type - (1) BERM

Height Increment (DELZ) = 0.0

Description: SR25 BERM

No. Height Changes (P)=0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
2	623.0	98.0	328.0	336.0 *156+40	* 8
	809.0	98.0	328.0	336.0 *157	* 8
	934.0	98.0	328.0	336.0 *157+40	* 8

Barrier No. 3

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

Description: SWEETWATER MHP SOUTH WALL

No. Height Changes (P)=0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	-500.0	226.0	304.0	310.0 *153	* 6
2	0.0	226.0	304.0	310.0 *154+40	* 6
3	36.0	226.0	304.0	310.0 *154+50	* 6
4	169.0	226.0	308.0	314.0 *155	* 6
5	312.0	226.0	308.0	314.0 *SITE	* 6
	334.0	226.0	308.0	314.0 *155+40	* 6

Barrier No. 4

Type - (1) BERM

Height Increment (DELZ) = 0.0

Description: SWEETWATER SITE BERM

No. Height Changes (P)=0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	334.0	242.0	308.0	314.5 *155+40	* 7

2      489.0      255.0      308.0      315.0 \*156  
       539.0      255.0      308.0      315.0 \*156+15 \* 7

Barrier No. 5      Description: SWEETWATER WALL NORTH OF SITE  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0      No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	623.0	243.0	308.0	314.0 *156+40	* 6
2	809.0	252.0	308.0	314.0 *157	* 6
	934.0	252.0	308.0	314.0 *157+40	* 6

# RECEIVER DATA

REC. NO.	X	Y	Z	DNL	PEOPLE	ID
1	312.0	274.0	322.6	67	500	1 REAR
2	312.0	300.0	324.6	67	500	2 REAR
3	312.0	314.0	326.6	67	500	3 REAR
4	312.0	338.0	328.6	67	500	4 REAR
5	312.0	364.0	330.6	67	500	5 REAR
6	312.0	396.0	332.6	67	500	6 REAR
7	312.0	412.0	334.6	67	500	7 REAR
8	382.0	274.0	322.1	67	500	8 FRONT
9	382.0	300.0	324.1	67	500	9 FRONT
10	382.0	324.0	326.1	67	500	10 FRONT
11	382.0	338.0	328.1	67	500	11 FRONT
12	382.0	364.0	330.1	67	500	12 FRONT
13	382.0	396.0	332.1	67	500	13 FRONT
14	382.0	412.0	334.1	67	500	14 FRONT
15	376.0	452.0	337.0	67	500	15 FRONT
16	356.0	452.0	337.5	67	500	16 FRONT
17	329.0	452.0	338.0	67	500	17 FRONT
18	329.0	516.0	340.0	67	500	18 REAR
19	356.0	516.0	339.5	67	500	19 REAR
20	376.0	516.0	339.0	67	500	20 REAR

# DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

# K - CONSTANTS

ALL LANE RECEIVER/PAIRS = 4.7 DBA

TITLE:  
SITE FUTURE LDN AT 20 POINTS 2ND LEVEL FOR VACANT SITE

EFFECTIVENESS / COST RATIOS  
\*\*\*\*\*

BAR ELE	0	1	2	3	4	5	6	7
1	-	0.*						
2	-	0.*						153
3	-	0.*						154+40
4	-	0.*						154+50
5	-	0.*						155
6	-	0.*						SITE
7	-	0.*						155+40
8	-	0.*						156
								156+15
9	-	0.*						
10	-	0.*						156+40
								157
11	-	0.*						
12	-	0.*						153
13	-	0.*						154+40
14	-	0.*						154+50
15	-	0.*						155
								SITE
16	-	0.*						
	-	0.*						155+40
								156
18	-	0.*						
19	-	0.*						156+40
								157

BARRIER DATA  
\*\*\*\*\*

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
1	-	8.*							153	500.0	MASONRY
2	-	8.*							154+40	36.0	MASONRY
3	-	8.*							154+50	133.0	MASONRY
4	-	8.*							155	143.3	MASONRY
5	-	8.*							SITE	22.0	MASONRY
6	-	8.*							155+40	155.3	MASONRY
7	-	8.*							156	50.8	MASONRY
8	-	8.*							156+15	84.0	MASONRY
9	-	8.*									
10	-	8.*							156+40	186.0	BERM
									157	125.0	BERM
	-	6.*							153	500.0	MASONRY
	-	6.*							154+40	36.0	MASONRY
3	-	6.*							154+50	133.1	MASONRY

SITE . . . 22.0 . MASONRY

155+40	155.5	BERM
156	50.0	BERM

156+40	186.2	MASONRY
157	125.0	MASONRY

0	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

1	1	REAR	67.	500.	66.0
2	2	REAR	67.	500.	65.1
3	3	REAR	67.	500.	65.0
4	4	REAR	67.	500.	64.7
5	5	REAR	67.	500.	64.4
6	6	REAR	67.	500.	63.7
7	7	REAR	67.	500.	63.5
8	8	FRONT	67.	500.	66.2
9	9	FRONT	67.	500.	64.7
10	10	FRONT	67.	500.	64.4
11	11	FRONT	67.	500.	64.3
12	12	FRONT	67.	500.	64.0
13	13	FRONT	67.	500.	63.6
14	14	FRONT	67.	500.	63.5
15	15	FRONT	67.	500.	63.1
16	16	FRONT	67.	500.	62.9
17	17	FRONT	67.	500.	63.2
18	18	REAR	67.	500.	62.1
19	19	REAR	67.	500.	62.2
20	20	REAR	67.	500.	62.1

BERM	13758.
MASONRY	138721.
MASONRY/JERSEY	0.
CONCRETE	0.

TOTAL COST = \$ 152000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION  
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  
CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION  
8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 6. 6. 6. 6. 6. 7. 7. 6. 6.

INPUT DATA FILE : HOSS2SP  
 CARRIER COST FILE : CALIF\$.DTA  
 DATE : 08-23-2005

SITE FUTURE LDN CURVE WITH DISTANCE POINTS SECOND FLOOR LEVEL

TRAFFIC DATA

LANE NO.	AUTO		MEDIUM TRKS		HEAVY TRKS		DESCRIPTION
	VPH	MPH	VPH	MPH	VPH	MPH	
1	1977	55	95	55	38	55	SWEETWATER
2	8096	65	239	65	273	65	SR125 NORTHBOUND
3	8096	65	239	65	273	65	SR125 SOUTHBOUND

LANE DATA

LANE NO.	SEG. NO.	GRADE COR.	X	Y	Z	SEGMENT DESCRIPTION
1	1	NO	-500.0	178.0	304.0	153
	2	NO	0.0	178.0	304.0	154+40
	3	NO	36.0	178.0	304.0	154+50
	4	NO	169.0	178.0	308.0	155
	5	NO	312.0	182.0	308.0	SITE
	6	NO	334.0	182.0	308.0	155+40
	7	NO	489.0	195.0	309.0	156
	8	NO	539.0	195.0	309.0	156+15
	9	NO	623.0	195.0	309.0	156+40
	10	NO	809.0	204.0	309.0	157
2	1	NO	-500.0	60.0	328.0	153
	2	NO	0.0	60.0	328.0	154+40
	3	NO	36.0	60.0	328.0	154+50
	4	NO	169.0	60.0	328.0	155
	5	NO	312.0	60.0	328.0	SITE
	6	NO	334.0	60.0	328.0	155+40
	7	NO	489.0	60.0	328.0	156
	8	NO	539.0	60.0	328.0	156+15
	9	NO	623.0	60.0	328.0	156+40
	10	NO	809.0	60.0	328.0	157
3	1	NO	-500.0	60.0	328.0	153
	2	NO	0.0	60.0	328.0	154+40
	3	NO	36.0	60.0	328.0	154+50
	4	NO	169.0	60.0	328.0	155
	5	NO	312.0	60.0	328.0	SITE
	6	NO	334.0	60.0	328.0	155+40
	7	NO	489.0	60.0	328.0	156
	8	NO	539.0	60.0	328.0	156+15
	9	NO	623.0	60.0	328.0	156+40



10 NO 809.0 -60.0 328.0 157+40  
934.0 -60.0 328.0 157+40

# BARRIER DATA

Barrier No. 1 Description: SR25 WALL  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	-500.0	89.0	328.0	336.0 *153	* 8
2	0.0	89.0	328.0	336.0 *154+40	* 8
3	36.0	89.0	328.0	336.0 *154+50	* 8
4	169.0	89.0	328.0	336.0 *155	* 8
5	312.0	98.0	328.0	336.0 *SITE	* 8
6	334.0	98.0	328.0	336.0 *155+40	* 8
7	489.0	107.0	328.0	336.0 *156	* 8
8	539.0	98.0	328.0	336.0 *156+15	* 8
	623.0	98.0	328.0	336.0 *156+40	* 8

Barrier No. 2 Description: SR25 BERM  
Type - (1) BERM  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	623.0	98.0	328.0	336.0 *156+40	* 8
2	809.0	98.0	328.0	336.0 *157	* 8
	934.0	98.0	328.0	336.0 *157+40	* 8

Barrier No. 3 Description: SWEETWATER MHP SOUTH WALL  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	-500.0	226.0	304.0	310.0 *153	* 6
2	0.0	226.0	304.0	310.0 *154+40	* 6
3	36.0	226.0	304.0	310.0 *154+50	* 6
4	169.0	226.0	308.0	314.0 *155	* 6
5	312.0	226.0	308.0	314.0 *SITE	* 6
	334.0	226.0	308.0	314.0 *155+40	* 6

Barrier No. 4 Description: SWEETWATER SITE BERM  
Type - (1) BERM  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	334.0	242.0	308.0	314.5 *155+40	* 7

2	489.0	255.0	308.0	315.0 *156	*	7
	539.0	255.0	308.0	315.0 *156+15	*	7

Barrier No. 5 Description: SWEETWATER WALL NORTH OF SITE  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

SEG.	X	Y	GROUND (Z0)	TOP (Z)	BARRIER HEIGHTS AT ENDS
1	623.0	243.0	308.0	314.0 *156+40	* 6
2	809.0	252.0	308.0	314.0 *157	* 6
	934.0	252.0	308.0	314.0 *157+40	* 6

RECEIVER DATA

REC. NO.	X	Y	Z	DNL	PEOPLE	ID
1	312.0	200.0	322.6	67	500	200
2	312.0	300.0	324.6	67	500	300
3	312.0	400.0	334.6	67	500	400
4	312.0	500.0	340.0	67	500	500
5	312.0	600.0	350.0	67	500	600
6	312.0	700.0	350.0	67	500	700
7	312.0	800.0	350.0	67	500	800

POP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

K - CONSTANTS

ALL LANE RECEIVER/PAIRS = -4.7 DBA

TITLE:  
SITE FUTURE LDN CURVE WITH DISTANCE POINTS SECOND FLOOR LEVEL

EFFECTIVENESS / COST RATIOS  
\*\*\*\*\*

BAR ELE	0	1	2	3	4	5	6	7	
1	-	0.*							153
2	-	0.*							154+40
3	-	0.*							154+50
4	-	0.*							155
5	-	0.*							SITE
6	-	0.*							155+40
7	-	0.*							156
8	-	0.*							156+15
9	-	0.*							156+40
10	-	0.*							157
11	-	0.*							153
12	-	0.*							154+40
13	-	0.*							154+50
14	-	0.*							155
15	-	0.*							SITE
16	-	0.*							155+40
17	-	0.*							156
18	-	0.*							156+40
19	-	0.*							157
	0	1	2	3	4	5	6	7	

1  
BARRIER DATA  
\*\*\*\*\*

BAR ELE	0	1	2	3	4	5	6	7	BAR ID	LENGTH	TYPE
1	-	8.*							153	500.0	MASONRY
2	-	8.*							154+40	36.0	MASONRY
3	-	8.*							154+50	133.0	MASONRY
4	-	8.*							155	143.3	MASONRY
5	-	8.*							SITE	22.0	MASONRY
6	-	8.*							155+40	155.3	MASONRY
7	-	8.*							156	50.8	MASONRY
8	-	8.*							156+15	84.0	MASONRY
9	-	8.*							156+40	186.0	BERM
10	-	8.*							157	125.0	BERM
11	-	6.*							153	500.0	MASONRY
12	-	6.*							154+40	36.0	MASONRY
13	-	6.*							154+50	133.1	MASONRY

14	-	8.*	155	143.0	MASONRY
15	-	6.*	SITE	22.0	MASONRY
16	-	7.*	155+40	155.5	BERM
17	-	7.*	156	50.0	BERM
18	-	6.*	156+40	186.2	MASONRY
19	-	6.*	157	125.0	MASONRY

0 1 2 3 4 5 6 7

1  
REC REC ID DNL PEOPLE LEQ(CAL)

1	200	67.	500.	73.8
2	300	67.	500.	65.1
3	400	67.	500.	64.0
4	500	67.	500.	62.5
5	600	67.	500.	61.6
6	700	67.	500.	60.2
7	800	67.	500.	58.9

BARRIER TYPE COST

BERM	13758.
MASONRY	138721.
MASONRY/JERSEY	0.
CONCRETE	0.

TOTAL COST = \$ 152000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 6. 6. 6. 6. 6. 6. 7. 7. 6. 6.

A P P E N D I X     8  
= = = = = = = =

2030 CNEL CALCULATIONS BUILT SITE  
AT 20 GROUND LEVEL LOCATIONS

BARRIER NAMING NOMENCLATURE

1. SR125 Wall. - This is the wall that runs north and south and is programmed from Station 153 to the north termination at Station 156.40.
2. SR125 Berm. - This is the extension of the barrier from Station 156.40 to Station 157.40.
3. Sweetwater MHP wall. - This is the wall on the east side of Sweetwater Road running in front of the Mobile Home Park and ending at Station 155.40.
4. Sweetwater Site Berm. - This is the berm in front of the site running from Station 155.40 to Station 156.15.
5. Sweetwater Wall North of the Site. - This is the wall on the east side of Sweetwater Road running from Station 156.40 to Station 157.40.
6. South Side of Bldg 1 Units 1-7. - This is the south side of the building approximated by a 20 foot free standing wall.
7. North Side Bldg 1 Units 1-7. - This is the north side of the building approximated by a 20 foot free standing wall.
8. South MHP P/L Wall. - This is the six foot wall running east and west along the south common property line.
9. Unit 1 Wall. - This is the six foot wall along the west side of the patio and parallel to Sweetwater Road.

14 - 6.\*  
 15 - 6.\*  
 16 - 7.\*  
 17 - 7.\*  
 18 - 6.\*  
 19 - 6.\*

155 143.0 MASONRY  
 SITE 22.0 MASONRY  
 155+40 155.5 BERM  
 156 50.0 BERM  
 156+40 186.2 MASONRY  
 157 125.0 MASONRY

1 0 1 2 3 4 5 6 7

| REC | REC ID | DNL | PEOPLE | LEQ (CAL) |
|-----|--------|-----|--------|-----------|
| 1   | 200    | 67. | 500.   | 73.8      |
| 2   | 300    | 67. | 500.   | 65.1      |
| 3   | 400    | 67. | 500.   | 64.0      |
| 4   | 500    | 67. | 500.   | 62.5      |
| 5   | 600    | 67. | 500.   | 61.6      |
| 6   | 700    | 67. | 500.   | 60.2      |
| 7   | 800    | 67. | 500.   | 58.9      |

| BARRIER TYPE   | COST    |
|----------------|---------|
| BERM           | 13758.  |
| MASONRY        | 138721. |
| MASONRY/JERSEY | 0.      |
| CONCRETE       | 0.      |

TOTAL COST = \$ 152000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION  
 8. 8. 8. 8. 8. 8. 8. 8. 8. 6. 6. 6. 6. 7. 7. 6. 6.

INPUT DATA FILE : HOSS7M  
 CARRIER COST FILE : CALIF\$.DTA  
 DATE : 08-15-2005

SITE FUTURE LDN AT 20 POINTS GROUND LEVEL FOR BUILT SITE

TRAFFIC DATA

| LANE<br>NO | AUTO |     | MEDIUM TRKS |     | HEAVY TRKS |     | DESCRIPTION      |
|------------|------|-----|-------------|-----|------------|-----|------------------|
|            | VPH  | MPH | VPH         | MPH | VPH        | MPH |                  |
| 1          | 1977 | 55  | 95          | 55  | 38         | 55  | SWEETWATER       |
| 2          | 8096 | 65  | 239         | 65  | 273        | 65  | SR125 NORTHBOUND |
| 3          | 8096 | 65  | 239         | 65  | 273        | 65  | SR125 SOUTHBOUND |

LANE DATA

| LANE<br>NO. | SEG.<br>NO. | GRADE<br>COR. | X      | Y     | Z     | SEGMENT<br>DESCRIPTION |
|-------------|-------------|---------------|--------|-------|-------|------------------------|
| 1           | 1           | NO            | -500.0 | 178.0 | 304.0 | 153                    |
|             | 2           | NO            | 0.0    | 178.0 | 304.0 | 154+40                 |
|             | 3           | NO            | 36.0   | 178.0 | 304.0 | 154+50                 |
|             | 4           | NO            | 169.0  | 178.0 | 308.0 | 155                    |
|             | 5           | NO            | 312.0  | 182.0 | 308.0 | SITE                   |
|             | 6           | NO            | 334.0  | 182.0 | 308.0 | 155+40                 |
|             | 7           | NO            | 489.0  | 195.0 | 309.0 | 156                    |
|             | 8           | NO            | 539.0  | 195.0 | 309.0 | 156+15                 |
|             | 9           | NO            | 623.0  | 195.0 | 309.0 | 156+40                 |
|             | 10          | NO            | 809.0  | 204.0 | 309.0 | 157                    |
| 2           | 1           | NO            | -500.0 | 60.0  | 328.0 | 153                    |
|             | 2           | NO            | 0.0    | 60.0  | 328.0 | 154+40                 |
|             | 3           | NO            | 36.0   | 60.0  | 328.0 | 154+50                 |
|             | 4           | NO            | 169.0  | 60.0  | 328.0 | 155                    |
|             | 5           | NO            | 312.0  | 60.0  | 328.0 | SITE                   |
|             | 6           | NO            | 334.0  | 60.0  | 328.0 | 155+40                 |
|             | 7           | NO            | 489.0  | 60.0  | 328.0 | 156                    |
|             | 8           | NO            | 539.0  | 60.0  | 328.0 | 156+15                 |
|             | 9           | NO            | 623.0  | 60.0  | 328.0 | 156+40                 |
|             | 10          | NO            | 809.0  | 60.0  | 328.0 | 157                    |
| 3           | 1           | NO            | -500.0 | -60.0 | 328.0 | 153                    |
|             | 2           | NO            | 0.0    | -60.0 | 328.0 | 154+40                 |
|             | 3           | NO            | 36.0   | -60.0 | 328.0 | 154+50                 |
|             | 4           | NO            | 169.0  | -60.0 | 328.0 | 155                    |
|             | 5           | NO            | 312.0  | -60.0 | 328.0 | SITE                   |
|             | 6           | NO            | 334.0  | -60.0 | 328.0 | 155+40                 |
|             | 7           | NO            | 489.0  | -60.0 | 328.0 | 156                    |
|             | 8           | NO            | 539.0  | -60.0 | 328.0 | 156+15                 |
|             | 9           | NO            | 623.0  | -60.0 | 328.0 | 156+40                 |
|             | 10          | NO            | 809.0  | -60.0 | 328.0 | 157                    |

934.0

-60.0

328.0 157+40

## BARRIER DATA

Barrier No. 1

Description: SR25 WALL

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

| SEG. | X      | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|--------|-------|----------------|---------------|----------------------------|
| 1    | -500.0 | 89.0  | 328.0          | 336.0 *153    | * 8                        |
| 2    | 0.0    | 89.0  | 328.0          | 336.0 *154+40 | * 8                        |
| 3    | 36.0   | 89.0  | 328.0          | 336.0 *154+50 | * 8                        |
| 4    | 169.0  | 89.0  | 328.0          | 336.0 *155    | * 8                        |
| 5    | 312.0  | 98.0  | 328.0          | 336.0 *SITE   | * 8                        |
| 6    | 334.0  | 98.0  | 328.0          | 336.0 *155+40 | * 8                        |
| 7    | 489.0  | 107.0 | 328.0          | 336.0 *156    | * 8                        |
| 8    | 539.0  | 98.0  | 328.0          | 336.0 *156+15 | * 8                        |
|      | 623.0  | 98.0  | 328.0          | 336.0 *156+40 | * 8                        |

Barrier No. 2

Description: SR25 BERM

Type - (1) BERM

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

| SEG. | X     | Y    | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|------|----------------|---------------|----------------------------|
| 1    | 623.0 | 98.0 | 328.0          | 336.0 *156+40 | * 8                        |
| 2    | 809.0 | 98.0 | 328.0          | 336.0 *157    | * 8                        |
|      | 934.0 | 98.0 | 328.0          | 336.0 *157+40 | * 8                        |

Barrier No. 3

Description: SWEETWATER MHP SOUTH WALL

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

| SEG. | X      | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|--------|-------|----------------|---------------|----------------------------|
| 1    | -500.0 | 226.0 | 304.0          | 310.0 *153    | * 6                        |
| 2    | 0.0    | 226.0 | 304.0          | 310.0 *154+40 | * 6                        |
| 3    | 36.0   | 226.0 | 304.0          | 310.0 *154+50 | * 6                        |
| 4    | 169.0  | 226.0 | 308.0          | 314.0 *155    | * 6                        |
| 5    | 312.0  | 226.0 | 308.0          | 314.0 *SITE   | * 6                        |
|      | 334.0  | 226.0 | 308.0          | 314.0 *155+40 | * 6                        |

Barrier No. 4

Description: SWEETWATER SITE BERM

Type - (1) BERM

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 334.0 | 242.0 | 308.0          | 314.5 *155+40 | * 7                        |
| 2    | 489.0 | 255.0 | 308.0          | 315.0 *156    | * 7                        |



539.0      255.0      308.0      315.0 \*156+15      \*      7

Barrier No. 5      Description: SWEETWATER WALL NORTH OF SITE  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0      No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 623.0 | 243.0 | 308.0          | 314.0 *156+40 | * 6                        |
| 2    | 809.0 | 252.0 | 308.0          | 314.0 *157    | * 6                        |
|      | 934.0 | 252.0 | 308.0          | 314.0 *157+40 | * 6                        |

Barrier No. 6      Description: SOUTH SIDE OF BLDG 1 UNIT 1-7  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0      No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 317.0 | 254.0 | 307.6          | 327.6 *B6 P1 | * 20                       |
|      | 317.0 | 422.0 | 319.0          | 339.0 *B6 P2 | * 20                       |

Barrier No. 7      Description: NORTH SIDE BLDG 1 UNIT 1-7  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0      No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 354.0 | 254.0 | 307.6          | 327.6 *B7 P1 | * 20                       |
|      | 354.0 | 422.0 | 319.0          | 339.0 *B7 P2 | * 20                       |

Barrier No. 8      Description: SOUTH MHP P/L WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0      No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 307.0 | 232.0 | 306.6          | 313.6 *B8 P1 | * 7                        |
|      | 307.0 | 512.0 | 322.3          | 328.3 *B8 P2 | * 6                        |

Barrier No. 9      Description: UNIT 1 WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0      No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
|      | 307.0 | 254.0 | 307.6          | 313.6 *B9 P1 | * 6                        |
|      | 317.0 | 254.0 | 307.6          | 313.6 *B9 P2 | * 6                        |

Barrier No. 10      Description: UNIT 8/9/10 BLDG

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

|   | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|---|-------|-------|----------------|---------------|----------------------------|
| 1 | 317.0 | 512.0 | 322.3          | 342.3 *B10 P1 | * 20                       |
|   | 392.0 | 512.0 | 322.0          | 342.0 *B10 P2 | * 20                       |

#### RECEIVER DATA

REC.

| NO. | X     | Y     | Z     | DNL | PEOPLE | ID       |
|-----|-------|-------|-------|-----|--------|----------|
| 1   | 312.0 | 274.0 | 312.6 | 67  | 500    | 1 REAR   |
| 2   | 312.0 | 300.0 | 314.6 | 67  | 500    | 2 REAR   |
| 3   | 312.0 | 314.0 | 316.6 | 67  | 500    | 3 REAR   |
| 4   | 312.0 | 338.0 | 318.6 | 67  | 500    | 4 REAR   |
| 5   | 312.0 | 364.0 | 320.6 | 67  | 500    | 5 REAR   |
| 6   | 312.0 | 396.0 | 322.6 | 67  | 500    | 6 REAR   |
| 7   | 312.0 | 412.0 | 324.6 | 67  | 500    | 7 REAR   |
| 8   | 382.0 | 274.0 | 312.1 | 67  | 500    | 8 FRONT  |
| 9   | 382.0 | 300.0 | 314.1 | 67  | 500    | 9 FRONT  |
| 10  | 382.0 | 324.0 | 316.1 | 67  | 500    | 10 FRONT |
| 11  | 382.0 | 338.0 | 318.1 | 67  | 500    | 11 FRONT |
| 12  | 382.0 | 364.0 | 320.1 | 67  | 500    | 12 FRONT |
| 3   | 382.0 | 396.0 | 322.1 | 67  | 500    | 13 FRONT |
| 4   | 382.0 | 412.0 | 324.1 | 67  | 500    | 14 FRONT |
| 15  | 376.0 | 452.0 | 327.0 | 67  | 500    | 15 FRONT |
| 16  | 356.0 | 452.0 | 327.5 | 67  | 500    | 16 FRONT |
| 17  | 329.0 | 452.0 | 328.0 | 67  | 500    | 17 FRONT |
| 18  | 329.0 | 516.0 | 330.0 | 67  | 500    | 18 REAR  |
| 19  | 356.0 | 516.0 | 329.5 | 67  | 500    | 19 REAR  |
| 20  | 376.0 | 516.0 | 329.0 | 67  | 500    | 20 REAR  |

#### DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

#### K - CONSTANTS

ALL LANE RECEIVER/PAIRS = -4.7 DBA

TITLE:

THE FUTURE LDN AT 20 POINTS GROUND LEVEL FOR BUILT SITE

## EFFECTIVENESS / COST RATIOS

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7      |
|------------|---|-----|---|---|---|---|---|--------|
| 1          | - | 0.* |   |   |   |   |   | 153    |
| 2          | - | 0.* |   |   |   |   |   | 154+40 |
| 3          | - | 0.* |   |   |   |   |   | 154+50 |
| 4          | - | 0.* |   |   |   |   |   | 155    |
| 5          | - | 0.* |   |   |   |   |   | SITE   |
| 6          | - | 0.* |   |   |   |   |   | 155+40 |
| 7          | - | 0.* |   |   |   |   |   | 156    |
| 8          | - | 0.* |   |   |   |   |   | 156+15 |
| 9          | - | 0.* |   |   |   |   |   | 156+40 |
| 10         | - | 0.* |   |   |   |   |   | 157    |
| 11         | - | 0.* |   |   |   |   |   | 153    |
| 12         | - | 0.* |   |   |   |   |   | 154+40 |
| 13         | - | 0.* |   |   |   |   |   | 154+50 |
| 14         | - | 0.* |   |   |   |   |   | 155    |
| 15         | - | 0.* |   |   |   |   |   | SITE   |
| 16         | - | 0.* |   |   |   |   |   | 155+40 |
| 17         | - | 0.* |   |   |   |   |   | 156    |
| 18         | - | 0.* |   |   |   |   |   | 156+40 |
| 19         | - | 0.* |   |   |   |   |   | 157    |
| 20         | - | 0.* |   |   |   |   |   | B6 P1  |
| 21         | - | 0.* |   |   |   |   |   | B7 P1  |
| 22         | - | 0.* |   |   |   |   |   | B8 P1  |
| 23         | - | 0.* |   |   |   |   |   | B9 P1  |
| 24         | - | 0.* |   |   |   |   |   | B10 P1 |

## BARRIER DATA

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7 | BAR<br>ID | LENGTH | TYPE    |
|------------|---|-----|---|---|---|---|---|---|-----------|--------|---------|
| 1          | - | 8.* |   |   |   |   |   |   | 153       | 500.0  | MASONRY |
| 2          | - | 8.* |   |   |   |   |   |   | 154+40    | 36.0   | MASONRY |
| 3          | - | 8.* |   |   |   |   |   |   | 154+50    | 133.0  | MASONRY |
| 4          | - | 8.* |   |   |   |   |   |   | 155       | 143.3  | MASONRY |
| 5          | - | 8.* |   |   |   |   |   |   | SITE      | 22.0   | MASONRY |

CONCRETE

0.

-----  
TOTAL COST = \$ 254000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1  
CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION  
8. 8. 8. 8. 8. 8. 8. 8. 8. 6. 6. 6. 6. 7. 7. 6. 6. 20. 20. 7. 6. 20.

A P P E N D I X     9  
= = = = = = = =

2030 CNEL CALCULATIONS BUILT SITE  
AT 20 SECOND FLOOR LEVEL LOCATIONS

BARRIER NAMING NOMENCLATURE

1. SR125 Wall. - This is the wall that runs north and south and is programmed from Station 153 to the north termination at Station 156.40.
2. SR125 Berm. - This is the extension of the barrier from Station 156.40 to Station 157.40.
3. Sweetwater MHP wall. - This is the wall on the east side of Sweetwater Road running in front of the Mobile Home Park and ending at Station 155.40.
4. Sweetwater Site Berm. - This is the berm in front of the site running from Station 155.40 to Station 156.15.
5. Sweetwater Wall North of the Site. - This is the wall on the east side of Sweetwater Road running from Station 156.40 to Station 157.40.
6. South Side of Bldg 1 Units 1-7. - This is the south side of the building approximated by a 20 foot free standing wall.
7. North Side Bldg 1 Units 1-7. - This is the north side of the building approximated by a 20 foot free standing wall.
8. South MHP P/L Wall. - This is the six foot wall running east and west along the south common property line.
9. Unit 1 Wall. - This is the six foot wall along the west side of the patio and parallel to Sweetwater Road.

|    |   |      |        |       |         |
|----|---|------|--------|-------|---------|
| 6  | - | 8.*  | 155+40 | 155.3 | MASONRY |
| 7  | - | 8.*  | 156    | 50.8  | MASONRY |
| 8  | - | 8.*  | 156+15 | 84.0  | MASONRY |
| 10 | - | 8.*  | 156+40 | 186.0 | BERM    |
|    | - | 8.*  | 157    | 125.0 | BERM    |
| 11 | - | 6.*  | 153    | 500.0 | MASONRY |
| 12 | - | 6.*  | 154+40 | 36.0  | MASONRY |
| 13 | - | 6.*  | 154+50 | 133.1 | MASONRY |
| 14 | - | 6.*  | 155    | 143.0 | MASONRY |
| 15 | - | 6.*  | SITE   | 22.0  | MASONRY |
| 16 | - | 7.*  | 155+40 | 155.5 | BERM    |
| 17 | - | 7.*  | 156    | 50.0  | BERM    |
| 18 | - | 6.*  | 156+40 | 186.2 | MASONRY |
| 19 | - | 6.*  | 157    | 125.0 | MASONRY |
| 20 | - | 20.* | B6 P1  | 168.4 | MASONRY |
| 21 | - | 20.* | B7 P1  | 168.4 | MASONRY |
| 22 | - | 7.*  | B8 P1  | 280.4 | MASONRY |
| 23 | - | 6.*  | B9 P1  | 10.0  | MASONRY |
| 24 | - | 20.* | B10 P1 | 75.0  | MASONRY |

0 1 2 3 4 5 6 7

---

| REC | REC | ID | DNL | PEOPLE | LEQ(CAL) |
|-----|-----|----|-----|--------|----------|
|-----|-----|----|-----|--------|----------|

|    |    |       |     |      |      |
|----|----|-------|-----|------|------|
| 1  | 1  | REAR  | 67. | 500. | 60.9 |
| 2  | 2  | REAR  | 67. | 500. | 61.2 |
| 3  | 3  | REAR  | 67. | 500. | 61.4 |
| 4  | 4  | REAR  | 67. | 500. | 61.3 |
| 5  | 5  | REAR  | 67. | 500. | 61.2 |
| 6  | 6  | REAR  | 67. | 500. | 60.8 |
| 7  | 7  | REAR  | 67. | 500. | 60.8 |
| 8  | 8  | FRONT | 67. | 500. | 61.3 |
| 9  | 9  | FRONT | 67. | 500. | 61.0 |
| 10 | 10 | FRONT | 67. | 500. | 61.0 |
| 11 | 11 | FRONT | 67. | 500. | 61.2 |
| 12 | 12 | FRONT | 67. | 500. | 61.1 |
| 13 | 13 | FRONT | 67. | 500. | 60.8 |
| 14 | 14 | FRONT | 67. | 500. | 60.8 |
| 15 | 15 | FRONT | 67. | 500. | 60.9 |
| 16 | 16 | FRONT | 67. | 500. | 61.4 |
| 17 | 17 | FRONT | 67. | 500. | 61.5 |
| 18 | 18 | REAR  | 67. | 500. | 49.1 |
| 19 | 19 | REAR  | 67. | 500. | 49.1 |
| 20 | 20 | REAR  | 67. | 500. | 49.1 |

| CARRIER TYPE   | COST    |
|----------------|---------|
| BERM           | 13758.  |
| MASONRY        | 240438. |
| MASONRY/JERSEY | 0.      |

\* \* SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) \* \*

PUT DATA FILE : HOSS8M  
BARRIER COST FILE : CALIFS.DTA  
DATE : 08-15-2005

SITE FUTURE LDN AT 20 POINTS SECOND FLOOR LEVEL FOR BUILT SITE

TRAFFIC DATA

| LANE NO. | AUTO VPH | MPH | MEDIUM TRKS VPH | MPH | HEAVY TRKS VPH | MPH | DESCRIPTION      |
|----------|----------|-----|-----------------|-----|----------------|-----|------------------|
| 1        | 1977     | 55  | 95              | 55  | 38             | 55  | SWEETWATER       |
| 2        | 8096     | 65  | 239             | 65  | 273            | 65  | SR125 NORTHBOUND |
| 3        | 8096     | 65  | 239             | 65  | 273            | 65  | SR125 SOUTHBOUND |

LANE DATA

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 178.0 | 304.0 | 153                 |
|          | 2        | NO         | 0.0    | 178.0 | 304.0 | 154+40              |
|          | 3        | NO         | 36.0   | 178.0 | 304.0 | 154+50              |
|          | 4        | NO         | 169.0  | 178.0 | 308.0 | 155                 |
|          | 5        | NO         | 312.0  | 182.0 | 308.0 | SITE                |
|          | 6        | NO         | 334.0  | 182.0 | 308.0 | 155+40              |
|          | 7        | NO         | 489.0  | 195.0 | 309.0 | 156                 |
|          | 8        | NO         | 539.0  | 195.0 | 309.0 | 156+15              |
|          | 9        | NO         | 623.0  | 195.0 | 309.0 | 156+40              |
|          | 10       | NO         | 809.0  | 204.0 | 309.0 | 157                 |
|          |          |            | 934.0  | 204.0 | 309.0 | 157+40              |
| 2        | 1        | NO         | -500.0 | 60.0  | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | 60.0  | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | 60.0  | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | 60.0  | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | 60.0  | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | 60.0  | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | 60.0  | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | 60.0  | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | 60.0  | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | 60.0  | 328.0 | 157                 |
|          |          |            | 934.0  | 60.0  | 328.0 | 157+40              |
| 3        | 1        | NO         | -500.0 | 60.0  | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | 60.0  | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | 60.0  | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | 60.0  | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | 60.0  | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | 60.0  | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | 60.0  | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | 60.0  | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | 60.0  | 328.0 | 156+40              |

|    |    |       |       |       |        |
|----|----|-------|-------|-------|--------|
| 10 | NO | 809.0 | -60.0 | 328.0 | 157    |
|    |    | 934.0 | -60.0 | 328.0 | 157+40 |

# BARRIER DATA

Barrier No. 1 Description: SR25 WALL  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X      | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|--------|-------|----------------|---------------|----------------------------|
| 1    | -500.0 | 89.0  | 328.0          | 336.0 *153    | * 8                        |
| 2    | 0.0    | 89.0  | 328.0          | 336.0 *154+40 | * 8                        |
| 3    | 36.0   | 89.0  | 328.0          | 336.0 *154+50 | * 8                        |
| 4    | 169.0  | 89.0  | 328.0          | 336.0 *155    | * 8                        |
| 5    | 312.0  | 98.0  | 328.0          | 336.0 *SITE   | * 8                        |
| 6    | 334.0  | 98.0  | 328.0          | 336.0 *155+40 | * 8                        |
| 7    | 489.0  | 107.0 | 328.0          | 336.0 *156    | * 8                        |
| 8    | 539.0  | 98.0  | 328.0          | 336.0 *156+15 | * 8                        |
|      | 623.0  | 98.0  | 328.0          | 336.0 *156+40 | * 8                        |

Barrier No. 2 Description: SR25 BERM  
Type - (1) BERM  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y    | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|------|----------------|---------------|----------------------------|
| 1    | 623.0 | 98.0 | 328.0          | 336.0 *156+40 | * 8                        |
| 2    | 809.0 | 98.0 | 328.0          | 336.0 *157    | * 8                        |
|      | 934.0 | 98.0 | 328.0          | 336.0 *157+40 | * 8                        |

Barrier No. 3 Description: SWEETWATER MHP SOUTH WALL  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X      | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|--------|-------|----------------|---------------|----------------------------|
| 1    | -500.0 | 226.0 | 304.0          | 310.0 *153    | * 6                        |
| 2    | 0.0    | 226.0 | 304.0          | 310.0 *154+40 | * 6                        |
| 3    | 36.0   | 226.0 | 304.0          | 310.0 *154+50 | * 6                        |
| 4    | 169.0  | 226.0 | 308.0          | 314.0 *155    | * 6                        |
| 5    | 312.0  | 226.0 | 308.0          | 314.0 *SITE   | * 6                        |
|      | 334.0  | 226.0 | 308.0          | 314.0 *155+40 | * 6                        |

Barrier No. 4 Description: SWEETWATER SITE BERM  
Type - (1) BERM  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 334.0 | 242.0 | 308.0          | 314.5 *155+40 | * 7                        |



2      489.0      255.0      308.0      315.0 \*156      \* 7  
        539.0      255.0      308.0      315.0 \*156+15      \* 7

Barrier No. 5      Description: SWEETWATER WALL NORTH OF SITE  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0      No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 623.0 | 243.0 | 308.0          | 314.0 *156+40 | * 6                        |
| 2    | 809.0 | 252.0 | 308.0          | 314.0 *157    | * 6                        |
|      | 934.0 | 252.0 | 308.0          | 314.0 *157+40 | * 6                        |

Barrier No. 6      Description: SOUTH SIDE OF BLDG 1 UNIT 1-7  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0      No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 317.0 | 254.0 | 307.6          | 327.6 *B6 P1 | * 20                       |
|      | 317.0 | 422.0 | 319.0          | 339.0 *B6 P2 | * 20                       |

Barrier No. 7      Description: NORTH SIDE BLDG 1 UNIT 1-7  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0      No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 354.0 | 254.0 | 307.6          | 327.6 *B7 P1 | * 20                       |
|      | 354.0 | 422.0 | 319.0          | 339.0 *B7 P2 | * 20                       |

Barrier No. 8      Description: SOUTH MHP P/L WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0      No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 307.0 | 232.0 | 306.6          | 313.6 *B8 P1 | * 7                        |
|      | 307.0 | 512.0 | 322.3          | 328.3 *B8 P2 | * 6                        |

Barrier No. 9      Description: UNIT 1 WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0      No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 307.0 | 254.0 | 307.6          | 313.6 *B9 P1 | * 6                        |
|      | 317.0 | 254.0 | 307.6          | 313.6 *B9 P2 | * 6                        |

Barrier No. 10  
Type - (2) MASONRY

Description: UNIT 8/9/10 BLDG

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 317.0 | 512.0 | 322.3          | 342.3      | *B10 P1 * 20               |
|      | 392.0 | 512.0 | 322.0          | 342.0      | *B10 P2 * 20               |

#### RECEIVER DATA

| REC.<br>NO. | X     | Y     | Z     | DNL | PEOPLE | ID       |
|-------------|-------|-------|-------|-----|--------|----------|
| 1           | 312.0 | 274.0 | 322.6 | 67  | 500    | 1 REAR   |
| 2           | 312.0 | 300.0 | 324.6 | 67  | 500    | 2 REAR   |
| 3           | 312.0 | 314.0 | 326.6 | 67  | 500    | 3 REAR   |
| 4           | 312.0 | 338.0 | 328.6 | 67  | 500    | 4 REAR   |
| 5           | 312.0 | 364.0 | 330.6 | 67  | 500    | 5 REAR   |
| 6           | 312.0 | 396.0 | 332.6 | 67  | 500    | 6 REAR   |
| 7           | 312.0 | 412.0 | 334.6 | 67  | 500    | 7 REAR   |
| 8           | 382.0 | 274.0 | 322.1 | 67  | 500    | 8 FRONT  |
| 9           | 382.0 | 300.0 | 324.1 | 67  | 500    | 9 FRONT  |
| 10          | 382.0 | 324.0 | 326.1 | 67  | 500    | 10 FRONT |
| 11          | 382.0 | 338.0 | 328.1 | 67  | 500    | 11 FRONT |
| 12          | 382.0 | 364.0 | 330.1 | 67  | 500    | 12 FRONT |
| 13          | 382.0 | 396.0 | 332.1 | 67  | 500    | 13 FRONT |
| 14          | 382.0 | 412.0 | 334.1 | 67  | 500    | 14 FRONT |
| 15          | 376.0 | 452.0 | 337.0 | 67  | 500    | 15 FRONT |
| 16          | 356.0 | 452.0 | 337.5 | 67  | 500    | 16 FRONT |
| 17          | 329.0 | 452.0 | 338.0 | 67  | 500    | 17 FRONT |
| 18          | 329.0 | 516.0 | 340.0 | 67  | 500    | 18 REAR  |
| 19          | 356.0 | 516.0 | 339.5 | 67  | 500    | 19 REAR  |
| 20          | 376.0 | 516.0 | 339.0 | 67  | 500    | 20 REAR  |

#### DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

#### K - CONSTANTS

ALL LANE RECEIVER/PAIRS = 4.7 DBA

SOUND32 - RELEASE 07/30/91

TITLE:

THE FUTURE LDN AT 20 POINTS SECOND FLOOR LEVEL FOR BUILT SITE

EFFECTIVENESS / COST RATIOS

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7      |
|------------|---|-----|---|---|---|---|---|--------|
| 1          | - | 0.* |   |   |   |   |   |        |
| 2          | - | 0.* |   |   |   |   |   | 153    |
| 3          | - | 0.* |   |   |   |   |   | 154+40 |
| 4          | - | 0.* |   |   |   |   |   | 154+50 |
| 5          | - | 0.* |   |   |   |   |   | 155    |
| 6          | - | 0.* |   |   |   |   |   | SITE   |
| 7          | - | 0.* |   |   |   |   |   | 155+40 |
| 8          | - | 0.* |   |   |   |   |   | 156    |
|            |   |     |   |   |   |   |   | 156+15 |
| 9          | - | 0.* |   |   |   |   |   |        |
| 10         | - | 0.* |   |   |   |   |   | 156+40 |
|            |   |     |   |   |   |   |   | 157    |
| 11         | - | 0.* |   |   |   |   |   |        |
| 12         | - | 0.* |   |   |   |   |   | 153    |
| 13         | - | 0.* |   |   |   |   |   | 154+40 |
| 14         | - | 0.* |   |   |   |   |   | 154+50 |
| 15         | - | 0.* |   |   |   |   |   | 155    |
|            |   |     |   |   |   |   |   | SITE   |
| 16         | - | 0.* |   |   |   |   |   |        |
| 17         | - | 0.* |   |   |   |   |   | 155+40 |
|            |   |     |   |   |   |   |   | 156    |
| 18         | - | 0.* |   |   |   |   |   |        |
| 19         | - | 0.* |   |   |   |   |   | 156+40 |
|            |   |     |   |   |   |   |   | 157    |
| 20         | - | 0.* |   |   |   |   |   |        |
|            |   |     |   |   |   |   |   | B6 P1  |
| 21         | - | 0.* |   |   |   |   |   |        |
|            |   |     |   |   |   |   |   | B7 P1  |
| 22         | - | 0.* |   |   |   |   |   |        |
|            |   |     |   |   |   |   |   | B8 P1  |
| 23         | - | 0.* |   |   |   |   |   |        |
|            |   |     |   |   |   |   |   | B9 P1  |
| 24         | - | 0.* |   |   |   |   |   |        |
|            |   |     |   |   |   |   |   | B10 P1 |

BARRIER DATA

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| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7 | BAR<br>ID | LENGTH | TYPE    |
|------------|---|-----|---|---|---|---|---|---|-----------|--------|---------|
| 1          | - | 8.* |   |   |   |   |   |   | 153       | 500.0  | MASONRY |
| 2          | - | 8.* |   |   |   |   |   |   | 154+40    | 36.0   | MASONRY |
| 3          | - | 8.* |   |   |   |   |   |   | 154+50    | 133.0  | MASONRY |
| 4          | - | 8.* |   |   |   |   |   |   | 155       | 143.3  | MASONRY |
| 5          | - | 8.* |   |   |   |   |   |   | SITE      | 22.0   | MASONRY |

|    |   |      |        |       |         |
|----|---|------|--------|-------|---------|
| 6  | - | 8.*  | 155+40 | 155.3 | MASONRY |
| 7  | - | 8.*  | 156    | 50.8  | MASONRY |
| 8  | - | 8.*  | 156+15 | 84.0  | MASONRY |
| 10 | - | 8.*  | 156+40 | 186.0 | BERM    |
|    | - | 8.*  | 157    | 125.0 | BERM    |
| 11 | - | 6.*  | 153    | 500.0 | MASONRY |
| 12 | - | 6.*  | 154+40 | 36.0  | MASONRY |
| 13 | - | 6.*  | 154+50 | 133.1 | MASONRY |
| 14 | - | 6.*  | 155    | 143.0 | MASONRY |
| 15 | - | 6.*  | SITE   | 22.0  | MASONRY |
| 16 | - | 7.*  | 155+40 | 155.5 | BERM    |
| 17 | - | 7.*  | 156    | 50.0  | BERM    |
| 18 | - | 6.*  | 156+40 | 186.2 | MASONRY |
| 19 | - | 6.*  | 157    | 125.0 | MASONRY |
| 20 | - | 20.* | B6 P1  | 168.4 | MASONRY |
| 21 | - | 20.* | B7 P1  | 168.4 | MASONRY |
| 22 | - | 7.*  | B8 P1  | 280.4 | MASONRY |
| 23 | - | 6.*  | B9 P1  | 10.0  | MASONRY |
| 24 | - | 20.* | B10 P1 | 75.0  | MASONRY |

1

| REC | REC ID   | DNL | PEOPLE | LEQ (CAL) |
|-----|----------|-----|--------|-----------|
| 1   | 1 REAR   | 67. | 500.   | 64.3      |
| 2   | 2 REAR   | 67. | 500.   | 63.6      |
| 3   | 3 REAR   | 67. | 500.   | 63.8      |
| 4   | 4 REAR   | 67. | 500.   | 63.5      |
| 5   | 5 REAR   | 67. | 500.   | 63.3      |
| 6   | 6 REAR   | 67. | 500.   | 62.6      |
| 7   | 7 REAR   | 67. | 500.   | 62.8      |
| 8   | 8 FRONT  | 67. | 500.   | 66.3      |
| 9   | 9 FRONT  | 67. | 500.   | 64.5      |
| 10  | 10 FRONT | 67. | 500.   | 64.0      |
| 11  | 11 FRONT | 67. | 500.   | 64.0      |
| 12  | 12 FRONT | 67. | 500.   | 63.7      |
| 13  | 13 FRONT | 67. | 500.   | 63.2      |
| 14  | 14 FRONT | 67. | 500.   | 63.1      |
| 15  | 15 FRONT | 67. | 500.   | 62.7      |
| 16  | 16 FRONT | 67. | 500.   | 62.9      |
| 17  | 17 FRONT | 67. | 500.   | 63.0      |
| 18  | 18 REAR  | 67. | 500.   | 59.2      |
| 19  | 19 REAR  | 67. | 500.   | 58.1      |
| 20  | 20 REAR  | 67. | 500.   | 56.7      |

| PRIOR TYPE     | COST   |
|----------------|--------|
| BERM           | 13758  |
| MASONRY        | 240438 |
| MASONRY/JERSEY | 0      |

A P P E N D I X     10  
= = = = =

BASIC ROOM NOISE REDUCTION CALCULATIONS

0.

TOTAL COST = \$ 254000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |      |     |    |       |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|-----|----|-------|
| 8. | 8. | 8. | 8. | 8. | 8. | 8. | 8. | 8. | 6. | 6. | 6. | 6. | 7. | 7. | 6. | 6.20 | 20. | 7. | 6.20. |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|-----|----|-------|

# WORK SHEET FOR CALCULATING ROOM NOISE REDUCTION VALUE

ROOM NAME LR/DR + STC = 24

FLOOR AREA 500

| SURFACES        | TL | @   | AREA | T*S     |
|-----------------|----|-----|------|---------|
| EXT. WALL 1     | 40 |     | 123  | 0.01230 |
| EXT. WALL 2     | 43 |     | 0    | 0.00000 |
| EXT. WALL 3     | 0  |     | 0    | 0.00000 |
| INT. WALL       |    |     | 520  |         |
| WINDOW 1        | 22 | .05 | 77   | 0.48584 |
| WINDOW 2        | 25 | .05 | 0    | 0.00000 |
| WINDOW 3        | 0  | .05 | 0    | 0.00000 |
| SGD             | 22 | .05 | 0    | 0.00000 |
| DOORS           | 0  | .04 | 0    | 0.00000 |
| ROOF            | 70 | .04 | 500  | 0.00005 |
| FLOOR           |    | .6  | 500  |         |
| ET*S            |    |     |      | 0.49819 |
| -10LOG(ET*S)    |    |     |      | 3.0     |
| 10LOGA          |    |     |      | 25.4    |
| NOISE REDUCTION |    |     |      | 22.5    |

# WORK SHEET FOR CALCULATING ROOM NOISE REDUCTION VALUE

ROOM NAME LR/DR + STC = 26

FLOOR AREA 500

| SURFACES        | TL | @   | AREA | T*S     |
|-----------------|----|-----|------|---------|
| EXT. WALL 1     | 40 |     | 123  | 0.01230 |
| EXT. WALL 2     | 43 |     | 0    | 0.00000 |
| EXT. WALL 3     | 0  |     | 0    | 0.00000 |
| INT. WALL       |    |     | 520  |         |
| WINDOW 1        | 24 | .05 | 77   | 0.30654 |
| WINDOW 2        | 27 | .05 | 0    | 0.00000 |
| WINDOW 3        | 0  | .05 | 0    | 0.00000 |
| SGD             | 24 | .05 | 0    | 0.00000 |
| DOORS           | 0  | .04 | 0    | 0.00000 |
| ROOF            | 70 | .04 | 500  | 0.00005 |
| FLOOR           |    | .6  | 500  |         |
| ET*S            |    |     |      | 0.31889 |
| -10LOG(ET*S)    |    |     |      | 5.0     |
| 10LOGA          |    |     |      | 25.4    |
| NOISE REDUCTION |    |     |      | 24.4    |

# WORK SHEET FOR CALCULATING ROOM NOISE REDUCTION VALUE

ROOM NAME LR/DR + STC = 28

FLOOR AREA 500

| SURFACES        | TL | @   | AREA | T*S     |
|-----------------|----|-----|------|---------|
| EXT. WALL 1     | 40 |     | 123  | 0.01230 |
| EXT. WALL 2     | 43 |     | 0    | 0.00000 |
| EXT. WALL 3     | 0  |     | 0    | 0.00000 |
| INT. WALL       |    |     | 520  |         |
| WINDOW 1        | 26 | .05 | 77   | 0.19342 |
| WINDOW 2        | 29 | .05 | 0    | 0.00000 |
| WINDOW 3        | 0  | .05 | 0    | 0.00000 |
| SGD             | 26 | .05 | 0    | 0.00000 |
| DOORS           | 0  | .04 | 0    | 0.00000 |
| ROOF            | 70 | .04 | 500  | 0.00005 |
| FLOOR           |    | .6  | 500  |         |
| ET*S            |    |     |      | 0.20577 |
| -10LOG(ET*S)    |    |     |      | 6.9     |
| 10LOGA          |    |     |      | 25.4    |
| NOISE REDUCTION |    |     |      | 26.3    |

# WORK SHEET FOR CALCULATING ROOM NOISE REDUCTION VALUE

ROOM NAME LR/DR + STC = 30

FLOOR AREA 500

| SURFACES        | TL | @   | AREA | T*S     |
|-----------------|----|-----|------|---------|
| EXT. WALL 1     | 40 |     | 123  | 0.01230 |
| EXT. WALL 2     | 43 |     | 0    | 0.00000 |
| EXT. WALL 3     | 0  |     | 0    | 0.00000 |
| INT. WALL       |    |     | 520  |         |
| WINDOW 1        | 28 | .05 | 77   | 0.12204 |
| WINDOW 2        | 31 | .05 | 0    | 0.00000 |
| WINDOW 3        | 0  | .05 | 0    | 0.00000 |
| SGD             | 28 | .05 | 0    | 0.00000 |
| DOORS           | 0  | .04 | 0    | 0.00000 |
| ROOF            | 70 | .04 | 500  | 0.00005 |
| FLOOR           |    | .6  | 500  |         |
| ET*S            |    |     |      | 0.13439 |
| -10LOG(ET*S)    |    |     |      | 8.7     |
| 10LOGA          |    |     |      | 25.4    |
| NOISE REDUCTION |    |     |      | 28.2    |



# WORK SHEET FOR CALCULATING ROOM NOISE REDUCTION VALUE

ROOM NAME LR/DR + STC = 32

FLOOR AREA 500

| SURFACES        | TL | @   | AREA | T*S     |
|-----------------|----|-----|------|---------|
| EXT. WALL 1     | 40 |     | 123  | 0.01230 |
| EXT. WALL 2     | 43 |     | 0    | 0.00000 |
| EXT. WALL 3     | 0  |     | 0    | 0.00000 |
| INT. WALL       |    |     | 520  |         |
| WINDOW 1        | 30 | .05 | 77   | 0.07700 |
| WINDOW 2        | 33 | .05 | 0    | 0.00000 |
| WINDOW 3        | 0  | .05 | 0    | 0.00000 |
| SGD             | 30 | .05 | 0    | 0.00000 |
| DOORS           | 0  | .04 | 0    | 0.00000 |
| ROOF            | 70 | .04 | 500  | 0.00000 |
| FLOOR           |    | .6  | 500  | 0.00005 |
| ET*S            |    |     |      | 0.08935 |
| -10LOG(ET*S)    |    |     |      | 10.5    |
| 10LOGA          |    |     |      | 25.4    |
| NOISE REDUCTION |    |     |      | 29.9    |

# WORK SHEET FOR CALCULATING ROOM NOISE REDUCTION VALUE

ROOM NAME LR/DR + STC = 34

FLOOR AREA 500

| SURFACES        | TL | @   | AREA | T*S     |
|-----------------|----|-----|------|---------|
| EXT. WALL 1     | 40 |     | 123  | 0.01230 |
| EXT. WALL 2     | 43 |     | 0    | 0.00000 |
| EXT. WALL 3     | 0  |     | 0    | 0.00000 |
| INT. WALL       |    |     | 520  |         |
| WINDOW 1        | 32 | .05 | 77   | 0.04858 |
| WINDOW 2        | 35 | .05 | 0    | 0.00000 |
| WINDOW 3        | 0  | .05 | 0    | 0.00000 |
| SGD             | 32 | .05 | 0    | 0.00000 |
| DOORS           | 0  | .04 | 0    | 0.00000 |
| ROOF            | 70 | .04 | 500  | 0.00000 |
| FLOOR           |    | .6  | 500  | 0.00005 |
| ET*S            |    |     |      | 0.06093 |
| -10LOG(ET*S)    |    |     |      | 12.2    |
| 10LOGA          |    |     |      | 25.4    |
| NOISE REDUCTION |    |     |      | 31.6    |

# WORK SHEET FOR CALCULATING ROOM NOISE REDUCTION VALUE

ROOM NAME LR/DR + STC = 36

FLOOR AREA 500

| SURFACES        | TL | @   | AREA | T*S     |
|-----------------|----|-----|------|---------|
| EXT. WALL 1     | 40 |     | 123  | 0.01230 |
| EXT. WALL 2     | 43 |     | 0    | 0.00000 |
| EXT. WALL 3     | 0  |     | 0    | 0.00000 |
| INT. WALL       |    |     | 520  |         |
| WINDOW 1        | 34 | .05 | 77   | 0.03065 |
| WINDOW 2        | 37 | .05 | 0    | 0.00000 |
| WINDOW 3        | 0  | .05 | 0    | 0.00000 |
| SGD             | 34 | .05 | 0    | 0.00000 |
| DOORS           | 0  | .04 | 0    | 0.00000 |
| ROOF            | 70 | .04 | 500  | 0.00000 |
| FLOOR           |    | .6  | 500  | 0.00005 |
| ET*S            |    |     |      | 0.04300 |
| -10LOG(ET*S)    |    |     |      | 13.7    |
| 10LOGA          |    |     |      | 25.4    |
| NOISE REDUCTION |    |     |      | 33.1    |

# WORK SHEET FOR CALCULATING ROOM NOISE REDUCTION VALUE

ROOM NAME BR + STC = 24

FLOOR AREA 132

| SURFACES        | TL | @   | AREA | T*S     |
|-----------------|----|-----|------|---------|
| EXT. WALL 1     | 40 |     | 68   | 0.00680 |
| EXT. WALL 2     | 43 |     | 0    | 0.00000 |
| EXT. WALL 3     | 0  |     | 0    | 0.00000 |
| INT. WALL       |    |     | 280  | 0.00000 |
| WINDOW 1        | 22 | .05 | 20   | 0.12619 |
| WINDOW 2        | 25 | .05 | 0    | 0.00000 |
| WINDOW 3        | 0  | .05 | 0    | 0.00000 |
| SGD             | 22 | .05 | 0    | 0.00000 |
| DOORS           | 0  | .04 | 0    | 0.00000 |
| ROOF            | 50 | .04 | 0    | 0.00000 |
| FLOOR           |    | .6  | 132  | 0.00132 |
| ET*S            |    |     | 132  |         |
| -10LOG(ET*S)    |    |     |      | 0.13431 |
| 10LOGA          |    |     |      | 8.7     |
| NOISE REDUCTION |    |     |      | 20.0    |
|                 |    |     |      | 22.7    |

# WORK SHEET FOR CALCULATING ROOM NOISE REDUCTION VALUE

ROOM NAME BR + STC = 26

FLOOR AREA 132

| SURFACES        | TL | @   | AREA | T*S     |
|-----------------|----|-----|------|---------|
| EXT. WALL 1     | 40 |     | 68   | 0.00680 |
| EXT. WALL 2     | 43 |     | 0    | 0.00000 |
| EXT. WALL 3     | 0  |     | 0    | 0.00000 |
| INT. WALL       |    |     | 280  | 0.00000 |
| WINDOW 1        | 24 | .05 | 20   | 0.07962 |
| WINDOW 2        | 27 | .05 | 0    | 0.00000 |
| WINDOW 3        | 0  | .05 | 0    | 0.00000 |
| SGD             | 24 | .05 | 0    | 0.00000 |
| DOORS           | 0  | .04 | 0    | 0.00000 |
| ROOF            | 50 | .04 | 0    | 0.00000 |
| FLOOR           |    | .6  | 132  | 0.00132 |
| ET*S            |    |     | 132  |         |
| -10LOG(ET*S)    |    |     |      | 0.08774 |
| 10LOGA          |    |     |      | 10.6    |
| NOISE REDUCTION |    |     |      | 20.0    |
|                 |    |     |      | 24.6    |

# WORK SHEET FOR CALCULATING ROOM NOISE REDUCTION VALUE

ROOM NAME BR + STC = 28

FLOOR AREA 132

| SURFACES        | TL | @   | AREA | T*S     |
|-----------------|----|-----|------|---------|
| EXT. WALL 1     | 40 |     | 68   | 0.00680 |
| EXT. WALL 2     | 43 |     | 0    | 0.00000 |
| EXT. WALL 3     | 0  |     | 0    | 0.00000 |
| INT. WALL       |    |     | 280  |         |
| WINDOW 1        | 26 | .05 | 20   | 0.05024 |
| WINDOW 2        | 29 | .05 | 0    | 0.00000 |
| WINDOW 3        | 0  | .05 | 0    | 0.00000 |
| SGD             | 26 | .05 | 0    | 0.00000 |
| DOORS           | 0  | .04 | 0    | 0.00000 |
| ROOF            | 50 | .04 | 0    | 0.00000 |
| FLOOR           |    | .6  | 132  | 0.00132 |
|                 |    |     | 132  |         |
| ET*S            |    |     |      | 0.05836 |
| -10LOG(ET*S)    |    |     |      | 12.3    |
| 10LOGA          |    |     |      | 20.0    |
| NOISE REDUCTION |    |     |      | 26.4    |

# WORK SHEET FOR CALCULATING ROOM NOISE REDUCTION VALUE

ROOM NAME BR + STC = 30

FLOOR AREA 132

| SURFACES        | TL | @   | AREA | T*S     |
|-----------------|----|-----|------|---------|
| EXT. WALL 1     | 40 |     | 68   | 0.00680 |
| EXT. WALL 2     | 43 |     | 0    | 0.00000 |
| EXT. WALL 3     | 0  |     | 0    | 0.00000 |
| INT. WALL       |    |     | 280  |         |
| WINDOW 1        | 28 | .05 | 20   | 0.03170 |
| WINDOW 2        | 31 | .05 | 0    | 0.00000 |
| WINDOW 3        | 0  | .05 | 0    | 0.00000 |
| SGD             | 28 | .05 | 0    | 0.00000 |
| DOORS           | 0  | .04 | 0    | 0.00000 |
| ROOF            | 50 | .04 | 0    | 0.00000 |
| FLOOR           |    | .6  | 132  | 0.00132 |
|                 |    |     | 132  |         |
| ET*S            |    |     |      | 0.03982 |
| -10LOG(ET*S)    |    |     |      | 14.0    |
| 10LOGA          |    |     |      | 20.0    |
| NOISE REDUCTION |    |     |      | 28.0    |

# WORK SHEET FOR CALCULATING ROOM NOISE REDUCTION VALUE

ROOM NAME BR + STC = 32

FLOOR AREA 132

| SURFACES        | TL | @   | AREA | T*S     |
|-----------------|----|-----|------|---------|
| EXT. WALL 1     | 40 |     | 68   | 0.00680 |
| EXT. WALL 2     | 43 |     | 0    | 0.00000 |
| EXT. WALL 3     | 0  |     | 0    | 0.00000 |
| INT. WALL       |    |     | 280  | 0.02000 |
| WINDOW 1        | 30 | .05 | 0    | 0.00000 |
| WINDOW 2        | 33 | .05 | 0    | 0.00000 |
| WINDOW 3        | 0  | .05 | 0    | 0.00000 |
| SGD             | 30 | .05 | 0    | 0.00000 |
| DOORS           | 0  | .04 | 0    | 0.00000 |
| ROOF            | 50 | .04 | 132  | 0.00132 |
| FLOOR           |    | .6  | 132  |         |
| ET*S            |    |     |      | 0.02812 |
| -10LOG(ET*S)    |    |     |      | 15.5    |
| 10LOGA          |    |     |      | 20.0    |
| NOISE REDUCTION |    |     |      | 29.5    |

# WORK SHEET FOR CALCULATING ROOM NOISE REDUCTION VALUE

ROOM NAME BR + STC = 34

FLOOR AREA 132

| SURFACES        | TL | @   | AREA | T*S     |
|-----------------|----|-----|------|---------|
| EXT. WALL 1     | 40 |     | 68   | 0.00680 |
| EXT. WALL 2     | 43 |     | 0    | 0.00000 |
| EXT. WALL 3     | 0  |     | 0    | 0.00000 |
| INT. WALL       |    |     | 280  | 0.01262 |
| WINDOW 1        | 32 | .05 | 0    | 0.00000 |
| WINDOW 2        | 35 | .05 | 0    | 0.00000 |
| WINDOW 3        | 0  | .05 | 0    | 0.00000 |
| SGD             | 32 | .05 | 0    | 0.00000 |
| DOORS           | 0  | .04 | 0    | 0.00000 |
| ROOF            | 50 | .04 | 132  | 0.00132 |
| FLOOR           |    | .6  | 132  |         |
| ET*S            |    |     |      | 0.02074 |
| -10LOG(ET*S)    |    |     |      | 16.8    |
| 10LOGA          |    |     |      | 20.0    |
| NOISE REDUCTION |    |     |      | 30.8    |

# WORK SHEET FOR CALCULATING ROOM NOISE REDUCTION VALUE

ROOM NAME BR + STC = 36

FLOOR AREA 132

| SURFACES        | TL | @   | AREA | T*S     |
|-----------------|----|-----|------|---------|
| EXT. WALL 1     | 40 |     | 68   | 0.00680 |
| EXT. WALL 2     | 43 |     | 0    | 0.00000 |
| EXT. WALL 3     | 0  |     | 0    | 0.00000 |
| INT. WALL       |    |     | 280  |         |
| WINDOW 1        | 34 | .05 | 20   | 0.00796 |
| WINDOW 2        | 37 | .05 | 0    | 0.00000 |
| WINDOW 3        | 0  | .05 | 0    | 0.00000 |
| SGD             | 34 | .05 | 0    | 0.00000 |
| DOORS           | 0  | .04 | 0    | 0.00000 |
| ROOF            | 50 | .04 | 132  | 0.00132 |
| FLOOR           |    | .6  | 132  |         |
| ET*S            |    |     |      | 0.01608 |
| -10LOG(ET*S)    |    |     |      | 17.9    |
| 10LOGA          |    |     |      | 20.0    |
| NOISE REDUCTION |    |     |      | 32.0    |

## **APPENDIX 11**

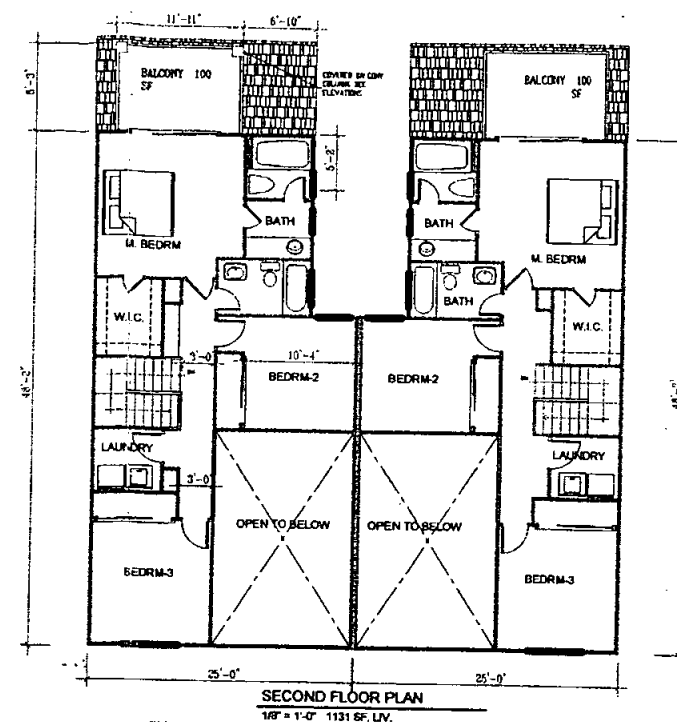
**SITE PLAN WITH PAD  
AND FINISH ELEVATIONS**

**GRADING PLAN WITH  
TOP OF THE WALL ELEVATION**

SWEETWATER RD.



**SITE PLAN**  
1" = 20'-0"



**GEORGE BEHNAM**  
**ARCHITECT**  
 1180 E. ORANGEBOULEVARD # 109  
 ANAHEIM, CALIFORNIA 92805  
 (714) 222-7777 • FAX (714) 222-7868

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|                  |               |                    |        |
|------------------|---------------|--------------------|--------|
| <b>DATE:</b>     | 02-14-05      | <b>JOB:</b>        | 031006 |
| <b>DRAWN BY:</b> | M.M.          | <b>CHECKED BY:</b> | G.B.   |
| <b>SCALE:</b>    | Noted         |                    |        |
| <b>SHEET</b>     | A-1           |                    |        |
|                  | 1 of 2 SHEETS |                    |        |



# COUNTY OF SAN DIEGO TRACT, TM 5392 RPL 3; STP 04-050

FOR CONDOMINIUM PURPOSES

## LEGAL DESCRIPTION:

THOSE PORTIONS OF THE NORTH 2 ACRES OF LOT 11, AND OF THE WEST HALF OF THE SOUTH 1 ACRE OF LOT 2 OF TRACT 1401 IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 1401 FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY ON DECEMBER 8, 1911 CONVEYED TO THE STATE OF CALIFORNIA IN A DEED RECORDED MARCH 13, 1993, AS DOCUMENT NO. 1993-010827, FILED IN THE OFFICE OF SAID COUNTY RECORDER, LYING EASTERLY OF THE FOLLOWING DESCRIBED LINE:

BEGINNING AT THE NORTHEAST CORNER OF PARCEL 21979-1, AS CONVEYED TO THE STATE OF CALIFORNIA IN A FINAL ORDER OF CONDEMNATION RECORDED ON NOVEMBER 20, 1968 AS DOCUMENT NUMBER 1968-059034 OF OFFICIAL RECORDS.

THENCE (1) ALONG THE EASTERLY LINE OF SAID PARCEL 21979-1 AND THE SOUTHERLY PROLONGATION THEREOF SOUTH 00°21'44" WEST, 402.25 FEET TO THE SOUTHERLY LINE OF THE LAND CONVEYED IN SAID DEED RECORDED MARCH 13, 1993, AND THE POINT OF TERMINUS. (ASSESSOR'S PARCEL NO. 578-012-80)

## GENERAL PROJECT INFORMATION

### EXISTING

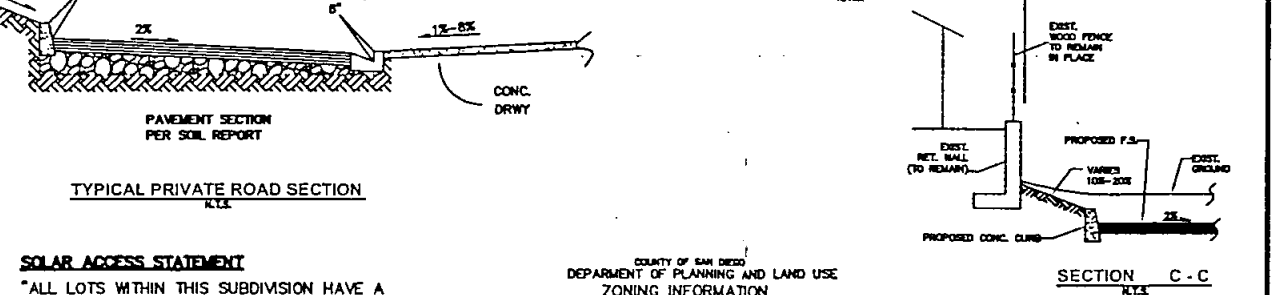
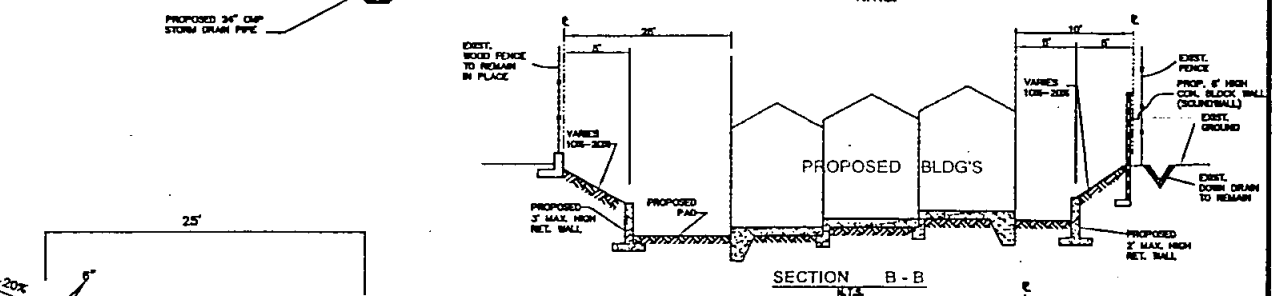
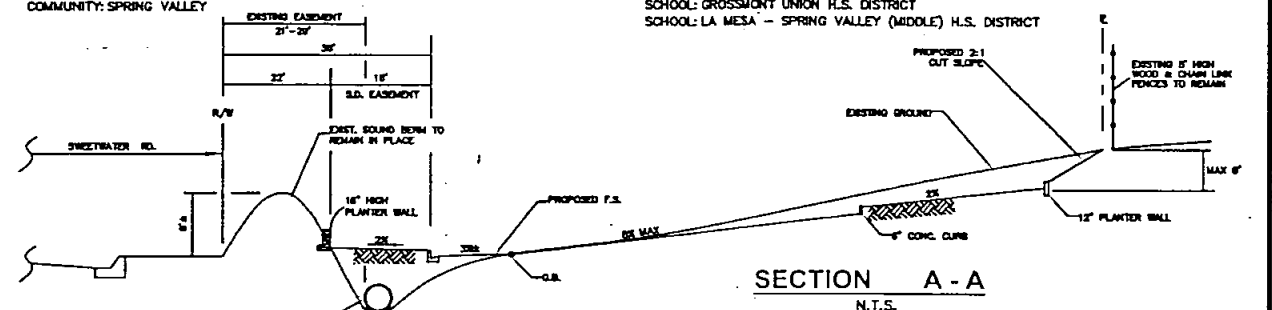
ASSESSOR PARCEL NO: 578-012-80  
SITE AREA: 1.15 ACRES  
EXISTING ZONING: RV11  
EXISTING USE: VACANT  
ASSESSORS TAX RATE AREA = 83171  
GENERAL PLAN = (7) RESIDENTIAL  
REGIONAL CATEGORY = CUD/A/ECA  
COMMUNITY: SPRING VALLEY

### PROPOSED

PROPOSED USE: 10 UNITS CONDOMINIUMS  
PROPOSED SETBACKS:  
FRONT: 32', REAR: 25', SIDE: 10' MIN.  
GROSS AREA: 1.15 ACRES  
NET AREA: 1.07 ACRES  
ZONING: RV11

### UTILITY SERVICES

GAS AND ELECTRIC: SDG & E TEL (800) 411-7343  
SEWER: SPRING VALLEY SANITATION  
MAINTENANCE DISTRICT TEL (619) 680-2007  
WATER: HELIX WATER DISTRICT TEL (619) 527-7482  
CABLE: COX COMMUNICATIONS TEL (800) 221-4188  
TELEPHONE: SBC TEL (800) 955-4296  
FIRE: SAN MIGUEL FIRE DEP. TEL (619) 870-0500  
SCHOOL: GROSSMONT UNION H.S. DISTRICT  
SCHOOL: LA MESA - SPRING VALLEY (MIDDLE) H.S. DISTRICT



## SOLAR ACCESS STATEMENT

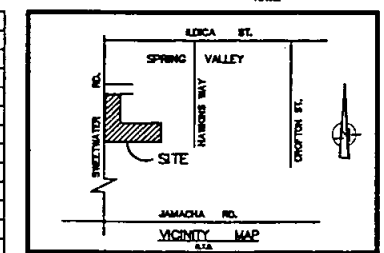
"ALL LOTS WITHIN THIS SUBDIVISION HAVE A MINIMUM OF 100 SQUARE FEET OF SOLAR ACCESS FOR EACH FUTURE DWELLING BY THIS SUBDIVISION. WHEN PARCELS LESS THAN ONE ACRE ARE PROPOSED, THE STATEMENT MUST BE SIGNED BY A REGISTERED CIVIL ENGINEER OR LICENSED LAND SURVEYOR. A STATEMENT SUPPORTING THE EXCEPTION OF ANY LOT/PARCEL FROM SOLAR ACCESS MUST ALSO BE SIGNED BY A REGISTERED ENGINEER OR LAND SURVEYOR."

## CONDOMINIUM MAP STATEMENT

"THIS IS A MAP OF A CONDOMINIUM PROJECT AS DEFINED IN SECTION 1350 OF THE STATE OF CALIFORNIA CIVIL CODES, THE MAXIMUM NUMBER OF DWELLING UNITS IS 10."

## DEPARTMENT OF PLANNING AND LAND USE ZONING INFORMATION

| ZONE                     |         |
|--------------------------|---------|
| RV 11                    |         |
| USE REGULATIONS          | Q       |
| ANIMAL REGULATIONS       | 10.9    |
| DENSITY                  | 10.000  |
| LOT SIZE                 | K       |
| BUILDING TYPE            | -       |
| MAXIMUM FLOOR AREA       | -       |
| FLOOR AREA RATIO         | -       |
| HEIGHT                   | C       |
| LOT COVERAGE             | -       |
| SETBACK                  | K       |
| OPEN SPACE               | -       |
| SPECIAL AREA REGULATIONS | B,D1,D2 |



AUGUST 30, 2005

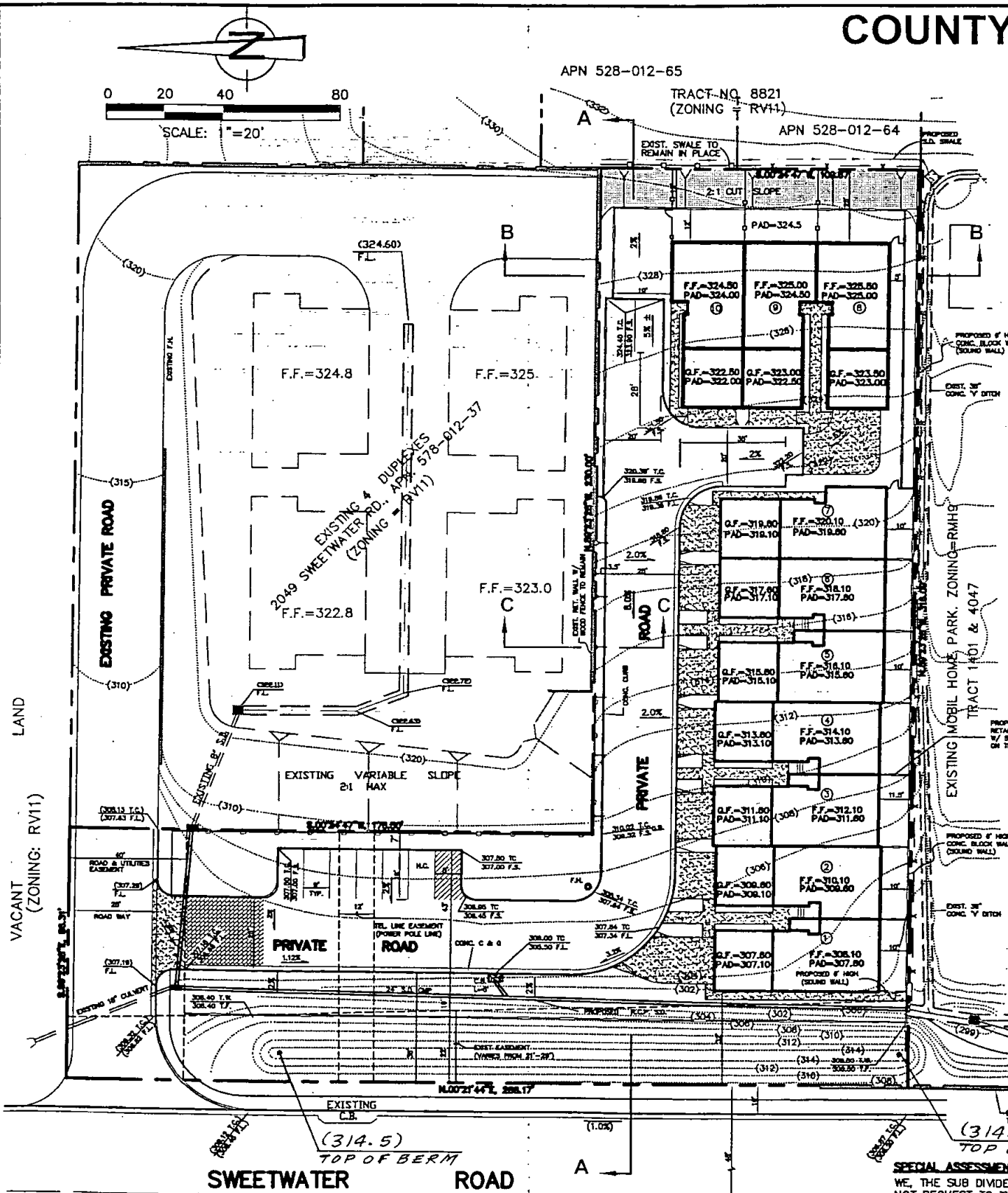
## COUNTY OF SAN DIEGO TRACT

TM 5392 RPL 3; STP 04-050

SWEETWATER ROAD SAN DIEGO

SCALE: 1"=20'

SHEET 1 OF 1



### LEGEND & ABBREVIATIONS

|                       |  |                     |
|-----------------------|--|---------------------|
| LOT BOUNDARIES        | PROPOSED CONC. SIDEWALK/DRIVE                | T.C. TOP OF CURB    |
| PROPOSED 2:1 SLOPE    | EXISTING CONCRETE BLOCK WALL                 | F.L. FLOW LINE      |
| EXISTING CONTOUR LINE | PROPOSED CONCRETE BLOCK WALL W/RET. FOR FLAT | P.F. FINISHED FLOOR |
|                       | S.B. GRADE BREAK                             | L.P. LOW POINT      |
|                       | C.M.P. CORRUGATED METAL PIPE                 | C.B. CATCH BASIN    |
|                       |  | T.G. TOP OF GRADE   |
|                       |  | S.D. STORM DRAIN    |

### ARCHITECT:

GEORGE BEHNAM  
1150E. ORANGETHOPE #109  
PLACENTIA, CA 92807  
TEL (714) 572-2384

### OWNER / SUBDIVIDER:

A & E SWEET HOMES LLC.  
100 S. ANAHEIM BLVD. # 360  
ANAHEIM CA 92805  
TEL (714) 991-4411

### BENCH MARK:

2" BRASS DISK CBV2 N. PC ILICA STREET  
12" W. ILICA CT. COUNTY ENGR.  
ELEVATION = 425.21 FT. (USGS)

### PREPARED BY:

HOSS, WILLIAM & ASSOCIATES INC.  
PLANNERS/CONSULTING ENGINEERS/SURVEYORS  
100 SOUTH ANAHEIM BLVD. # 360 ANAHEIM, CA 92805  
TEL (714) 991-4411 FAX (714) 991-4491

### SPECIAL ASSESSMENT ACT STATEMENT

WE, THE SUB DIVIDER OF THIS PROJECT WILL NOT REQUEST TO THE BOARD OF SUPERVISOR FOR PERMISSION TO INITIATE PROCEEDING UNDER A SPECIAL ASSESSMENT ACT FOR CONSTRUCTION OF ANY OF THE PROPOSED IMPROVEMENT.

## **ATTACHMENT A**

### **Tabulated Design Elevation Of Sound Attenuation Features**

**TM 5392RPL3: STP04 - 050**

**Tabulated Designed Elevations of the Sound Attenuation Features**

| Unit No. | Finish Floor Elevation (ft.) | Top of Southerly Soundwall (ft.) | Top of Roof (ft.) | Top of Westerly Soundwall (ft.) | Balcony Finish Floor (ft.) | Top of Balcony Wall (ft.) |
|----------|------------------------------|----------------------------------|-------------------|---------------------------------|----------------------------|---------------------------|
| 1        | 308.1                        | 314.1                            | 332.8             | 314.5                           | 317.1                      | 320.6                     |
| 2        | 310.1                        | 316.1                            | 334.8             | -----                           | 319.1                      | 322.6                     |
| 3        | 312.1                        | 318.1                            | 336.8             | -----                           | 321.1                      | 324.6                     |
| 4        | 314.1                        | 320.1                            | 338.8             | -----                           | 323.1                      | 326.6                     |
| 5        | 316.1                        | 322.1                            | 340.8             | -----                           | 325.1                      | 328.6                     |
| 6        | 318.1                        | 324.1                            | 342.8             | -----                           | 327.1                      | 330.6                     |
| 7        | 320.1                        | 326.1                            | 344.8             | -----                           | 329.1                      | 332.6                     |
| 8        | 325.5                        | 331.5                            | 350.2             | -----                           | 334.5                      | 339.5                     |
| 9        | 325.0                        | -----                            | 349.7             | -----                           | 334.0                      | 339                       |
| 10       | 324.5                        | -----                            | 349.2             | -----                           | 333.5                      | 338.5                     |

**Notes:**

Top of existing earth berm along Sweetwater Road is 314.5 ( See TM5392 ).  
(located at westerly side of the project, see TM5392)

All units ( 1-10 ) are two story and the exact height from finish floor to top of the roof is 24.7 ft.( see architect plans ).

## **ATTACHMENT B**

### **Architectural Plans with highlighted top of Sound Walls Elevations**

# 10 - CONDOMINIUMS ----- SWEETWATER RD. SPRING VALLEY, CA A.P.N 578-012-80

SWEETWATER RD.

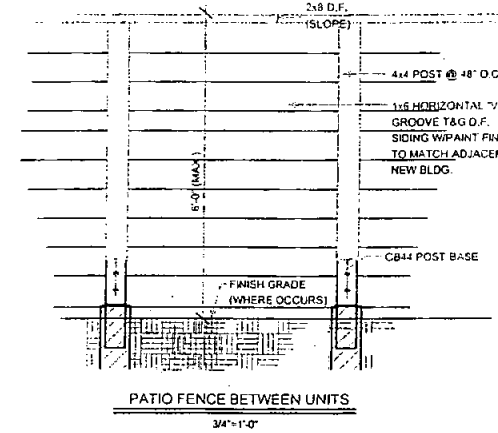
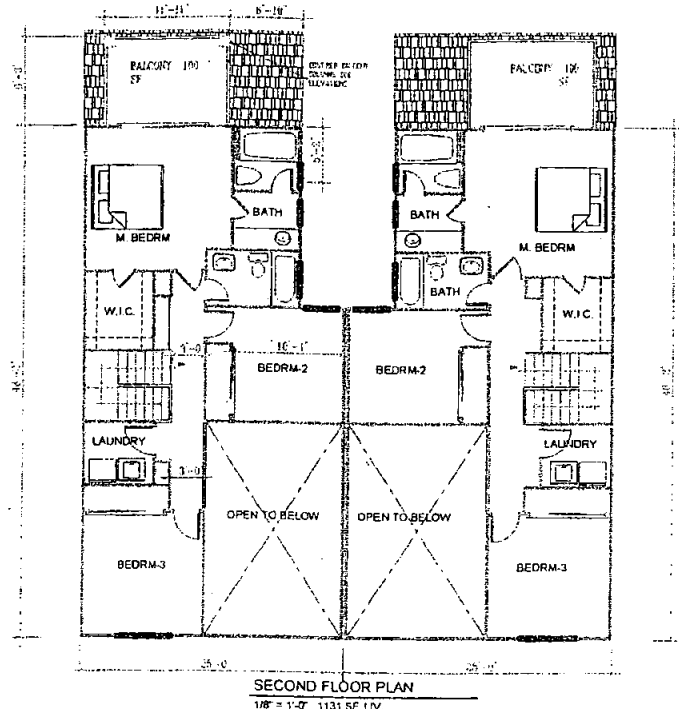
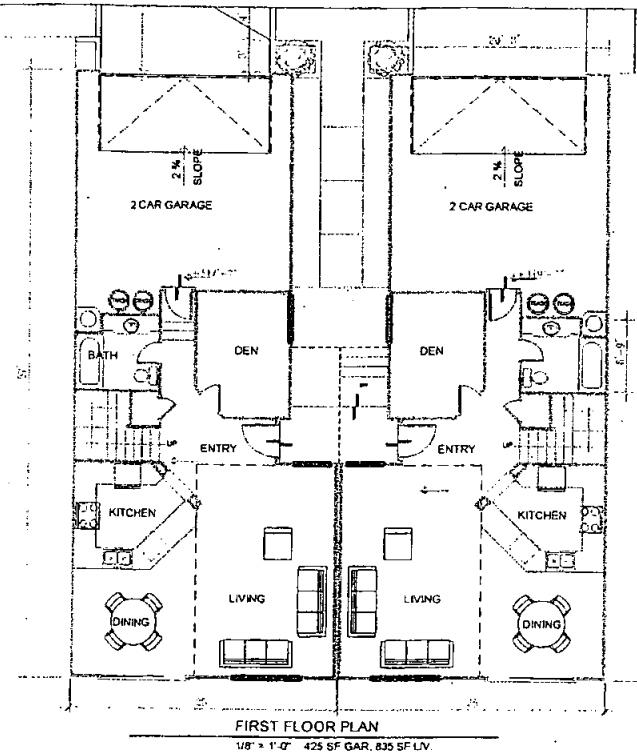
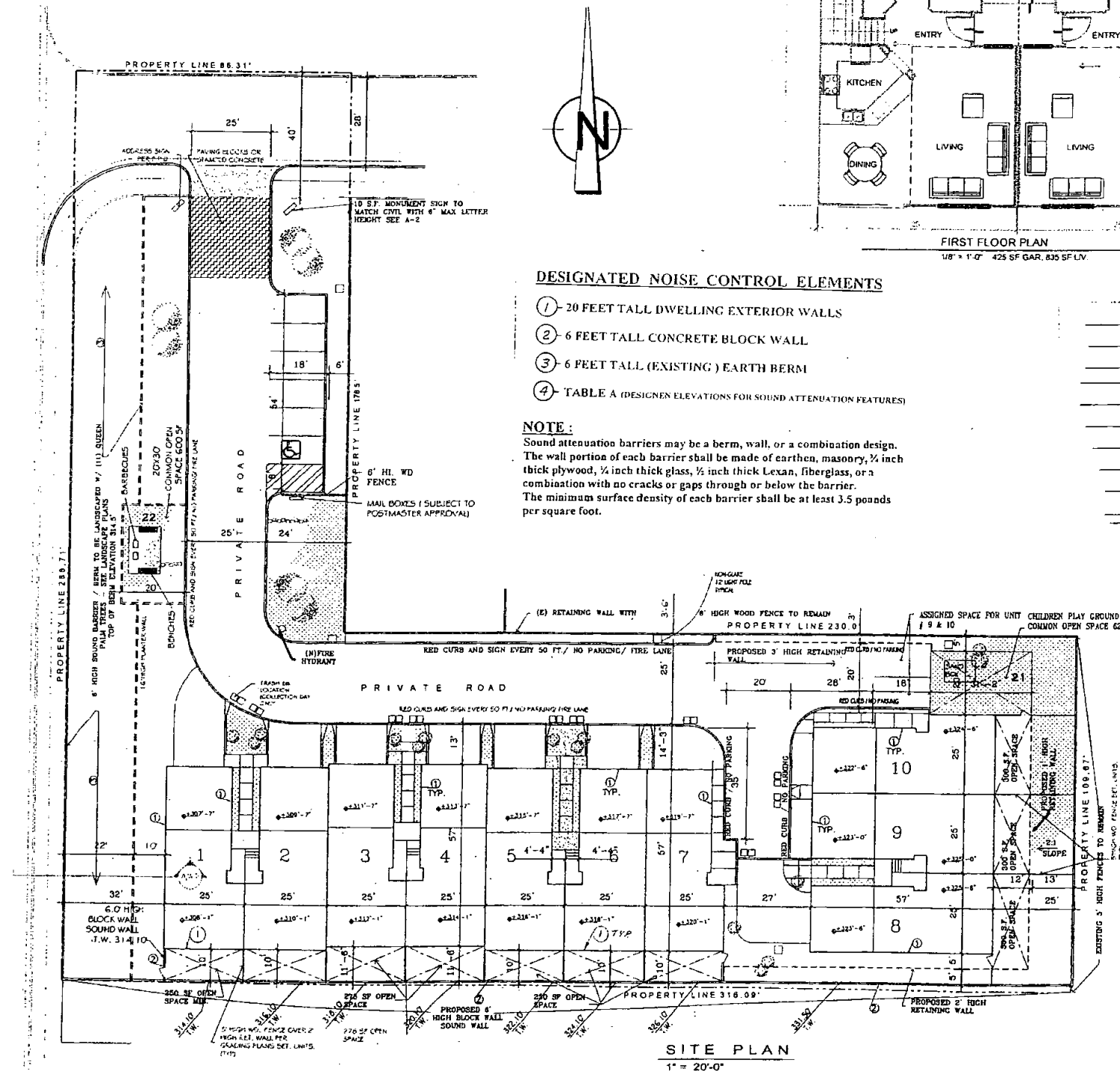


TABLE "A"

| TM 5392RPL3: STP04 - 050  |                              |                                  |                   |                                 |                      |                           |
|---|------------------------------|----------------------------------|-------------------|---------------------------------|----------------------|---------------------------|
| Tabulated Designed Elevations of the Sound Attenuation Features |                              |                                  |                   |                                 |                      |                           |
| Unit No.  | Finish Floor Elevation (ft.) | Top of Southerly Soundwall (ft.) | Top of Roof (ft.) | Top of Westerly Soundwall (ft.) | Balcony Finish (ft.) | Top of Balcony Wall (ft.) |
| 1   | 308.1                        | 314.1                            | 332.8             | 314.5                           | 317.1                | 320.6                     |
| 2   | 310.1                        | 316.1                            | 334.8             | ---                             | 319.1                | 322.6                     |
| 3   | 312.1                        | 318.1                            | 336.8             | ---                             | 321.1                | 324.6                     |
| 4   | 314.1                        | 320.1                            | 338.8             | ---                             | 323.1                | 326.6                     |
| 5   | 316.1                        | 322.1                            | 340.8             | ---                             | 325.1                | 328.6                     |
| 6   | 318.1                        | 324.1                            | 342.8             | ---                             | 327.1                | 330.6                     |
| 7   | 320.1                        | 326.1                            | 344.8             | ---                             | 329.1                | 332.6                     |
| 8   | 325.5                        | 331.5                            | 350.2             | ---                             | 334.5                | 339.5                     |
| 9   | 325.0                        | ---                              | 349.7             | ---                             | 334.0                | 339.0                     |
| 10  | 324.5                        | ---                              | 349.2             | ---                             | 333.5                | 338.5                     |

**Notes:**  
Top of existing earth berm along Sweetwater Road is 314.5 (See TM5392). (located at westerly side of the project, see TM5392)

All units (1-10) are two story and the exact height from finish floor to top of the roof is 24.7 ft. (see architect plans).

**INTERIOR NOISE CONTROL NOTES**  
ALL WINDOWS HAS TO BE RATED AS HIGH AS STC 48

**SAN MIGUEL CONSOLIDATED FIRE PROTECTION DISTRICT NOTES**

- HOME OWNERS ASSOCIATION CCR&S SHALL ENFORCE TOWING ILLEGAL PARKED VEHICLES.
- ENTIRE STREET, TURN AROUND AREA MUST BE STRIPPED WITH RED PAINT AND WHITE LETTERS ENTIRE ROADWAY IS A FIRE LANE. SIGNS EVERY 50' SHALL BE INSTALLED IN BOTH DIRECTIONS INDICATING "NO PARKING-FIRE LANE".
- A FIRE HYDRANT SHALL BE INSTALLED AT THE NORTH EAST CORNER DRIVEWAY.
- PERMANENT ADDRESS SIGN SHALL BE INSTALLED AT THE SWEETWATER ENTRANCE.
- ALL UNITS SHALL HAVE A NFPA 13 D SPRINKLER SYSTEM. INSTALL PRIOR TO OCCUPANCY.

**ZONING DEPT. STATISTICS AND NOTES**

- PRESENT USE - VACANT
- NO TREES 6" DIA EXISTING
- ADDRESS AND MONUMENT SIGNS PROPOSED.

LOT SIZE = 500868 SQ. FT. = 1.15 ACRE

**UNITS AREA:**

FIRST FLOOR AREA = 835 SQ. FT.  
SECOND FLOOR AREA = 1131 SQ. FT.  
TOTAL UNIT FLOOR AREA = 1966 SQ. FT.  
GARAGE AREA = 425 SQ. FT.  
UNIT FOOT PRINT = 1262 SQ. FT.  
TOTAL UNITS FOOT PRINT = 12620 SQ. FT.  
BUILDING LOT COVERAGE = 25%

**PRIVATE OPEN SPACE:**

REQUIRED: 10 UNITS X 350 SQ. FT. = 3,500 SQ. FT.  
OPEN SPACE UNITS 1,2,5,6,7  
PATIO = 250 SQ. FT. FIRST FLOOR  
BALCONY = 100 SQ. FT. SECOND FLOOR  
OPEN SPACE UNITS 3 & 4  
PATIO = 278 SQ. FT. FIRST FLOOR  
BALCONY = 100 SQ. FT. SECOND FLOOR  
OPEN SPACE UNITS 8  
PATIO = 350 SQ. FT. FIRST FLOOR  
BALCONY = 100 SQ. FT. SECOND FLOOR  
OPEN SPACE UNITS 9 & 10  
PATIO = 300 SQ. FT. FIRST FLOOR  
BALCONY = 100 SQ. FT. SECOND FLOOR  
TOTAL PROVIDED PRIVATE OPEN SPACE 3,768 SQ. FT. > 3,500 O.K.

**COMMON OPEN SPACE:**

REQUIRED = 1,000 SF  
PROVIDED = 600 SF @ FRONT WEST AREA  
620 SF @ BACK EAST AREA  
TOTAL PROVIDED = 1,220 SF

PROVIDED VISITOR PARKING 9 PARKING SPACE

LANDSCAPE AREA = 14495 SQ. FT.  
LANDSCAPE COVERAGE (14495/500868) = 29%

PAVING AREA = 14599 SQ. FT.  
PAVING AREA COVERAGE (14599/500868) = 29%

10 CONDOMINIUMS  
JOB NAME: 2047 SWEETWATER DR  
LOCATION: SPRING VALLEY, CA

DESCRIPTION: SITE PLAN/FLOOR PLANS

GEORGE BEHNAH  
ARCHITECT  
1180 E ORANGEBOREE #108  
SPRING VALLEY, CA 94576  
(714) 972-2334

DATE: 02-14-05  
JOB: 031006

DRAWN BY: M.M.  
CHECKED BY: G.B.

SCALE: Noted  
SHEET  
A-1

1 of 2 SHEETS

## **ATTACHMENT C**

**Tract Map (TM 5392) with highlighted top of  
Berm Elevation**

# COUNTY OF SAN DIEGO TRACT, TM 5392 RPL 3; STP 04-050

FOR CONDOMINIUM PURPOSES

## LEGAL DESCRIPTION:

THOSE PORTIONS OF THE NORTH 2 ACRES OF LOT 11, AND OF THE WEST HALF OF THE SOUTH 1 ACRE OF LOT 2 OF TRACT 1401 IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 1401 FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY ON DECEMBER 8, 1911 CONVEYED TO THE STATE OF CALIFORNIA IN A DEED RECORDED MARCH 15, 1995, AS DOCUMENT NO. 1995-0108927, FILED IN THE OFFICE OF SAID COUNTY RECORDER, LYING EASTABLY OF THE FOLLOWING DESCRIBED LINE:

BEGINNING AT THE NORTHEASTERLY CORNER OF PARCEL 21978-1, AS CONVEYED TO THE STATE OF CALIFORNIA IN A FINAL ORDER OF CONDEMNATION RECORDED ON NOVEMBER 20, 1996 AS DOCUMENT NUMBER 1996-0590034 OF OFFICIAL RECORDS.

THENCE (1) ALONG THE EASTERLY LINE OF SAID PARCEL 21978-1 AND THE SOUTHERLY PROLONGATION THEREOF SOUTH 00°21'44" WEST, 402.25 FEET TO THE SOUTHERLY LINE OF THE LAND CONVEYED IN SAID DEED RECORDED MARCH 15, 1995, AND THE POINT OF TERMINUS, (ASSESSOR'S PARCEL NO. 578-012-80)

## GENERAL PROJECT INFORMATION

### EXISTING

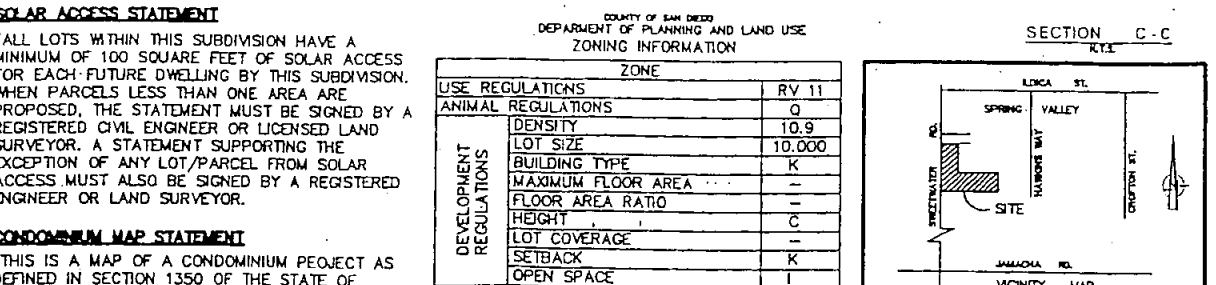
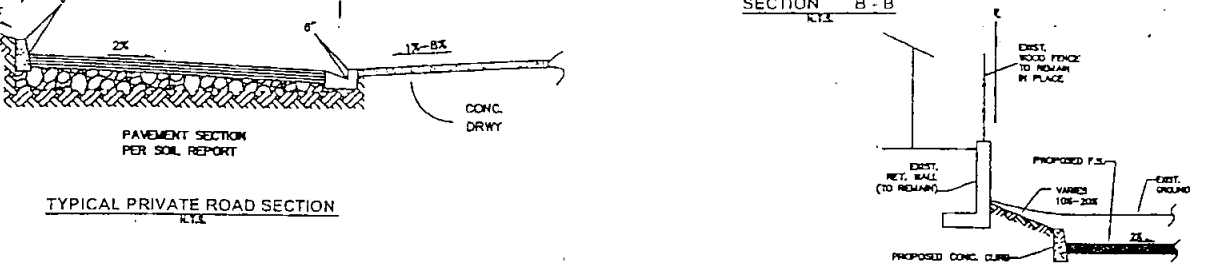
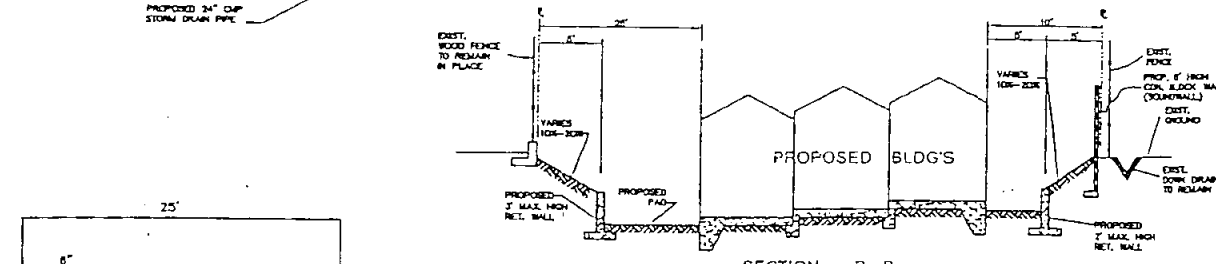
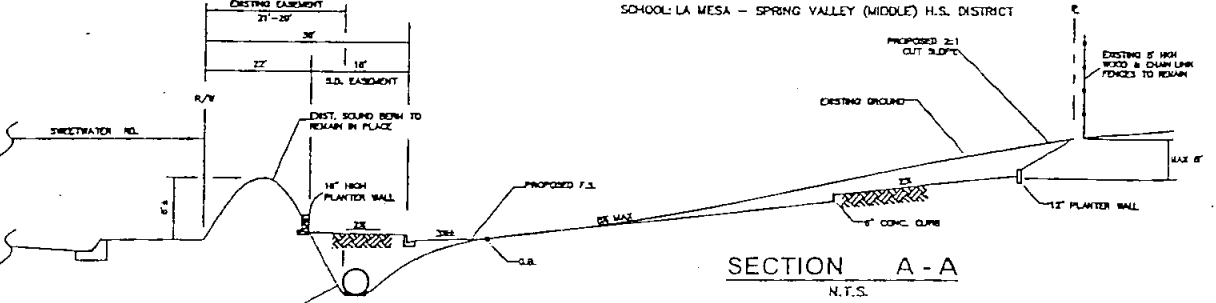
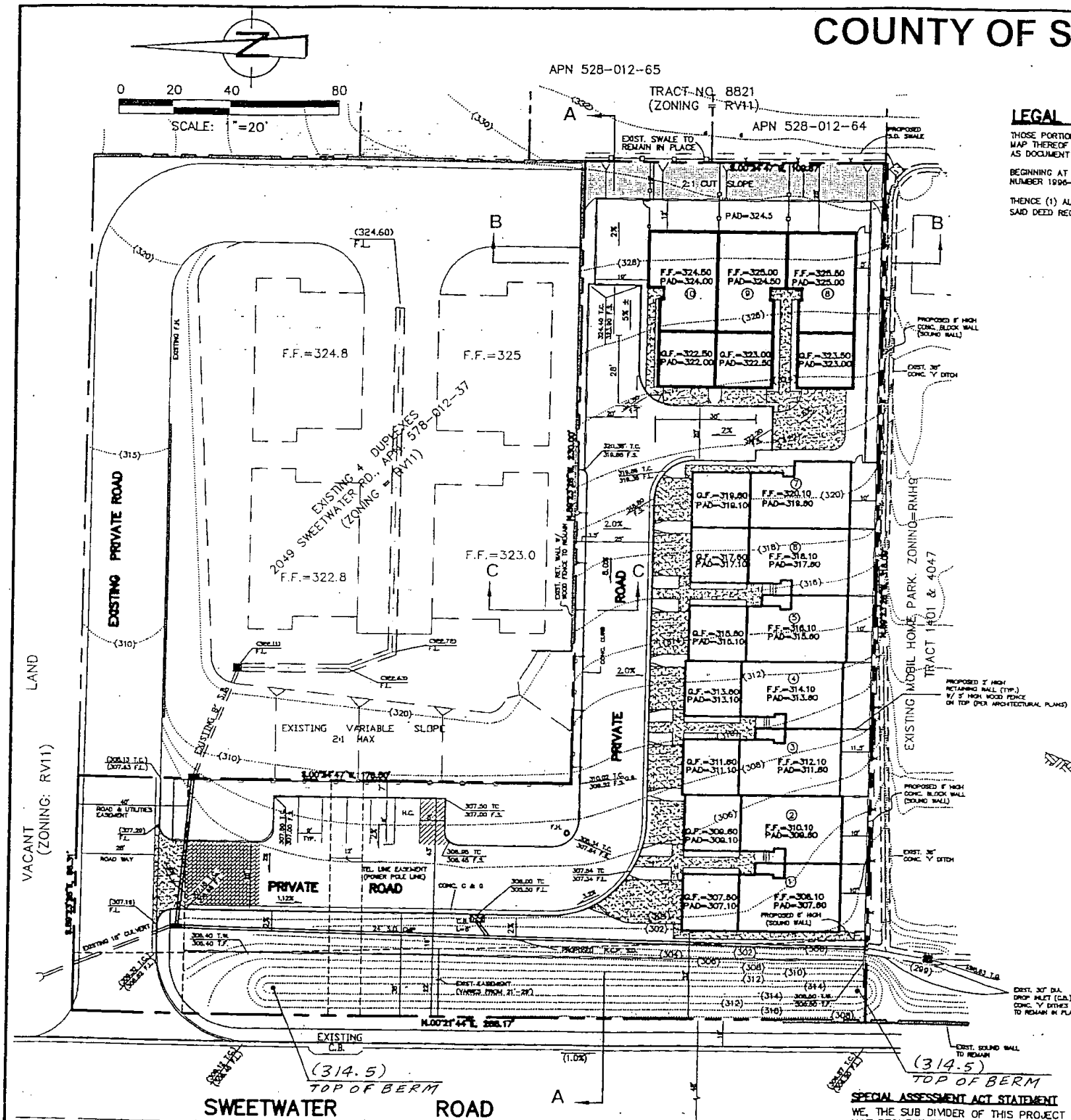
ASSESSOR PARCEL NO: 578-012-80  
SITE AREA: 1.15 ACRES  
EXISTING ZONING: RV11  
EXISTING USE: VACANT  
ASSESSORS TAX RATE AREA = 83171  
GENERAL PLAN = (7) RESIDENTIAL  
REGIONAL CATEGORY= CUD/A/ECA  
COMMUNITY: SPRING VALLEY

### PROPOSED

PROPOSED USE: 10 UNITS CONDOMINIUMS  
PROPOSED SETBACKS:  
FRONT: 32', REAR: 25', SIDE: 10' MIN.  
GROSS AREA: 1.15 ACRES  
NET AREA: 1.07 ACRES  
ZONING: RV11

### UTILITY SERVICES

GAS AND ELECTRIC: SDG & E TEL (800) 411-7343  
SEWER: SPRING VALLEY SANITATION  
MAINTENANCE DISTRICT TEL (619)-660-2007  
WATER: HELIX WATER DISTRICT TEL (619) 527-7482  
CABLE: COX COMMUNICATIONS TEL (800) 221-4188  
TELEPHONE: SBC TEL (800) 955-4298  
FIRE: SAN MIGUEL FIRE DEPT. TEL (619) 870-0500  
SCHOOL: GROSSMONT UNION H.S. DISTRICT  
SCHOOL: LA MESA - SPRING VALLEY (MIDDLE) H.S. DISTRICT



## SOLAR ACCESS STATEMENT

"ALL LOTS WITHIN THIS SUBDIVISION HAVE A MINIMUM OF 100 SQUARE FEET OF SOLAR ACCESS FOR EACH FUTURE DWELLING BY THIS SUBDIVISION. WHEN PARCELS LESS THAN ONE ACRE ARE PROPOSED, THE STATEMENT MUST BE SIGNED BY A REGISTERED CIVIL ENGINEER OR LICENSED LAND SURVEYOR. A STATEMENT SUPPORTING THE EXCEPTION OF ANY LOT/PARCEL FROM SOLAR ACCESS MUST ALSO BE SIGNED BY A REGISTERED ENGINEER OR LAND SURVEYOR."

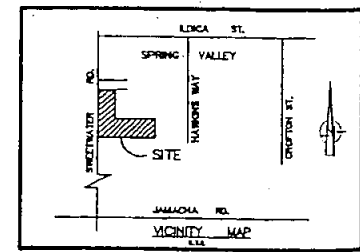
## CONDOMINIUM MAP STATEMENT

"THIS IS A MAP OF A CONDOMINIUM PROJECT AS DEFINED IN SECTION 1350 OF THE STATE OF CALIFORNIA CIVIL CODES, THE MAXIMUM NUMBER OF DWELLING UNITS IS 10."

## SPECIAL ASSESSMENT ACT STATEMENT

"WE, THE SUB DIVIDER OF THIS PROJECT WILL NOT REQUEST TO THE BOARD OF SUPERVISOR FOR PERMISSION TO INITIATE PROCEEDING UNDER A SPECIAL ASSESSMENT ACT FOR CONSTRUCTION OF ANY OF THE PROPOSED IMPROVEMENTS."

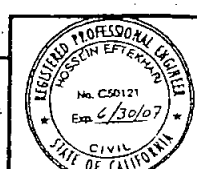
| COUNTY OF SAN DIEGO<br>DEPARTMENT OF PLANNING AND LAND USE<br>ZONING INFORMATION |         |
|--|---------|
| ZONE   |         |
| USE REGULATIONS  | RV 11   |
| ANIMAL REGULATIONS   | Q       |
| DEVELOPMENT REGULATIONS  |         |
| DENSITY  | 10.9    |
| LOT SIZE   | 10,000  |
| BUILDING TYPE  | K       |
| MAXIMUM FLOOR AREA   | -       |
| FLOOR AREA RATIO   | -       |
| HEIGHT   | C       |
| LOT COVERAGE   | -       |
| SETBACK  | K       |
| OPEN SPACE   | I       |
| SPECIAL AREA REGULATIONS   | B,D1,D2 |



| LEGEND & ABBREVIATIONS |  |
|------------------------|--|
| LOT BOUNDARIES         | PROPOSED CONC. SIDEWALK/DRIVE                    |
| PROPOSED 2:1 SLOPE     | EXISTING CONCRETE BLOCK WALL                     |
| EXISTING CENTER LINE   | PROPOSED CONCRETE BLOCK WALL WITH RAIL FOR FENCE |
|                        | GRADE BREAK                                      |
|                        | COMP. CORRUGATED METAL PIPE                      |
|                        | TOP OF CURB                                      |
|                        | FLOW LINE  |
|                        | FRESHED FLOOR                                    |
|                        | LOW POINT  |
|                        | CATCH BASIN                                      |
|                        | TOP OF GRATE                                     |
|                        | STORM DRAIN                                      |

| ARCHITECT:   | OWNER / SUBDIVIDER  |
|--|---|
| GEORGE BEHNAM<br>1150E. ORANGEHOPE #109<br>PLACENTIA, CA 92807<br>TEL (714) 572-2384 | A & E SWEET HOMES LLC.<br>100 S. ANAHEIM BLVD. # 360<br>ANAHEIM, CA 92805<br>TEL (714) 991-4411 |

| BENCH MARK  | PREPARED BY:   |
|---|--|
| 2" BRASS DISK CBV2 N. PC ILICA STREET<br>12' W. ILICA CT. COUNTY ENGR.<br>ELEVATION = 425.21 FT. (USGS) | HOSS, WILLIAM & ASSOCIATES INC.<br>PLANNERS, CONSULTING ENGINEERS, SURVEYORS<br>100 SOUTH ANAHEIM BLVD. # 360 ANAHEIM, CA 92805<br>TEL (714) 991-4411 FAX (714) 991-4491 |



COUNTY OF SAN DIEGO TRACT  
TM 5392 RPL 3; STP 04-050  
SWEETWATER ROAD SAN DIEGO  
SCALE: 1"=20'  
SHEET 1 OF 1

## **ATTACHMENT D**

**2030 CNEL calculation for Balconies, Play Lot  
And Barbeque pit**





# GORDON BRICKEN & ASSOCIATES

ACOUSTICAL and ENERGY ENGINEERS

## S U M M A R Y

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This report addresses the noise levels at 22 locations on the project site using a modified calculation method suggested by the County. Details are discussed in the body of the report. The results are given below.

| <u>NUMBER</u> | <u>GROUND</u> <sup>(1)</sup> | <u>BALCONY</u> |
|---------------|------------------------------|----------------|
| 1             | 57.1*                        |                |
| 2             | 55.9*                        |                |
| 3             | 56.8*                        |                |
| 4             | 57.7*                        |                |
| 5             | 57.9*                        |                |
| 6             | 57.8*                        |                |
| 7             | 58.8*                        |                |
| 8             | 63.2                         | 59.7           |
| 9             | 61.9                         | 58.3           |
| 10            | 60.2                         | 55.4           |
| 11            | 61.1                         | 56.2           |
| 12            | 60.6                         | 57.9           |
| 13            | 60.2                         | 56.0           |
| 14            | 60.2                         | 59.5           |
| 15            | 59.7                         | 56.7           |
| 16            | 60.3                         | 59.2           |
| 17            | 60.1                         | 58.5           |
| 18            | 41.5*                        |                |
| 19            | 41.4*                        |                |
| 20            | 41.5*                        |                |
| 21            | 58.2*                        |                |
| 22            | 54.5*                        |                |

(1) Asterisk denotes patios and recreation areas.



# GORDON BRICKEN & ASSOCIATES

## ACOUSTICAL and ENERGY ENGINEERS

### 1.0 INTRODUCTION

This report presents the results of a revised set of calculations for the project. The most recent report on the project addressed the noise level at 20 points for both the ground level and the second floor level. The following three changes were requested by the County:

1. Although the present County exterior requirement does not explicitly require the project to meet a level of 60 dBA CNEL, the County has decided that it wishes to do so in this project. The original calculations at the 20 points were slightly higher than 60 dBA CNEL.
2. The project has added two recreational areas on the site. There will now be 22 points.
3. Since there was already ground level private open space, the balconies were originally thought to be exempt from the 60 dBA limit. However, the architect counted the balconies to meet the project's open space requirement. As a result, the balconies must also meet the 60 dBA CNEL requirement.

The points are indicated on Exhibits 1 and 2. There are 22 locations. Ground level points are indicated by the symbol "G" and the balcony locations by the symbol "B".

The computer program used for this project will account for the noise reduction due to only one barrier. In the case of multiple barriers, the program selects the barrier that produces the highest noise reduction. In that event, the likelihood exists that the actual noise level with multiple barriers is lower than the computer model predicts. It was suggested by John Bennet of the County that an alternate procedure be employed that he felt would account for the added noise reduction.

## 2.0 ALTERNATE CALCULATION PROCEDURE

The suggested alternate calculation procedure would involve computing the noise reduction for the exterior sound walls and the noise reduction of the buildings and any other secondary structure separately, and, then, combining the results in a particular manner. The procedure works as follows:

- Step 1. Compute the Noise Level of the vacant site without the freeway wall/berm for the freeway alone. All other barriers are left in place.
- Step 2. Compute the Noise Level of the vacant site without the Sweetwater berm for Sweetwater Road alone. All other barriers are left in place.
- Step 3. Compute the Noise Level of the vacant site with the freeway wall/berm for the freeway alone. All other barriers are left in place.
- Step 4. Compute the Noise Level of the vacant site with the Sweetwater berm for Sweetwater Road alone. All other barriers are left in place.
- Step 5. Subtract the results of Step 3 from Step 1 to obtain the reduction of the freeway wall.
- Step 6. Subtract the results of Step 4 from Step 2 to obtain the reduction of the Sweetwater berm.
- Step 7. Add the results of Step 1 to the result of Step 2. This is the combined freeway and Sweetwater Road results for the vacant site.
- Step 8. Add the results of Step 3 to the results of Step 4. This is the combined freeway and Sweetwater Road results with the freeway and Sweetwater Road barriers in place.
- Step 9. Subtract the results of Step 3 from Step 7 to obtain the combined noise reduction of the all barriers for both noise sources.

In actuality, the calculations could have gone to Steps 7 and 8 immediately since neither barrier interacts with the other noise source with one exception which will be addressed later. The main reason to break up the calculations by source is to view the various contributions so as to address any further mitigation should it be required.

Steps 1 through 9 addressed the vacant site. The next series of steps addresses the effect of the building without the freeway or Sweetwater barriers.

- Step 10. Compute the freeway contribution for the buildings without Sweetwater Road.
- Step 11. Compute the Sweetwater contribution of the buildings without the freeway.
- Step 12. Add the results of Step 11 to Step 12. This is the combined effect of the buildings.
- Step 13. Subtract Step 10 from Step 1. This provides the noise reduction of the buildings for the freeway.
- Step 14. Subtract Step 11 from Step 2. This provides the noise reduction of the buildings for Sweetwater Road.
- Step 15. Subtract the results of Step 12 from Step 8. This is the combined noise reduction of the buildings.
- Step 16. The results of Step 15 represent the added reduction of the buildings. These values are then subtracted from the levels produced for the freeway and Sweetwater Road barriers. This means Step 15 results are subtracted from Step 8.

There is one exception to the Steps as listed. Position #22 is set into the Sweetwater berm. As a result, this position is not affected by the buildings but will be affected by both the freeway noise reduction plus the Sweetwater Road berm noise reduction. Steps 10 to 16 are the same except the Sweetwater berm effect replaces the buildings.

The balconies represent a different set of barrier considerations from the buildings alone. Each balcony space has only one open face. Therefore, the space is semi-enclosed. The program cannot address the roof of the balcony so the calculations assume an open roof. The space is modeled with a back and two side paneled, one open side and an open roof. Otherwise, Steps 10 through 16 are the same procedure.

### 3.0

#### GROUND LEVEL CALCULATIONS NO BUILDINGS

The results of Steps 1 through 9 are given in Tables 1 and 2 on the following pages.

TABLE 1

SITE CALCULATIONS FOR FREEWAY AND SWEETWATER  
ROAD WITHOUT BUILDINGS IN PLACE  
STEPS 1 TO 6 FOR POINTS G1 TO G21 (1)

| NO. | FREEWAY ALONE       |                       |                    | SWEETWATER ALONE    |                       |                    |
|-----|---------------------|-----------------------|--------------------|---------------------|-----------------------|--------------------|
|     | NO WALL<br>(Step 1) | WITH WALL<br>(Step 3) | CHANGE<br>(Step 5) | NO BERM<br>(Step 2) | WITH BERM<br>(Step 4) | CHANGE<br>(Step 6) |
| G1  | 70.4                | 60.8                  | 9.6                | 64.0                | 60.4                  | 7.2                |
| G2  | 71.3                | 61.0                  | 10.3               | 63.2                | 59.2                  | 8.7                |
| G3  | 71.6                | 61.2                  | 10.4               | 62.8                | 59.1                  | 8.8                |
| G4  | 71.4                | 61.2                  | 10.2               | 62.0                | 58.5                  | 8.8                |
| G5  | 70.9                | 61.2                  | 9.7                | 61.3                | 58.0                  | 8.5                |
| G6  | 70.4                | 61.1                  | 9.3                | 60.4                | 57.4                  | 8.2                |
| G7  | 70.1                | 61.1                  | 9.0                | 60.1                | 57.3                  | 7.9                |
| G8  | 72.0                | 60.6                  | 11.1               | 66.5                | 57.7                  | 9.7                |
| G9  | 71.4                | 60.8                  | 10.6               | 64.8                | 58.1                  | 9.6                |
| G10 | 71.3                | 60.9                  | 10.4               | 63.7                | 58.1                  | 9.3                |
| G11 | 71.2                | 61.0                  | 10.2               | 63.1                | 58.1                  | 9.0                |
| G12 | 70.9                | 61.0                  | 9.9                | 62.1                | 57.8                  | 8.7                |
| G13 | 70.3                | 60.9                  | 9.4                | 61.0                | 57.3                  | 8.4                |
| G14 | 70.0                | 60.9                  | 9.1                | 60.6                | 57.3                  | 8.0                |
| G15 | 69.4                | 60.7                  | 8.7                | 59.5                | 56.7                  | 7.7                |
| G16 | 69.5                | 60.8                  | 8.7                | 59.5                | 56.7                  | 7.7                |
| G17 | 69.5                | 60.9                  | 8.6                | 59.3                | 56.8                  | 7.6                |
| G18 | 68.6                | 60.1                  | 8.5                | 57.9                | 55.5                  | 7.6                |
| G19 | 68.5                | 60.1                  | 8.4                | 58.0                | 55.5                  | 7.5                |
| G20 | 68.5                | 60.0                  | 8.5                | 58.0                | 55.5                  | 7.6                |
| G21 | 68.7                | 58.7                  | 10.0               | 58.5                | 54.8                  | 8.9                |
| RUN | 9GM                 | 10GM                  |                    | 11G                 | 12GM                  |                    |

(1) The actual calculations are contained in Appendices 1, 2, 3 and 4

TABLE 2

SITE CALCULATIONS FOR FREEWAY AND SWEETWATER  
ROAD WITHOUT BUILDINGS IN PLACE  
STEPS 7 TO 9 FOR POINTS G1 TO G21

| NO. | FREEWAY PLUS SWEETWATER         |                                   |                           |
|-----|---------------------------------|-----------------------------------|---------------------------|
|     | <u>NO WALL/BERM</u><br>(Step 7) | <u>WITH WALL/BERM</u><br>(Step 8) | <u>CHANGE</u><br>(Step 9) |
| G1  | 70.8                            | 63.6                              | 7.2                       |
| G2  | 71.9                            | 63.2                              | 8.7                       |
| G3  | 72.1                            | 63.3                              | 8.8                       |
| G4  | 71.9                            | 63.1                              | 8.8                       |
| G5  | 71.4                            | 62.9                              | 8.5                       |
| G6  | 70.8                            | 62.6                              | 8.2                       |
| G7  | 70.5                            | 62.6                              | 7.9                       |
| G8  | 73.1                            | 63.4                              | 9.7                       |
| G9  | 72.3                            | 62.7                              | 9.6                       |
| G10 | 72.0                            | 62.7                              | 9.3                       |
| G11 | 71.8                            | 62.8                              | 9.0                       |
| G12 | 71.4                            | 62.7                              | 8.7                       |
| G13 | 70.8                            | 62.4                              | 8.4                       |
| G14 | 70.5                            | 62.5                              | 8.0                       |
| G15 | 69.8                            | 62.1                              | 7.7                       |
| G16 | 69.9                            | 62.2                              | 7.7                       |
| G17 | 69.9                            | 62.3                              | 7.6                       |
| G18 | 69.0                            | 61.4                              | 7.5                       |
| G19 | 68.9                            | 61.4                              | 7.6                       |
| G20 | 68.9                            | 61.3                              | 8.9                       |
| G21 | 69.1                            | 60.2                              | 5.7                       |

## 4.0

GROUND LEVEL CALCULATIONS BUILDINGS ALONE

The next series of Steps is for the buildings alone without the freeway and Sweetwater barriers. The results are given in Tables 3 and 4.

TABLE 3

SITE CALCULATIONS FOR FREEWAY AND SWEETWATER  
ROAD WITH BUILDINGS IN PLACE  
STEPS 1 TO 6 FOR POINTS G1 TO G21

| <u>NO.</u> | <u>FREEWAY ALONE</u>       |                               |                            | <u>SWEETWATER ALONE</u>    |                               |                            |
|------------|----------------------------|-------------------------------|----------------------------|----------------------------|-------------------------------|----------------------------|
|            | <u>NO BLDG</u><br>(Step 1) | <u>WITH BLDG</u><br>(Step 10) | <u>CHANGE</u><br>(Step 13) | <u>NO BLDG</u><br>(Step 2) | <u>WITH BLDG</u><br>(Step 11) | <u>CHANGE</u><br>(Step 14) |
| G1         | 70.4                       | 63.6                          | 6.8                        | 64.0                       | 56.1                          | 7.9                        |
| G2         | 71.3                       | 64.0                          | 7.3                        | 63.2                       | 55.9                          | 7.2                        |
| G3         | 71.6                       | 65.1                          | 6.5                        | 62.8                       | 56.4                          | 6.4                        |
| G4         | 71.4                       | 66.1                          | 5.3                        | 62.0                       | 56.2                          | 5.8                        |
| G5         | 70.9                       | 66.0                          | 4.9                        | 61.3                       | 55.7                          | 5.6                        |
| G6         | 70.4                       | 65.6                          | 4.8                        | 60.4                       | 55.0                          | 5.4                        |
| G7         | 70.1                       | 67.5                          | 2.6                        | 60.1                       | 54.8                          | 5.3                        |
| G8         | 72.0                       | 71.8                          | 0.2                        | 66.5                       | 66.3                          | 0.2                        |
| G9         | 71.4                       | 70.6                          | 0.8                        | 64.8                       | 64.4                          | 0.4                        |
| G10        | 71.3                       | 69.7                          | 1.6                        | 63.7                       | 53.0                          | 0.7                        |
| G11        | 71.2                       | 69.3                          | 1.9                        | 63.1                       | 62.3                          | 0.8                        |
| G12        | 70.9                       | 68.6                          | 1.2                        | 62.1                       | 61.2                          | 0.9                        |
| G13        | 70.3                       | 67.9                          | 2.4                        | 61.0                       | 60.0                          | 1.0                        |
| G14        | 70.0                       | 67.6                          | 2.4                        | 60.6                       | 59.5                          | 1.1                        |
| G15        | 69.4                       | 66.9                          | 2.5                        | 59.5                       | 58.5                          | 1.0                        |
| G16        | 69.5                       | 67.5                          | 2.0                        | 59.5                       | 58.6                          | 0.9                        |
| G17        | 69.5                       | 67.3                          | 2.2                        | 59.3                       | 56.7                          | 2.6                        |
| G18        | 68.6                       | 48.5                          | 20.1                       | 57.9                       | 40.3                          | 17.7                       |
| G19        | 68.5                       | 48.5                          | 20.0                       | 58.0                       | 40.3                          | 17.7                       |
| G20        | 68.5                       | 48.5                          | 20.0                       | 58.0                       | 40.3                          | 17.7                       |
| G21        | 68.7                       | 66.6                          | 2.1                        | 58.5                       | 57.7                          | 0.8                        |
| RUN        | 9GM                        | 13G                           |                            | 11G                        | 14G                           |                            |

- (1) The actual additional calculations are contained in Appendices 5 and 6.

TABLE 4

SITE CALCULATIONS FOR FREEWAY AND SWEETWATER  
ROAD WITHOUT BUILDINGS IN PLACE  
STEPS 7 TO 9 FOR POINTS G1 TO G21

| NO. | FREEWAY PLUS SWEETWATER         |                                   |                           |
|-----|---------------------------------|-----------------------------------|---------------------------|
|     | <u>NO WALL/BERM</u><br>(Step 7) | <u>WITH WALL/BERM</u><br>(Step 8) | <u>CHANGE</u><br>(Step 9) |
| G1  | 70.8                            | 64.6                              | 6.5                       |
| G2  | 71.9                            | 64.6                              | 7.3                       |
| G3  | 72.1                            | 65.6                              | 6.5                       |
| G4  | 71.9                            | 66.5                              | 5.4                       |
| G5  | 71.4                            | 66.4                              | 5.0                       |
| G6  | 70.8                            | 66.0                              | 4.8                       |
| G7  | 70.5                            | 67.7                              | 2.8                       |
| G8  | 73.1                            | 72.9                              | 0.2                       |
| G9  | 72.3                            | 71.5                              | 0.8                       |
| G10 | 72.0                            | 70.5                              | 1.5                       |
| G11 | 71.8                            | 70.1                              | 1.7                       |
| G12 | 71.4                            | 69.3                              | 2.1                       |
| G13 | 70.8                            | 68.6                              | 2.2                       |
| G14 | 70.5                            | 68.2                              | 2.3                       |
| G15 | 69.8                            | 67.4                              | 2.4                       |
| G16 | 69.9                            | 68.0                              | 1.9                       |
| G17 | 69.9                            | 67.7                              | 2.2                       |
| G18 | 69.0                            | 49.1                              | 19.9                      |
| G19 | 68.9                            | 49.9                              | 19.0                      |
| G20 | 68.9                            | 49.1                              | 19.8                      |
| G21 | 69.1                            | 67.1                              | 0.2                       |



# 5.0 GROUND LEVEL COMBINED BUILDING AND WALL EFFECTS

Step 15 subtracts the Changed results (Step 15) in Table 4 from the combined freeway and Sweetwater Road results (Step 8) in Table 2. The results are given in Table 5.

TABLE 5

## SITE CALCULATIONS FOR FREEWAY AND SWEETWATER ROAD FOR WALLS AND BUILDINGS FOR POINTS G1 TO G21 (1)

| NO. | FREEWAY PLUS SWEETWATER WALLS PLUS BUILDINGS |                          |                       |
|-----|--|--------------------------|-----------------------|
|     | <u>WALLS ONLY LEVEL</u>                      | <u>ADDED BLDG CHANGE</u> | <u>COMBINED LEVEL</u> |
| G1  | 63.6   | - 6.5                    | 57.1*                 |
| G2  | 63.2   | - 7.3                    | 55.9*                 |
| G3  | 63.3   | - 6.5                    | 56.8*                 |
| G4  | 63.1   | - 5.4                    | 57.7*                 |
| G5  | 62.9   | - 5.0                    | 57.9*                 |
| G6  | 62.6   | - 4.8                    | 57.8*                 |
| G7  | 62.6   | - 2.8                    | 58.8*                 |
| G8  | 63.4   | - 0.2                    | 63.2                  |
| G9  | 62.7   | - 0.8                    | 61.9                  |
| G10 | 62.7   | - 1.5                    | 60.2                  |
| G11 | 62.8   | - 1.7                    | 61.1                  |
| G12 | 62.7   | - 2.1                    | 60.6                  |
| G13 | 62.4   | - 2.2                    | 60.2                  |
| G14 | 62.5   | - 2.3                    | 60.2                  |
| G15 | 62.1   | - 2.4                    | 59.7                  |
| G16 | 62.2   | -1.9                     | 60.3                  |
| G17 | 62.3   | - 2.2                    | 60.1                  |
| G18 | 61.4   | -19.9                    | 41.5*                 |
| G19 | 61.4   | -19.0                    | 41.4*                 |
| G20 | 61.3   | -19.8                    | 41.5*                 |
| G21 | 60.2   | - 2.0                    | 58.2*                 |

(1). The asterisk indicates a patio or recreational area.

All the patios are less than 60 dBA CNEL as required. The other locations are front yards.

# 6.0 GROUND LEVEL LOCATION #22

Location #22 is not affected by the buildings but is affected by being set into the berm. The procedure is the same as before except the building calculation is replaced by a calculation of the effect of the berm on the freeway noise at Location #22. The results are given in Table 6. The calculations are in the various Appendices previously mentioned with the exception of Run 15GM which is contained in Appendix 7.

TABLE 6

LOCATION #22 CALCULATIONS (1)

| <u>CONDITION</u>                      | <u>CNEL</u> | <u>RUN</u> |
|---------------------------------------|-------------|------------|
| Freeway Alone Without Walls and Berms | 73.1        | 9GM        |
| Freeway Alone With Freeway Wall only  | 60.6        | 10GM       |
| Sweetwater Alone Without Berm         | 65.3        | 11G        |
| Sweetwater Alone With Berm            | 53.8        | 12GM       |
| Freeway Alone with Berm Only          | 58.2        | 15GM       |

- (1) Reduction of freeway by berm =  $73.1 - 58.2 = 14.9$   
 Freeway adjusted for Freeway Wall and berm =  $60.6 - 14.9 = 46.4$   
 Final combined adjusted freeway and Sweetwater =  $46.4 + 53.8$   
 (Log addition) = 54.5.

7.0 BALCONY CALCULATIONS NO BUILDINGS

The second floor calculations follow the same steps as for the ground except there are fewer locations. They have a corresponding number to the first floor calculation location but with a separate identifier. The vacant site calculation results are given in Tables 7 and 8.

TABLE 7

SITE CALCULATIONS FOR FREEWAY AND SWEETWATER  
ROAD WITHOUT BUILDINGS IN PLACE  
STEPS 1 TO 6 FOR POINTS B8 TO B17 (1)

| <u>NO.</u> | <u>FREEWAY ALONE</u>       |                              |                           | <u>SWEETWATER ALONE</u>    |                              |                           |
|------------|----------------------------|------------------------------|---------------------------|----------------------------|------------------------------|---------------------------|
|            | <u>NO WALL</u><br>(Step 1) | <u>WITH WALL</u><br>(Step 3) | <u>CHANGE</u><br>(Step 5) | <u>NO BERM</u><br>(Step 2) | <u>WITH BERM</u><br>(Step 4) | <u>CHANGE</u><br>(Step 6) |
| B8         | 72.7                       | 62.6                         | 10.1                      | 66.5                       | 63.7                         | 2.8                       |
| B9         | 72.1                       | 62.6                         | 9.5                       | 64.9                       | 60.5                         | 4.4                       |
| B10        | 71.6                       | 62.6                         | 9.0                       | 63.7                       | 59.7                         | 4.0                       |
| B11        | 71.3                       | 62.6                         | 8.7                       | 63.2                       | 59.5                         | 3.7                       |
| B12        | 70.9                       | 62.4                         | 8.5                       | 62.2                       | 59.0                         | 3.2                       |
| B13        | 70.3                       | 62.1                         | 8.2                       | 61.2                       | 58.3                         | 2.9                       |
| B14        | 70.1                       | 62.1                         | 8.0                       | 60.8                       | 58.2                         | 2.6                       |
| B15        | 69.3                       | 61.5                         | 7.8                       | 59.5                       | 57.3                         | 2.2                       |
| B16        | 69.3                       | 61.5                         | 7.6                       | 59.2                       | 57.6                         | 2.6                       |
| B17        | 69.3                       | 61.6                         | 7.7                       | 59.1                       | 57.7                         | 2.4                       |
| RUN        | 15S                        | 16S                          |                           | 17S                        | 18S                          |                           |

- (1) The actual calculations are contained in Appendices 8, 9, 10 and 11.

TABLE 8

SITE CALCULATIONS FOR FREEWAY AND SWEETWATER  
ROAD WITHOUT BUILDINGS IN PLACE  
STEPS 7 TO 9 FOR POINTS B8 TO B17

| NO. | FREEWAY PLUS SWEETWATER  |                            |                    |
|-----|--------------------------|----------------------------|--------------------|
|     | NO WALL/BERM<br>(Step 7) | WITH WALL/BERM<br>(Step 8) | CHANGE<br>(Step 9) |
| B8  | 73.6                     | 66.2                       | 7.4                |
| B99 | 72.9                     | 64.7                       | 8.2                |
| B10 | 72.3                     | 64.4                       | 7.9                |
| B11 | 71.9                     | 64.3                       | 7.6                |
| B12 | 71.4                     | 63.7                       | 7.7                |
| B13 | 70.8                     | 63.6                       | 7.2                |
| B14 | 70.6                     | 63.5                       | 7.1                |
| B15 | 69.8                     | 63.0                       | 6.8                |
| B16 | 69.9                     | 63.1                       | 6.8                |
| B17 | 69.9                     | 63.1                       | 6.8                |

8.0

BALCONY CALCULATIONS BUILDINGS ALONE

The balcony calculations were based on two different railing models. Balconies B8 to B14 will have 42 inch high, solid railings. Balconies B15, B16 and B17 will have 60 inch high, solid railings. The results are given in Tables 9 and 10.

TABLE 9

SITE CALCULATIONS FOR FREEWAY AND SWEETWATER  
ROAD WITH BUILDINGS IN PLACE  
STEPS 1 TO 6 FOR POINTS B8 TO B17 (1)

| NO. | FREEWAY ALONE       |                        |                     | SWEETWATER ALONE    |                        |                     |
|-----|---------------------|------------------------|---------------------|---------------------|------------------------|---------------------|
|     | NO BLDG<br>(Step 1) | WITH BLDG<br>(Step 10) | CHANGE<br>(Step 13) | NO BLDG<br>(Step 2) | WITH BLDG<br>(Step 11) | CHANGE<br>(Step 14) |
| B8  | 72.1                | 66.2                   | 6.5                 | 66.5                | 59.6                   | 6.9                 |
| B9  | 72.1                | 65.8                   | 6.3                 | 64.9                | 58.1                   | 6.8                 |
| B10 | 71.6                | 62.8                   | 8.8                 | 63.7                | 56.0                   | 7.7                 |
| B11 | 71.3                | 63.2                   | 8.1                 | 63.2                | 55.4                   | 7.8                 |
| B12 | 70.9                | 66.9                   | 4.0                 | 62.2                | 59.1                   | 3.1                 |
| B13 | 70.3                | 62.6                   | 7.7                 | 61.2                | 54.3                   | 6.9                 |
| B14 | 70.1                | 66.0                   | 4.1                 | 60.8                | 58.0                   | 2.8                 |
| B15 | 69.3                | 63.9                   | 5.4                 | 59.5                | 55.4                   | 4.1                 |
| B16 | 69.3                | 65.6                   | 3.7                 | 59.2                | 55.2                   | 4.0                 |
| B17 | 69.3                | 64.8                   | 4.5                 | 59.1                | 55.6                   | 3.5                 |
| RUN | 15S                 | 23SA<br>26SB           |                     | 17S                 | 24SA<br>25SB           |                     |

(1) The actual Additional calculations are contained in Appendices 12, 13, 14 and 15.

TABLE 10

SITE CALCULATIONS FOR FREEWAY AND SWEETWATER  
ROAD WITH BUILDINGS IN PLACE  
STEPS 7 TO 9 FOR POINTS B8 TO B17

| NO. | FREEWAY PLUS SWEETWATER         |                                   |                           |
|-----|---------------------------------|-----------------------------------|---------------------------|
|     | <u>NO WALL/BERM</u><br>(Step 7) | <u>WITH WALL/BERM</u><br>(Step 8) | <u>CHANGE</u><br>(Step 9) |
| B8  | 73.6                            | 67.1                              | 6.5                       |
| B9  | 72.9                            | 66.5                              | 6.4                       |
| B10 | 72.3                            | 63.5                              | 8.8                       |
| B11 | 71.9                            | 63.8                              | 8.1                       |
| B12 | 71.4                            | 67.6                              | 4.8                       |
| B13 | 70.8                            | 63.2                              | 7.6                       |
| B14 | 70.6                            | 66.6                              | 4.0                       |
| B15 | 69.8                            | 64.5                              | 5.3                       |
| B16 | 69.9                            | 66.0                              | 3.9                       |
| B17 | 69.9                            | 65.3                              | 4.6                       |

9.0 BALCONY BUILDING AND WALL EFFECTS

Table 10 provides the amount of noise reduction to be added to the noise level from Step 10 of Table 9 for the freeway and Sweetwater barriers. The addition is given in Table 11.

TABLE 11

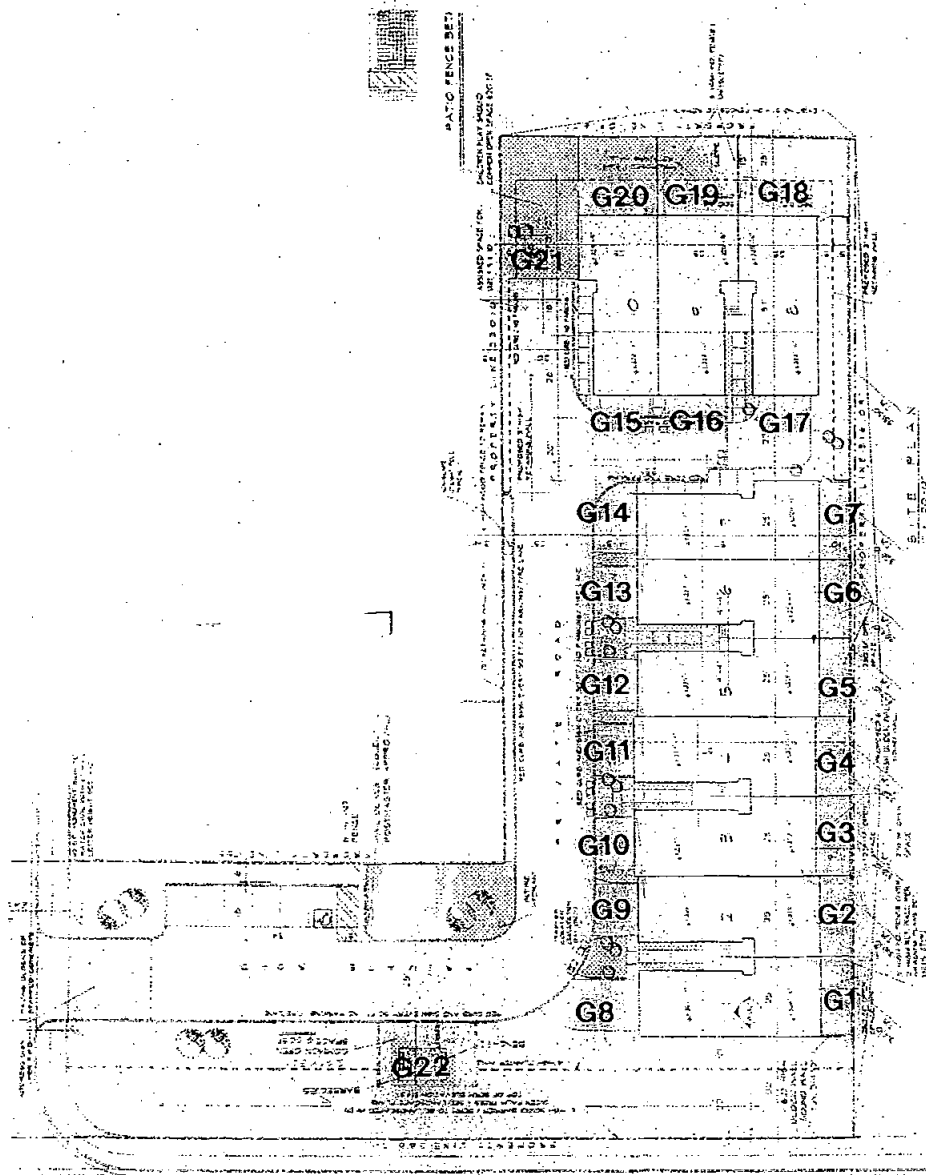
SITE CALCULATIONS FOR FREEWAY AND SWEETWATER  
ROAD FOR WALLS AND BUILDINGS  
FOR POINTS B8 TO B17 (1)

| NO. | FREEWAY PLUS SWEETWATER WALLS PLUS BUILDINGS |                          |                       |
|-----|--|--------------------------|-----------------------|
|     | <u>WALLS ONLY LEVEL</u>                      | <u>ADDED BLDG CHANGE</u> | <u>COMBINED LEVEL</u> |
| B8  | 66.2   | - 6.5                    | 59.7                  |
| B9  | 64.7   | - 6.4                    | 58.3                  |
| B10 | 64.4   | - 8.8                    | 55.4                  |
| B11 | 64.3   | - 7.1                    | 56.2                  |
| B12 | 63.7   | - 4.8                    | 57.9                  |
| B13 | 63.6   | - 7.6                    | 56.0                  |
| B14 | 63.5   | - 4.0                    | 59.5                  |
| B15 | 63.0   | - 5.3                    | 56.7                  |
| B16 | 63.1   | - 3.9                    | 59.2                  |
| B17 | 63.1   | - 4.6                    | 58.5                  |

(1) Patios or recreational area.

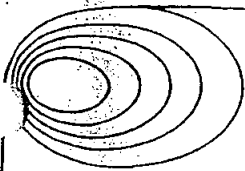
All balconies comply with the requirement of 60 dBA CNEL.

11



SCALE 1" = 60'

SCALE 1" = 60'



# **GORDON BRICKEN & ASSOCIATES**

**ACOUSTICAL and ENERGY ENGINEERS**

## **A P P E N D I X      1**

**RUN 9GM**

1621 East Seventeenth Street, Suite K  
Phone (714) 835-0249

Santa Ana, California 92705-8518  
FAX (714) 835-1957

\* \* SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) \* \*

INPUT DATA FILE : HOSS9GM  
 BARRIER COST FILE : CALIFS.DTA  
 DATE : 08-01-2006

FUTURE LDN/GRND LEVEL/VACANT/SITE/FW NO WALLS OR BERMS L22M

=====

TRAFFIC DATA

-----

| LANE NO. | AUTO |     | MEDIUM TRKS |     | HEAVY TRKS |     | DESCRIPTION      |
|----------|------|-----|-------------|-----|------------|-----|------------------|
|          | VPH  | MPH | VPH         | MPH | VPH        | MPH |                  |
| 1        | 8096 | 65  | 239         | 65  | 273        | 65  | SR125 NORTHBOUND |
| 2        | 8096 | 65  | 239         | 65  | 273        | 65  | SR125 SOUTHBOUND |

=====

LANE DATA

-----

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 60.0  | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | 60.0  | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | 60.0  | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | 60.0  | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | 60.0  | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | 60.0  | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | 60.0  | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | 60.0  | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | 60.0  | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | 60.0  | 328.0 | 157                 |
| 2        | 1        | NO         | -500.0 | -60.0 | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | -60.0 | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | -60.0 | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | -60.0 | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | -60.0 | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | -60.0 | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | -60.0 | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | -60.0 | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | -60.0 | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | -60.0 | 328.0 | 157                 |
|          |          |            | 934.0  | -60.0 | 328.0 | 157+40              |

=====

BARRIER DATA

-----

Barrier No. 1 Description: SWEETWATER MHP SOUTH WALL  
 Type (2) MASONRY  
 Right Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X | Y | GROUND (Z0) | TOP (Z) | BARRIER HEIGHTS AT ENDS |
|------|---|---|-------------|---------|-------------------------|
|------|---|---|-------------|---------|-------------------------|



|   |        |       |       |       |         |   |   |
|---|--------|-------|-------|-------|---------|---|---|
| 1 | -500.0 | 226.0 | 304.0 | 310.0 | *153    | * | 6 |
| 2 | 0.0    | 226.0 | 304.0 | 310.0 | *154+40 | * | 6 |
| 3 | 36.0   | 226.0 | 304.0 | 310.0 | *154+50 | * | 6 |
| 4 | 169.0  | 226.0 | 308.0 | 314.0 | *155    | * | 6 |
| 5 | 312.0  | 226.0 | 308.0 | 314.0 | *SITE   | * | 6 |
|   | 334.0  | 226.0 | 308.0 | 314.0 | *155+40 | * | 6 |

Barrier No. 2 Description: SWEETWATER WALL NORTH OF SITE  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 623.0 | 243.0 | 308.0          | 314.0      | *156+40 * 6                |
| 2    | 809.0 | 252.0 | 308.0          | 314.0      | *157 * 6                   |
|      | 934.0 | 252.0 | 308.0          | 314.0      | *157+40 * 6                |

#### RECEIVER DATA

| REC.<br>NO. | X     | Y     | Z     | DNL PEOPLE | ID       |
|-------------|-------|-------|-------|------------|----------|
| 1           | 312.0 | 274.0 | 312.6 | 67 500     | 1 REAR   |
| 2           | 312.0 | 300.0 | 314.6 | 67 500     | 2 REAR   |
| 3           | 312.0 | 314.0 | 316.6 | 67 500     | 3 REAR   |
| 4           | 312.0 | 338.0 | 318.6 | 67 500     | 4 REAR   |
| 5           | 312.0 | 364.0 | 320.6 | 67 500     | 5 REAR   |
| 6           | 312.0 | 396.0 | 322.6 | 67 500     | 6 REAR   |
| 7           | 312.0 | 412.0 | 324.6 | 67 500     | 7 REAR   |
| 8           | 382.0 | 274.0 | 312.1 | 67 500     | 8 FRONT  |
| 9           | 382.0 | 300.0 | 314.1 | 67 500     | 9 FRONT  |
| 10          | 382.0 | 324.0 | 316.1 | 67 500     | 10 FRONT |
| 11          | 382.0 | 338.0 | 318.1 | 67 500     | 11 FRONT |
| 12          | 382.0 | 364.0 | 320.1 | 67 500     | 12 FRONT |
| 13          | 382.0 | 396.0 | 322.1 | 67 500     | 13 FRONT |
| 14          | 382.0 | 412.0 | 324.1 | 67 500     | 14 FRONT |
| 15          | 376.0 | 452.0 | 327.0 | 67 500     | 15 FRONT |
| 16          | 356.0 | 452.0 | 327.5 | 67 500     | 16 FRONT |
| 17          | 329.0 | 452.0 | 328.0 | 67 500     | 17 FRONT |
| 18          | 329.0 | 516.0 | 330.0 | 67 500     | 18 REAR  |
| 19          | 356.0 | 516.0 | 329.5 | 67 500     | 19 REAR  |
| 20          | 376.0 | 516.0 | 329.0 | 67 500     | 20 REAR  |
| 21          | 407.0 | 479.0 | 313.0 | 67 500     | REC1     |
| 22          | 429.0 | 252.0 | 312.0 | 67 500     | REC2     |

#### DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

#### K - CONSTANTS

ALL LANE RECEIVER/PAIRS = -4.7 DBA

## TITLE:

FUTURE LDN/GRND LEVEL/VACANT/SITE/FW NO WALLS OR BERMS L22M

## EFFECTIVENESS / COST RATIOS

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7      |
|------------|---|-----|---|---|---|---|---|--------|
| 1          | - | 0.* |   |   |   |   |   | 153    |
| 2          | - | 0.* |   |   |   |   |   | 154+40 |
| 3          | - | 0.* |   |   |   |   |   | 154+50 |
| 4          | - | 0.* |   |   |   |   |   | 155    |
| 5          | - | 0.* |   |   |   |   |   | SITE   |
| 6          | - | 0.* |   |   |   |   |   | 156+40 |
| 7          | - | 0.* |   |   |   |   |   | 157    |

## BARRIER DATA

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7 | BAR<br>ID | LENGTH | TYPE    |
|------------|---|-----|---|---|---|---|---|---|-----------|--------|---------|
| 1          | - | 6.* |   |   |   |   |   |   | 153       | 500.0  | MASONRY |
| 2          | - | 6.* |   |   |   |   |   |   | 154+40    | 36.0   | MASONRY |
| 3          | - | 6.* |   |   |   |   |   |   | 154+50    | 133.1  | MASONRY |
| 4          | - | 6.* |   |   |   |   |   |   | 155       | 143.0  | MASONRY |
| 5          | - | 6.* |   |   |   |   |   |   | SITE      | 22.0   | MASONRY |
| 6          | - | 6.* |   |   |   |   |   |   | 156+40    | 186.2  | MASONRY |
| 7          | - | 6.* |   |   |   |   |   |   | 157       | 125.0  | MASONRY |

| REC | REC ID   | DNL | PEOPLE | LEQ (CAL) |
|-----|----------|-----|--------|-----------|
| 1   | 1 REAR   | 67. | 500.   | 70.4      |
| 2   | 2 REAR   | 67. | 500.   | 71.3      |
| 3   | 3 REAR   | 67. | 500.   | 71.6      |
| 4   | 4 REAR   | 67. | 500.   | 71.4      |
| 5   | 5 REAR   | 67. | 500.   | 70.9      |
| 6   | 6 REAR   | 67. | 500.   | 70.4      |
| 7   | 7 REAR   | 67. | 500.   | 70.1      |
| 8   | 8 FRONT  | 67. | 500.   | 72.0      |
| 9   | 9 FRONT  | 67. | 500.   | 71.4      |
| 10  | 10 FRONT | 67. | 500.   | 71.3      |
| 11  | 11 FRONT | 67. | 500.   | 71.2      |
| 12  | 12 FRONT | 67. | 500.   | 70.9      |
| 13  | 13 FRONT | 67. | 500.   | 70.3      |
| 14  | 14 FRONT | 67. | 500.   | 70.0      |
| 15  | 15 FRONT | 67. | 500.   | 69.4      |
| 16  | 16 FRONT | 67. | 500.   | 69.5      |
| 17  | 17 FRONT | 67. | 500.   | 69.5      |

|    |         |     |      |      |
|----|---------|-----|------|------|
| 18 | 18 REAR | 67. | 500. | 68.6 |
| 19 | 19 REAR | 67. | 500. | 68.5 |
| 20 | 20 REAR | 67. | 500. | 68.5 |
| 21 | REC1    | 67. | 500. | 68.7 |
| 22 | REC2    | 67. | 500. | 73.1 |

-----

| BARRIER TYPE   | COST   |
|----------------|--------|
| -----          |        |
| BERM           | 0.     |
| MASONRY        | 60242. |
| MASONRY/JERSEY | 0.     |
| CONCRETE       | 0.     |
| -----          |        |

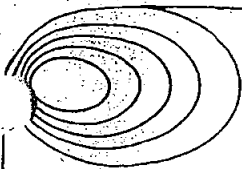
TOTAL COST = \$ 60000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

6. 6. 6. 6. 6. 6. 6.



# **GORDON BRICKEN & ASSOCIATES**

**ACOUSTICAL and ENERGY ENGINEERS**

## **A P P E N D I X      2**

**RUN 10GM**

1621 East Seventeenth Street, Suite K Santa Ana, California 92705-8518  
Phone (714) 835-0249 FAX (714) 835-1957

\* \* SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) \* \*

INPUT DATA FILE : HOSS10GM  
BARRIER COST FILE : CALIFS.DTA  
DATE : 07-27-2006

FUTURE LDN AT 22 POINTS GROUND LEVEL FOR VACANT SITE FW ONLY WITH WALL 22M

=====

TRAFFIC DATA

-----

| LANE NO. | AUTO |     | MEDIUM TRKS |     | HEAVY TRKS |     | DESCRIPTION      |
|----------|------|-----|-------------|-----|------------|-----|------------------|
|          | VPH  | MPH | VPH         | MPH | VPH        | MPH |                  |
| 1        | 8096 | 65  | 239         | 65  | 273        | 65  | SR125 NORTHBOUND |
| 2        | 8096 | 65  | 239         | 65  | 273        | 65  | SR125 SOUTHBOUND |

=====

LANE DATA

-----

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 60.0  | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | 60.0  | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | 60.0  | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | 60.0  | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | 60.0  | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | 60.0  | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | 60.0  | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | 60.0  | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | 60.0  | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | 60.0  | 328.0 | 157                 |
|          |          |            | 934.0  | 60.0  | 328.0 | 157+40              |
| 2        | 1        | NO         | -500.0 | -60.0 | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | -60.0 | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | -60.0 | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | -60.0 | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | -60.0 | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | -60.0 | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | -60.0 | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | -60.0 | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | -60.0 | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | -60.0 | 328.0 | 157                 |
|          |          |            | 934.0  | -60.0 | 328.0 | 157+40              |

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BARRIER DATA

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Barrier No. 1 Description: SR25 WALL  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X | Y | GROUND (Z0) | TOP (Z) | BARRIER HEIGHTS AT ENDS |
|------|---|---|-------------|---------|-------------------------|
|------|---|---|-------------|---------|-------------------------|

|   |        |       |       |       |         |   |   |
|---|--------|-------|-------|-------|---------|---|---|
| 1 | -500.0 | 89.0  | 328.0 | 336.0 | *153    | * | 8 |
| 2 | 0.0    | 89.0  | 328.0 | 336.0 | *154+40 | * | 8 |
| 3 | 36.0   | 89.0  | 328.0 | 336.0 | *154+50 | * | 8 |
| 4 | 169.0  | 89.0  | 328.0 | 336.0 | *155    | * | 8 |
| 5 | 312.0  | 98.0  | 328.0 | 336.0 | *SITE   | * | 8 |
| 6 | 334.0  | 98.0  | 328.0 | 336.0 | *155+40 | * | 8 |
| 7 | 489.0  | 107.0 | 328.0 | 336.0 | *156    | * | 8 |
| 8 | 539.0  | 98.0  | 328.0 | 336.0 | *156+15 | * | 8 |
|   | 623.0  | 98.0  | 328.0 | 336.0 | *156+40 | * | 8 |

Barrier No. 2 Description: SR25 BERM  
Type - (1) BERM  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y    | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|------|----------------|------------|----------------------------|
| 1    | 623.0 | 98.0 | 328.0          | 336.0      | *156+40 * 8                |
| 2    | 809.0 | 98.0 | 328.0          | 336.0      | *157 * 8                   |
|      | 934.0 | 98.0 | 328.0          | 336.0      | *157+40 * 8                |

Barrier No. 3 Description: SWEETWATER MHP SOUTH WALL  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X      | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|--------|-------|----------------|------------|----------------------------|
| 1    | -500.0 | 226.0 | 304.0          | 310.0      | *153 * 6                   |
| 2    | 0.0    | 226.0 | 304.0          | 310.0      | *154+40 * 6                |
| 3    | 36.0   | 226.0 | 304.0          | 310.0      | *154+50 * 6                |
| 4    | 169.0  | 226.0 | 308.0          | 314.0      | *155 * 6                   |
| 5    | 312.0  | 226.0 | 308.0          | 314.0      | *SITE * 6                  |
|      | 334.0  | 226.0 | 308.0          | 314.0      | *155+40 * 6                |

Barrier No. 4 Description: SWEETWATER WALL NORTH OF SITE  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 623.0 | 243.0 | 308.0          | 314.0      | *156+40 * 6                |
| 2    | 809.0 | 252.0 | 308.0          | 314.0      | *157 * 6                   |
|      | 934.0 | 252.0 | 308.0          | 314.0      | *157+40 * 6                |

#### RECEIVER DATA

| REC.<br>NO. | X     | Y     | Z     | DNL | PEOPLE | ID     |
|-------------|-------|-------|-------|-----|--------|--------|
| 1           | 312.0 | 274.0 | 312.6 | 67  | 500    | 1 REAR |
| 2           | 312.0 | 300.0 | 314.6 | 67  | 500    | 2 REAR |

|    |       |       |       |    |     |          |
|----|-------|-------|-------|----|-----|----------|
| 3  | 312.0 | 314.0 | 316.6 | 67 | 500 | 3 REAR   |
| 4  | 312.0 | 338.0 | 318.6 | 67 | 500 | 4 REAR   |
| 5  | 312.0 | 364.0 | 320.6 | 67 | 500 | 5 REAR   |
| 6  | 312.0 | 396.0 | 322.6 | 67 | 500 | 6 REAR   |
| 7  | 312.0 | 412.0 | 324.6 | 67 | 500 | 7 REAR   |
| 8  | 382.0 | 274.0 | 312.1 | 67 | 500 | 8 FRONT  |
| 9  | 382.0 | 300.0 | 314.1 | 67 | 500 | 9 FRONT  |
| 10 | 382.0 | 324.0 | 316.1 | 67 | 500 | 10 FRONT |
| 11 | 382.0 | 338.0 | 318.1 | 67 | 500 | 11 FRONT |
| 12 | 382.0 | 364.0 | 320.1 | 67 | 500 | 12 FRONT |
| 13 | 382.0 | 396.0 | 322.1 | 67 | 500 | 13 FRONT |
| 14 | 382.0 | 412.0 | 324.1 | 67 | 500 | 14 FRONT |
| 15 | 376.0 | 452.0 | 327.0 | 67 | 500 | 15 FRONT |
| 16 | 356.0 | 452.0 | 327.5 | 67 | 500 | 16 FRONT |
| 17 | 329.0 | 452.0 | 328.0 | 67 | 500 | 17 FRONT |
| 18 | 329.0 | 516.0 | 330.0 | 67 | 500 | 18 REAR  |
| 19 | 356.0 | 516.0 | 329.5 | 67 | 500 | 19 REAR  |
| 20 | 376.0 | 516.0 | 329.0 | 67 | 500 | 20 REAR  |
| 21 | 407.0 | 479.0 | 313.0 | 67 | 500 | REC1     |
| 22 | 429.0 | 252.0 | 312.0 | 67 | 500 | REC2 MOD |

# DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

# K - CONSTANTS

ALL LANE RECEIVER/PAIRS = -4.7 DBA

## TITLE:

FUTURE LDN AT 22 POINTS GROUND LEVEL FOR VACANT SITE NW ONLY WITH WALL 22M

## EFFECTIVENESS / COST RATIOS

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7 |        |
|------------|---|-----|---|---|---|---|---|---|--------|
| 1          | - | 0.* |   |   |   |   |   |   | 153    |
| 2          | - | 0.* |   |   |   |   |   |   | 154+40 |
| 3          | - | 0.* |   |   |   |   |   |   | 154+50 |
| 4          | - | 0.* |   |   |   |   |   |   | 155    |
| 5          | - | 0.* |   |   |   |   |   |   | SITE   |
| 6          | - | 0.* |   |   |   |   |   |   | 155+40 |
| 7          | - | 0.* |   |   |   |   |   |   | 156    |
| 8          | - | 0.* |   |   |   |   |   |   | 156+15 |
| 9          | - | 0.* |   |   |   |   |   |   | 156+40 |
| 10         | - | 0.* |   |   |   |   |   |   | 157    |
| 11         | - | 0.* |   |   |   |   |   |   | 153    |
| 12         | - | 0.* |   |   |   |   |   |   | 154+40 |
| 13         | - | 0.* |   |   |   |   |   |   | 154+50 |
| 14         | - | 0.* |   |   |   |   |   |   | 155    |
| 15         | - | 0.* |   |   |   |   |   |   | SITE   |
| 16         | - | 0.* |   |   |   |   |   |   | 156+40 |
| 17         | - | 0.* |   |   |   |   |   |   | 157    |

0 1 2 3 4 5 6 7

1

## BARRIER DATA

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | BARRIER HEIGHTS |  |  |  |  |  |  | BAR<br>ID | LENGTH | TYPE    |
|------------|---|-----|-----------------|--|--|--|--|--|--|-----------|--------|---------|
| 1          | - | 8.* |                 |  |  |  |  |  |  | 153       | 500.0  | MASONRY |
| 2          | - | 8.* |                 |  |  |  |  |  |  | 154+40    | 36.0   | MASONRY |
| 3          | - | 8.* |                 |  |  |  |  |  |  | 154+50    | 133.0  | MASONRY |
| 4          | - | 8.* |                 |  |  |  |  |  |  | 155       | 143.3  | MASONRY |
| 5          | - | 8.* |                 |  |  |  |  |  |  | SITE      | 22.0   | MASONRY |
| 6          | - | 8.* |                 |  |  |  |  |  |  | 155+40    | 155.3  | MASONRY |
| 7          | - | 8.* |                 |  |  |  |  |  |  | 156       | 50.8   | MASONRY |
| 8          | - | 8.* |                 |  |  |  |  |  |  | 156+15    | 84.0   | MASONRY |
| 9          | - | 8.* |                 |  |  |  |  |  |  | 156+40    | 186.0  | BERM    |
| 10         | - | 8.* |                 |  |  |  |  |  |  | 157       | 125.0  | BERM    |
| 11         | - | 6.* |                 |  |  |  |  |  |  | 153       | 500.0  | MASONRY |
| 12         | - | 6.* |                 |  |  |  |  |  |  | 154+40    | 36.0   | MASONRY |
| 13         | - | 6.* |                 |  |  |  |  |  |  | 154+50    | 133.1  | MASONRY |
| 14         | - | 6.* |                 |  |  |  |  |  |  | 155       | 143.0  | MASONRY |
| 15         | - | 6.* |                 |  |  |  |  |  |  | SITE      | 22.0   | MASONRY |



16 - 6.\*  
17 - 6.\*

156+40 186.2 MASONRY  
157 125.0 MASONRY

0 1 2 3 4 5 6 7

| 1  | REC      | REC ID | DNL | PEOPLE | LEQ(CAL) |
|----|----------|--------|-----|--------|----------|
| 1  | 1        | REAR   | 67. | 500.   | 60.8     |
| 2  | 2        | REAR   | 67. | 500.   | 61.0     |
| 3  | 3        | REAR   | 67. | 500.   | 61.2     |
| 4  | 4        | REAR   | 67. | 500.   | 61.2     |
| 5  | 5        | REAR   | 67. | 500.   | 61.2     |
| 6  | 6        | REAR   | 67. | 500.   | 61.1     |
| 7  | 7        | REAR   | 67. | 500.   | 61.1     |
| 8  | 8        | FRONT  | 67. | 500.   | 60.6     |
| 9  | 9        | FRONT  | 67. | 500.   | 60.8     |
| 10 | 10       | FRONT  | 67. | 500.   | 60.9     |
| 11 | 11       | FRONT  | 67. | 500.   | 61.0     |
| 12 | 12       | FRONT  | 67. | 500.   | 61.0     |
| 13 | 13       | FRONT  | 67. | 500.   | 60.9     |
| 14 | 14       | FRONT  | 67. | 500.   | 60.9     |
| 15 | 15       | FRONT  | 67. | 500.   | 60.7     |
| 16 | 16       | FRONT  | 67. | 500.   | 60.8     |
| 17 | 17       | FRONT  | 67. | 500.   | 60.9     |
| 18 | 18       | REAR   | 67. | 500.   | 60.1     |
| 19 | 19       | REAR   | 67. | 500.   | 60.1     |
| 20 | 20       | REAR   | 67. | 500.   | 60.0     |
| 21 | REC1     |        | 67. | 500.   | 58.7     |
| 22 | REC2 MOD |        | 67. | 500.   | 60.6     |

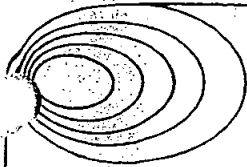
BARRIER TYPE COST

BERM 9019.  
MASONRY 138721.  
MASONRY/JERSEY 0.  
CONCRETE 0.

TOTAL COST = \$ 148000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  
CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION  
8. 8. 8. 8. 8. 8. 8. 8. 8. 6. 6. 6. 6. 6. 6.



# GORDON BRICKEN & ASSOCIATES

ACOUSTICAL and ENERGY ENGINEERS

## A P P E N D I X 3

RUN 11GM

1621 East Seventeenth Street, Suite K  
Phone (714) 835-0249

Santa Ana, California 92705-8518  
FAX (714) 835-1957

\* \* SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) \* \*

INPUT DATA FILE : HOSS11G  
BARRIER COST FILE : CALIFS.DTA  
DATE : 07-19-2006

FUTURE LDN AT 22 POINTS GROUND LEVEL FOR VACANT SITE SWEETWATER NO BERM

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TRAFFIC DATA

-----

| LANE NO. | AUTO VPH | MPH | MEDIUM VPH | TRKS MPH | HEAVY VPH | TRKS MPH | DESCRIPTION |
|----------|----------|-----|------------|----------|-----------|----------|-------------|
| 1        | 1977     | 55  | 95         | 55       | 38        | 55       | SWEETWATER  |

=====

LANE DATA

-----

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 178.0 | 304.0 | 153                 |
|          | 2        | NO         | 0.0    | 178.0 | 304.0 | 154+40              |
|          | 3        | NO         | 36.0   | 178.0 | 304.0 | 154+50              |
|          | 4        | NO         | 169.0  | 178.0 | 308.0 | 155                 |
|          | 5        | NO         | 312.0  | 182.0 | 308.0 | SITE                |
|          | 6        | NO         | 334.0  | 182.0 | 308.0 | 155+40              |
|          | 7        | NO         | 489.0  | 195.0 | 309.0 | 156                 |
|          | 8        | NO         | 539.0  | 195.0 | 309.0 | 156+15              |
|          | 9        | NO         | 623.0  | 195.0 | 309.0 | 156+40              |
|          | 10       | NO         | 809.0  | 204.0 | 309.0 | 157                 |
|          |          |            | 934.0  | 204.0 | 309.0 | 157+40              |

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BARRIER DATA

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Barrier No. 1 Description: SWEETWATER MHP SOUTH WALL  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X      | Y     | GROUND (Z0) | TOP (Z) | BARRIER HEIGHTS AT ENDS |
|------|--------|-------|-------------|---------|-------------------------|
| 1    | -500.0 | 226.0 | 304.0       | 310.0   | *153 * 6                |
| 2    | 0.0    | 226.0 | 304.0       | 310.0   | *154+40 * 6             |
| 3    | 36.0   | 226.0 | 304.0       | 310.0   | *154+50 * 6             |
| 4    | 169.0  | 226.0 | 308.0       | 314.0   | *155 * 6                |
| 5    | 312.0  | 226.0 | 308.0       | 314.0   | *SITE * 6               |
|      | 334.0  | 226.0 | 308.0       | 314.0   | *155+40 * 6             |

-----

Barrier No. 2 Description: SWEETWATER WALL NORTH OF SITE  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|-----|-------|-------|----------------|---------------|----------------------------|
| 1   | 623.0 | 243.0 | 308.0          | 314.0 *156+40 | * 6                        |
| 2   | 809.0 | 252.0 | 308.0          | 314.0 *157    | * 6                        |
|     | 934.0 | 252.0 | 308.0          | 314.0 *157+40 | * 6                        |

# RECEIVER DATA

| REC.<br>NO. | X     | Y     | Z     | DNL | PEOPLE | ID       |
|-------------|-------|-------|-------|-----|--------|----------|
| 1           | 312.0 | 274.0 | 312.6 | 67  | 500    | 1 REAR   |
| 2           | 312.0 | 300.0 | 314.6 | 67  | 500    | 2 REAR   |
| 3           | 312.0 | 314.0 | 316.6 | 67  | 500    | 3 REAR   |
| 4           | 312.0 | 338.0 | 318.6 | 67  | 500    | 4 REAR   |
| 5           | 312.0 | 364.0 | 320.6 | 67  | 500    | 5 REAR   |
| 6           | 312.0 | 396.0 | 322.6 | 67  | 500    | 6 REAR   |
| 7           | 312.0 | 412.0 | 324.6 | 67  | 500    | 7 REAR   |
| 8           | 382.0 | 274.0 | 312.1 | 67  | 500    | 8 FRONT  |
| 9           | 382.0 | 300.0 | 314.1 | 67  | 500    | 9 FRONT  |
| 10          | 382.0 | 324.0 | 316.1 | 67  | 500    | 10 FRONT |
| 11          | 382.0 | 338.0 | 318.1 | 67  | 500    | 11 FRONT |
| 12          | 382.0 | 364.0 | 320.1 | 67  | 500    | 12 FRONT |
| 13          | 382.0 | 396.0 | 322.1 | 67  | 500    | 13 FRONT |
| 14          | 382.0 | 412.0 | 324.1 | 67  | 500    | 14 FRONT |
| 15          | 376.0 | 452.0 | 327.0 | 67  | 500    | 15 FRONT |
| 16          | 356.0 | 452.0 | 327.5 | 67  | 500    | 16 FRONT |
| 17          | 329.0 | 452.0 | 328.0 | 67  | 500    | 17 FRONT |
| 18          | 329.0 | 516.0 | 330.0 | 67  | 500    | 18 REAR  |
| 19          | 356.0 | 516.0 | 329.5 | 67  | 500    | 19 REAR  |
| 20          | 376.0 | 516.0 | 329.0 | 67  | 500    | 20 REAR  |
| 21          | 407.0 | 479.0 | 313.0 | 67  | 500    | REC1     |
| 22          | 429.0 | 302.0 | 328.0 | 67  | 500    | REC2     |

# DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

# K - CONSTANTS

ALL LANE RECEIVER/PAIRS = -4.7 DBA

## TITLE:

FUTURE LDN AT 22 POINTS GROUND LEVEL FOR VACANT SITE SWEETWATER NO BERM

## EFFECTIVENESS / COST RATIOS

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7 |        |
|------------|---|-----|---|---|---|---|---|---|--------|
| 1          | - | 0.* |   |   |   |   |   |   | 153    |
| 2          | - | 0.* |   |   |   |   |   |   | 154+40 |
| 3          | - | 0.* |   |   |   |   |   |   | 154+50 |
| 4          | - | 0.* |   |   |   |   |   |   | 155    |
| 5          | - | 0.* |   |   |   |   |   |   | SITE   |
| 6          | - | 0.* |   |   |   |   |   |   | 156+40 |
| 7          | - | 0.* |   |   |   |   |   |   | 157    |

0 1 2 3 4 5 6 7

## BARRIER DATA

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7 | BAR<br>ID | LENGTH | TYPE    |
|------------|---|-----|---|---|---|---|---|---|-----------|--------|---------|
| 1          | - | 6.* |   |   |   |   |   |   | 153       | 500.0  | MASONRY |
| 2          | - | 6.* |   |   |   |   |   |   | 154+40    | 36.0   | MASONRY |
| 3          | - | 6.* |   |   |   |   |   |   | 154+50    | 133.1  | MASONRY |
| 4          | - | 6.* |   |   |   |   |   |   | 155       | 143.0  | MASONRY |
| 5          | - | 6.* |   |   |   |   |   |   | SITE      | 22.0   | MASONRY |
| 6          | - | 6.* |   |   |   |   |   |   | 156+40    | 186.2  | MASONRY |
| 7          | - | 6.* |   |   |   |   |   |   | 157       | 125.0  | MASONRY |

0 1 2 3 4 5 6 7

1 REC REC ID DNL PEOPLE LEQ(CAL)

|    |    |       |     |      |      |
|----|----|-------|-----|------|------|
| 1  | 1  | REAR  | 67. | 500. | 64.0 |
| 2  | 2  | REAR  | 67. | 500. | 63.2 |
| 3  | 3  | REAR  | 67. | 500. | 62.8 |
| 4  | 4  | REAR  | 67. | 500. | 62.0 |
| 5  | 5  | REAR  | 67. | 500. | 61.3 |
| 6  | 6  | REAR  | 67. | 500. | 60.4 |
| 7  | 7  | REAR  | 67. | 500. | 60.1 |
| 8  | 8  | FRONT | 67. | 500. | 66.5 |
| 9  | 9  | FRONT | 67. | 500. | 64.8 |
| 10 | 10 | FRONT | 67. | 500. | 63.7 |
| 11 | 11 | FRONT | 67. | 500. | 63.1 |
| 12 | 12 | FRONT | 67. | 500. | 62.1 |
| 13 | 13 | FRONT | 67. | 500. | 61.0 |
| 14 | 14 | FRONT | 67. | 500. | 60.6 |
| 15 | 15 | FRONT | 67. | 500. | 59.5 |
| 16 | 16 | FRONT | 67. | 500. | 59.5 |
| 17 | 17 | FRONT | 67. | 500. | 59.3 |

|    |         |     |      |      |
|----|---------|-----|------|------|
| 18 | 18 REAR | 67. | 500. | 57.9 |
| 19 | 19 REAR | 67. | 500. | 58.0 |
| 20 | 20 REAR | 67. | 500. | 58.0 |
| 21 | REC1    | 67. | 500. | 58.5 |
| 22 | REC2    | 67. | 500. | 65.3 |

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| BARRIER TYPE   | COST   |
|----------------|--------|
| BERM           | 0.     |
| MASONRY        | 60242. |
| MASONRY/JERSEY | 0.     |
| CONCRETE       | 0.     |

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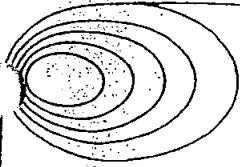
TOTAL COST = \$ 60000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

6. 6. 6. 6. 6. 6. 6.



# GORDON BRICKEN & ASSOCIATES

ACOUSTICAL and ENERGY ENGINEERS

A P P E N D I X 4

RUN 12GM

1621 East Seventeenth Street, Suite K  
Phone (714) 835-0249

Santa Ana, California 92705-8518  
FAX (714) 835-1957

\* \* SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) \* \*

INPUT DATA FILE : HOSS12GM  
BARRIER COST FILE : CALIF\$.DTA  
DATE : 07-27-2006

FUTURE LDN AT 22 PTS GRND LEVEL FOR VACANT SITE SWEETWATER WITH BERM 22M

TRAFFIC DATA

| LANE NO. | AUTO |     | MEDIUM TRKS |     | HEAVY TRKS |     | DESCRIPTION |
|----------|------|-----|-------------|-----|------------|-----|-------------|
|          | VPH  | MPH | VPH         | MPH | VPH        | MPH |             |
| 1        | 1977 | 55  | 95          | 55  | 38         | 55  | SWEETWATER  |

LANE DATA

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 178.0 | 304.0 | 153                 |
|          | 2        | NO         | 0.0    | 178.0 | 304.0 | 154+40              |
|          | 3        | NO         | 36.0   | 178.0 | 304.0 | 154+50              |
|          | 4        | NO         | 169.0  | 178.0 | 308.0 | 155                 |
|          | 5        | NO         | 312.0  | 182.0 | 308.0 | SITE                |
|          | 6        | NO         | 334.0  | 182.0 | 308.0 | 155+10              |
|          | 7        | NO         | 489.0  | 195.0 | 309.0 | 156                 |
|          | 8        | NO         | 539.0  | 195.0 | 309.0 | 156+15              |
|          | 9        | NO         | 623.0  | 195.0 | 309.0 | 156+40              |
|          | 10       | NO         | 809.0  | 204.0 | 309.0 | 157                 |
|          |          |            | 934.0  | 204.0 | 309.0 | 157+40              |

BARRIER DATA

Barrier No. 1 Description: SWEETWATER MHP SOUTH WALL  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X      | Y     | GROUND (Z0) | TOP (Z) | BARRIER HEIGHTS AT ENDS |
|------|--------|-------|-------------|---------|-------------------------|
| 1    | -500.0 | 226.0 | 304.0       | 310.0   | *153 * 6                |
| 2    | 0.0    | 226.0 | 304.0       | 310.0   | *154+40 * 6             |
| 3    | 36.0   | 226.0 | 304.0       | 310.0   | *154+50 * 6             |
| 4    | 169.0  | 226.0 | 308.0       | 314.0   | *155 * 6                |
| 5    | 312.0  | 226.0 | 308.0       | 314.0   | *SITE * 6               |
|      | 334.0  | 226.0 | 308.0       | 314.0   | *155+10 * 6             |

Barrier No. 2 Description: SWEETWATER SITE BERM  
Type - (1) BERM  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0



| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 334.0 | 242.0 | 308.0          | 314.5 *15  | 0 * 7                      |
| 2    | 489.0 | 255.0 | 308.0          | 315.0 *15  | 0 * 7                      |
|      | 539.0 | 255.0 | 308.0          | 315.0 *15  | 15 * 7                     |

Barrier No. 3 Description: SWEETWATER WALL NORTH OF SITE  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 623.0 | 243.0 | 308.0          | 314.0 *15  | 40 * 6                     |
| 2    | 809.0 | 252.0 | 308.0          | 314.0 *15  | 0 * 6                      |
|      | 934.0 | 252.0 | 308.0          | 314.0 *15  | 40 * 6                     |

#### RECEIVER DATA

| REC.<br>NO. | X     | Y     | Z     | DNL | PEOPLE |          |
|-------------|-------|-------|-------|-----|--------|----------|
| 1           | 312.0 | 274.0 | 312.6 | 67  | 500    | 1 REAR   |
| 2           | 312.0 | 300.0 | 314.6 | 67  | 500    | 2 REAR   |
| 3           | 312.0 | 314.0 | 316.6 | 67  | 500    | 3 REAR   |
| 4           | 312.0 | 338.0 | 318.6 | 67  | 500    | 4 REAR   |
| 5           | 312.0 | 364.0 | 320.6 | 67  | 500    | 5 REAR   |
| 6           | 312.0 | 396.0 | 322.6 | 67  | 500    | REAR     |
| 7           | 312.0 | 412.0 | 324.6 | 67  | 500    | REAR     |
| 8           | 382.0 | 274.0 | 312.1 | 67  | 500    | 1 FRONT  |
| 9           | 382.0 | 300.0 | 314.1 | 67  | 500    | 2 FRONT  |
| 10          | 382.0 | 324.0 | 316.1 | 67  | 500    | 10 FRONT |
| 11          | 382.0 | 338.0 | 318.1 | 67  | 500    | 11 FRONT |
| 12          | 382.0 | 364.0 | 320.1 | 67  | 500    | 2 FRONT  |
| 13          | 382.0 | 396.0 | 322.1 | 67  | 500    | 3 FRONT  |
| 14          | 382.0 | 412.0 | 324.1 | 67  | 500    | 4 FRONT  |
| 15          | 376.0 | 452.0 | 327.0 | 67  | 500    | 5 FRONT  |
| 16          | 356.0 | 452.0 | 327.5 | 67  | 500    | 6 FRONT  |
| 17          | 329.0 | 452.0 | 328.0 | 67  | 500    | 7 FRONT  |
| 18          | 329.0 | 516.0 | 330.0 | 67  | 500    | 18 REAR  |
| 19          | 356.0 | 516.0 | 329.5 | 67  | 500    | 9 REAR   |
| 20          | 376.0 | 516.0 | 329.0 | 67  | 500    | 0 REAR   |
| 21          | 407.0 | 479.0 | 313.0 | 67  | 500    | EC1      |
| 22          | 429.0 | 252.0 | 312.0 | 67  | 500    | EC2      |

#### DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

#### K - CONSTANTS

ALL LANE RECEIVER/PAIRS = -4.7 DBA

|    |      |       |     |      |      |
|----|------|-------|-----|------|------|
| 12 | 12   | FRONT | 67. | 500. | 57.8 |
| 13 | 13   | FRONT | 67. | 500. | 57.3 |
| 14 | 14   | FRONT | 67. | 500. | 57.3 |
| 15 | 15   | FRONT | 67. | 500. | 56.7 |
| 16 | 16   | FRONT | 67. | 500. | 56.7 |
| 17 | 17   | FRONT | 67. | 500. | 56.8 |
| 18 | 18   | REAR  | 67. | 500. | 55.5 |
| 19 | 19   | REAR  | 67. | 500. | 55.5 |
| 20 | 20   | REAR  | 67. | 500. | 55.5 |
| 21 | REC1 |       | 67. | 500. | 54.8 |
| 22 | REC2 |       | 67. | 500. | 53.8 |

| BARRIER TYPE | COST |
|--------------|------|
|--------------|------|

|                |        |
|----------------|--------|
| BERM           | 4739.  |
| MASONRY        | 60242. |
| MASONRY/JERSEY | 0.     |
| CONCRETE       | 0.     |

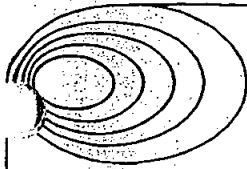
TOTAL COST = \$ 65000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

6. 6. 6. 6. 7. 7. 6. 6.



# **GORDON BRICKEN & ASSOCIATES**

**ACOUSTICAL and ENERGY ENGINEERS**

## **A P P E N D I X      4**

**RUN 12GM**

1621 East Seventeenth Street, Suite K  
Phone (714) 835-0249

Santa Ana, California 92705-8518  
FAX (714) 835-1957

\* \* SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) \* \*

INPUT DATA FILE : HOSS12GM  
 BARRIER COST FILE : CALIF\$.DTA  
 DATE : 07-27-2006

FUTURE LDN AT 22 PTS GRND LEVEL FOR VACANT SITE SWEETWATER WITH BERM 22M

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TRAFFIC DATA

-----

| LANE NO. | AUTO |     | MEDIUM TRKS |     | HEAVY TRKS |     | DESCRIPTION |
|----------|------|-----|-------------|-----|------------|-----|-------------|
|          | VPH  | MPH | VPH         | MPH | VPH        | MPH |             |
| 1        | 1977 | 55  | 95          | 55  | 38         | 55  | SWEETWATER  |

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LANE DATA

-----

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 178.0 | 304.0 | 153                 |
|          | 2        | NO         | 0.0    | 178.0 | 304.0 | 154+40              |
|          | 3        | NO         | 36.0   | 178.0 | 304.0 | 154+50              |
|          | 4        | NO         | 169.0  | 178.0 | 308.0 | 155                 |
|          | 5        | NO         | 312.0  | 182.0 | 308.0 | SITE                |
|          | 6        | NO         | 334.0  | 182.0 | 308.0 | 155+10              |
|          | 7        | NO         | 489.0  | 195.0 | 309.0 | 156                 |
|          | 8        | NO         | 539.0  | 195.0 | 309.0 | 156+15              |
|          | 9        | NO         | 623.0  | 195.0 | 309.0 | 156+40              |
|          | 10       | NO         | 809.0  | 204.0 | 309.0 | 157                 |
|          |          |            | 934.0  | 204.0 | 309.0 | 157+40              |

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BARRIER DATA

-----

Barrier No. 1 Description: SWEETWATER MHP SOUTH WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ)= 0.0 No. Height Changes (P)=0

| SEG. | X      | Y     | GROUND (Z0) | TOP (Z) | BARRIER HEIGHTS AT ENDS |
|------|--------|-------|-------------|---------|-------------------------|
| 1    | -500.0 | 226.0 | 304.0       | 310.0   | *153 * 6                |
| 2    | 0.0    | 226.0 | 304.0       | 310.0   | *154+40 * 6             |
| 3    | 36.0   | 226.0 | 304.0       | 310.0   | *154+50 * 6             |
| 4    | 169.0  | 226.0 | 308.0       | 314.0   | *155 * 6                |
| 5    | 312.0  | 226.0 | 308.0       | 314.0   | *SITE * 6               |
|      | 334.0  | 226.0 | 308.0       | 314.0   | *155+10 * 6             |

-----

Barrier No. 2 Description: SWEETWATER S-SIDE BERM  
 Type - (1) BERM  
 Height Increment (DELZ)= 0.0 No. Height Changes (P)=0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 334.0 | 242.0 | 308.0          | 314.5 *15  | 7                          |
| 2    | 489.0 | 255.0 | 308.0          | 315.0 *15  | 7                          |
|      | 539.0 | 255.0 | 308.0          | 315.0 *15  | 7                          |

Barrier No. 3 Description: SWEETWATER WALL NORTH OF SITE  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 623.0 | 243.0 | 308.0          | 314.0 *15+40 | 6                          |
| 2    | 809.0 | 252.0 | 308.0          | 314.0 *15    | 6                          |
|      | 934.0 | 252.0 | 308.0          | 314.0 *15+40 | 6                          |

#### RECEIVER DATA

| REC.<br>NO. | X     | Y     | Z     | DNL PEOPLE |          |
|-------------|-------|-------|-------|------------|----------|
| 1           | 312.0 | 274.0 | 312.6 | 67 500     | 1 REAR   |
| 2           | 312.0 | 300.0 | 314.6 | 67 500     | 2 REAR   |
| 3           | 312.0 | 314.0 | 316.6 | 67 500     | 3 REAR   |
| 4           | 312.0 | 338.0 | 318.6 | 67 500     | 4 REAR   |
| 5           | 312.0 | 364.0 | 320.6 | 67 500     | 5 REAR   |
| 6           | 312.0 | 396.0 | 322.6 | 67 500     | 6 REAR   |
| 7           | 312.0 | 412.0 | 324.6 | 67 500     | 7 REAR   |
| 8           | 382.0 | 274.0 | 312.1 | 67 500     | 8 FRONT  |
| 9           | 382.0 | 300.0 | 314.1 | 67 500     | 9 FRONT  |
| 10          | 382.0 | 324.0 | 316.1 | 67 500     | 10 FRONT |
| 11          | 382.0 | 338.0 | 318.1 | 67 500     | 11 FRONT |
| 12          | 382.0 | 364.0 | 320.1 | 67 500     | 12 FRONT |
| 13          | 382.0 | 396.0 | 322.1 | 67 500     | 13 FRONT |
| 14          | 382.0 | 412.0 | 324.1 | 67 500     | 14 FRONT |
| 15          | 376.0 | 452.0 | 327.0 | 67 500     | 15 FRONT |
| 16          | 356.0 | 452.0 | 327.5 | 67 500     | 16 FRONT |
| 17          | 329.0 | 452.0 | 328.0 | 67 500     | 17 FRONT |
| 18          | 329.0 | 516.0 | 330.0 | 67 500     | 18 REAR  |
| 19          | 356.0 | 516.0 | 329.5 | 67 500     | 19 REAR  |
| 20          | 376.0 | 516.0 | 329.0 | 67 500     | 20 REAR  |
| 21          | 407.0 | 479.0 | 313.0 | 67 500     | EC1      |
| 22          | 429.0 | 252.0 | 312.0 | 67 500     | EC2      |

#### DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

#### K - CONSTANTS

ALL LANE RECEIVER/PAIRS = -4.7 DBA

|    |      |       |     |      |      |
|----|------|-------|-----|------|------|
| 12 | 12   | FRONT | 67. | 500. | 57.8 |
| 13 | 13   | FRONT | 67. | 500. | 57.3 |
| 14 | 14   | FRONT | 67. | 500. | 57.3 |
| 15 | 15   | FRONT | 67. | 500. | 56.7 |
|    | 16   | FRONT | 67. | 500. | 56.7 |
|    | 17   | FRONT | 67. | 500. | 56.8 |
| 18 | 18   | REAR  | 67. | 500. | 55.5 |
| 19 | 19   | REAR  | 67. | 500. | 55.5 |
| 20 | 20   | REAR  | 67. | 500. | 55.5 |
| 21 | REC1 |       | 67. | 500. | 54.8 |
| 22 | REC2 |       | 67. | 500. | 53.8 |

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| BARRIER TYPE | COST |
|--------------|------|
|--------------|------|

-----

|                |        |
|----------------|--------|
| BERM           | 4739.  |
| MASONRY        | 60242. |
| MASONRY/JERSEY | 0.     |
| CONCRETE       | 0.     |

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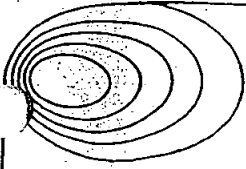
TOTAL COST = \$ 65000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

6. 6. 6. 6. 6. 7. 7. 6. 6.



# **GORDON BRICKEN & ASSOCIATES**

**ACOUSTICAL and ENERGY ENGINEERS**

A P P E N D I X      5

**RUN 13G**

1621 East Seventeenth Street, Suite K      Santa Ana, California 92705-8518  
Phone (714) 835-0249      FAX (714) 835-1957

\* \* SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) \* \*

INPUT DATA FILE : HOSS13G  
 BARRIER COST FILE : CALIF\$.DTA  
 DATE : 07-19-2006

FUTURE LDN AT 20 POINTS GROUND LEVEL FOR BUILT SITE FW WITH NO WALL

TRAFFIC DATA

| LANE NO. | AUTO |     | MEDIUM TRKS |     | HEAVY TRKS |     | DESCRIPTION      |
|----------|------|-----|-------------|-----|------------|-----|------------------|
|          | VPH  | MPH | VPH         | MPH | VPH        | MPH |                  |
| 1        | 8096 | 65  | 239         | 65  | 273        | 65  | SR125 NORTHBOUND |
| 2        | 8096 | 65  | 239         | 65  | 273        | 65  | SR125 SOUTHBOUND |

LANE DATA

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 60.0  | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | 60.0  | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | 60.0  | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | 60.0  | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | 60.0  | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | 60.0  | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | 60.0  | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | 60.0  | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | 60.0  | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | 60.0  | 328.0 | 157                 |
| 2        | 1        | NO         | -500.0 | -60.0 | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | -60.0 | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | -60.0 | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | -60.0 | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | -60.0 | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | -60.0 | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | -60.0 | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | -60.0 | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | -60.0 | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | -60.0 | 328.0 | 157                 |

BARRIER DATA

Barrier No. 1 Description: SWEETWATER MHP SOUTH WALL  
 Type - (2) MASONRY  
 Light Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X | Y | GROUND (Z0) | TOP (Z) | BARRIER HEIGHTS AT ENDS |
|------|---|---|-------------|---------|-------------------------|
|------|---|---|-------------|---------|-------------------------|



|   |        |       |       |       |         |   |   |
|---|--------|-------|-------|-------|---------|---|---|
| 1 | -500.0 | 226.0 | 304.0 | 310.0 | *153    | * | 6 |
| 2 | 0.0    | 226.0 | 304.0 | 310.0 | *154+40 | * | 6 |
| 3 | 36.0   | 226.0 | 304.0 | 310.0 | *154+50 | * | 6 |
| 4 | 169.0  | 226.0 | 308.0 | 314.0 | *155    | * | 6 |
| 5 | 312.0  | 226.0 | 308.0 | 314.0 | *SITE   | * | 6 |
|   | 334.0  | 226.0 | 308.0 | 314.0 | *155+40 | * | 6 |

Barrier No. 2 Description: SWEETWATER WALL NORTH OF SITE  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |   |   |
|------|-------|-------|----------------|------------|----------------------------|---|---|
| 1    | 623.0 | 243.0 | 308.0          | 314.0      | *156+40                    | * | 6 |
| 2    | 809.0 | 252.0 | 308.0          | 314.0      | *157                       | * | 6 |
|      | 934.0 | 252.0 | 308.0          | 314.0      | *157+40                    | * | 6 |

Barrier No. 3 Description: SOUTH SIDE OF BLDG 1 UNIT 1-7  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |   |    |
|------|-------|-------|----------------|------------|----------------------------|---|----|
| 1    | 317.0 | 254.0 | 307.6          | 327.6      | *B3 P1                     | * | 20 |
|      | 317.0 | 422.0 | 319.0          | 339.0      | *B3 P2                     | * | 20 |

Barrier No. 4 Description: NORTH SIDE BLDG 1 UNIT 1-7  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |   |    |
|------|-------|-------|----------------|------------|----------------------------|---|----|
| 1    | 354.0 | 254.0 | 307.6          | 327.6      | *B4 P1                     | * | 20 |
|      | 354.0 | 422.0 | 319.0          | 339.0      | *B4 P2                     | * | 20 |

Barrier No. 5 Description: SOUTH MHP P/L WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |   |   |
|------|-------|-------|----------------|------------|----------------------------|---|---|
| 1    | 307.0 | 232.0 | 306.6          | 313.6      | *B5 P1                     | * | 7 |
|      | 307.0 | 512.0 | 322.3          | 328.3      | *B5 P2                     | * | 6 |

Barrier No. 6 Description: UNIT 1 WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X | Y | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |  |  |
|------|---|---|----------------|------------|----------------------------|--|--|
|------|---|---|----------------|------------|----------------------------|--|--|

|   |       |       |       |       |        |   |   |
|---|-------|-------|-------|-------|--------|---|---|
| 1 | 307.0 | 254.0 | 307.6 | 313.6 | *B6 P1 | * | 6 |
|   | 317.0 | 254.0 | 307.6 | 313.6 | *B6 P2 | * | 6 |

Barrier No. 7 Description: UNIT 8/9/10 BLDG  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |   |    |
|------|-------|-------|----------------|------------|----------------------------|---|----|
| 1    | 317.0 | 512.0 | 322.3          | 342.3      | *B7 P1                     | * | 20 |
|      | 392.0 | 512.0 | 322.0          | 342.0      | *B7 P2                     | * | 20 |

# RECEIVER DATA

| REC.<br>NO. | X     | Y     | Z     | DNL | PEOPLE | ID       |
|-------------|-------|-------|-------|-----|--------|----------|
| 1           | 312.0 | 274.0 | 312.6 | 67  | 500    | 1 REAR   |
| 2           | 312.0 | 300.0 | 314.6 | 67  | 500    | 2 REAR   |
| 3           | 312.0 | 314.0 | 316.6 | 67  | 500    | 3 REAR   |
| 4           | 312.0 | 338.0 | 318.6 | 67  | 500    | 4 REAR   |
| 5           | 312.0 | 364.0 | 320.6 | 67  | 500    | 5 REAR   |
| 6           | 312.0 | 396.0 | 322.6 | 67  | 500    | 6 REAR   |
| 7           | 312.0 | 412.0 | 324.6 | 67  | 500    | 7 REAR   |
| 8           | 382.0 | 274.0 | 312.1 | 67  | 500    | 8 FRONT  |
| 9           | 382.0 | 300.0 | 314.1 | 67  | 500    | 9 FRONT  |
| 10          | 382.0 | 324.0 | 316.1 | 67  | 500    | 10 FRONT |
| 11          | 382.0 | 338.0 | 318.1 | 67  | 500    | 11 FRONT |
| 12          | 382.0 | 364.0 | 320.1 | 67  | 500    | 12 FRONT |
| 13          | 382.0 | 396.0 | 322.1 | 67  | 500    | 13 FRONT |
| 14          | 382.0 | 412.0 | 324.1 | 67  | 500    | 14 FRONT |
| 15          | 376.0 | 452.0 | 327.0 | 67  | 500    | 15 FRONT |
| 16          | 356.0 | 452.0 | 327.5 | 67  | 500    | 16 FRONT |
| 17          | 329.0 | 452.0 | 328.0 | 67  | 500    | 17 FRONT |
| 18          | 329.0 | 516.0 | 330.0 | 67  | 500    | 18 REAR  |
| 19          | 356.0 | 516.0 | 329.5 | 67  | 500    | 19 REAR  |
| 20          | 376.0 | 516.0 | 329.0 | 67  | 500    | 20 REAR  |
| 21          | 407.0 | 479.0 | 313.0 | 67  | 500    | REC1     |
| 22          | 429.0 | 302.0 | 328.0 | 67  | 500    | REC2     |

# DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

# K - CONSTANTS

ALL LANE RECEIVER/PAIRS = -4.7 DBA

1

| REC | REC ID   | DNL | PEOPLE | LEQ (CAL) |
|-----|----------|-----|--------|-----------|
| 1   | 1 REAR   | 67. | 500.   | 63.6      |
| 2   | 2 REAR   | 67. | 500.   | 64.0      |
| 3   | 3 REAR   | 67. | 500.   | 65.1      |
| 4   | 4 REAR   | 67. | 500.   | 66.1      |
| 5   | 5 REAR   | 67. | 500.   | 66.0      |
| 6   | 6 REAR   | 67. | 500.   | 65.6      |
| 7   | 7 REAR   | 67. | 500.   | 67.5      |
| 8   | 8 FRONT  | 67. | 500.   | 71.8      |
| 9   | 9 FRONT  | 67. | 500.   | 70.6      |
| 10  | 10 FRONT | 67. | 500.   | 69.7      |
| 11  | 11 FRONT | 67. | 500.   | 69.3      |
| 12  | 12 FRONT | 67. | 500.   | 68.6      |
| 13  | 13 FRONT | 67. | 500.   | 67.9      |
| 14  | 14 FRONT | 67. | 500.   | 67.6      |
| 15  | 15 FRONT | 67. | 500.   | 66.9      |
| 16  | 16 FRONT | 67. | 500.   | 67.5      |
| 17  | 17 FRONT | 67. | 500.   | 67.3      |
| 18  | 18 REAR  | 67. | 500.   | 48.5      |
| 19  | 19 REAR  | 67. | 500.   | 48.5      |
| 20  | 20 REAR  | 67. | 500.   | 48.5      |
| 21  | REC1     | 67. | 500.   | 66.6      |
| 22  | REC2     | 67. | 500.   | 71.7      |

| BARRIER TYPE   | COST    |
|----------------|---------|
| BERM           | 0.      |
| MASONRY        | 161959. |
| MASONRY/JERSEY | 0.      |
| CONCRETE       | 0.      |

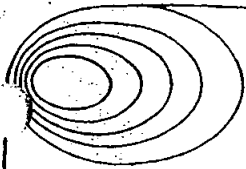
TOTAL COST = \$ 162000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

6. 6. 6. 6. 6. 6. 6. 20. 20. 7. 6. 20.



# GORDON BRICKEN & ASSOCIATES

ACOUSTICAL and ENERGY ENGINEERS

A P P E N D I X 6

RUN 14G

1621 East Seventeenth Street, Suite K  
Phone (714) 835-0249

Santa Ana, California 92705-8518  
FAX (714) 835-1957

INPUT DATA FILE : HOSS14G  
 BARRIER COST FILE : CALIF\$.DTA  
 DATE : 07-19-2006

FUTURE LDN AT 22 POINTS GROUND LEVEL FOR BUILT SITE SWEETWATER ONLY

=====

TRAFFIC DATA

-----

| LANE NO. | AUTO VPH | MPH | MEDIUM TRKS VPH | MPH | HEAVY TRKS VPH | MPH | DESCRIPTION |
|----------|----------|-----|-----------------|-----|----------------|-----|-------------|
| 1        | 1977     | 55  | 95              | 55  | 38             | 55  | SWEETWATER  |

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LANE DATA

-----

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 178.0 | 304.0 | 153                 |
|          | 2        | NO         | 0.0    | 178.0 | 304.0 | 154+40              |
|          | 3        | NO         | 36.0   | 178.0 | 304.0 | 154+50              |
|          | 4        | NO         | 169.0  | 178.0 | 308.0 | 155                 |
|          | 5        | NO         | 312.0  | 182.0 | 308.0 | SITE                |
|          | 6        | NO         | 334.0  | 182.0 | 308.0 | 155+40              |
|          | 7        | NO         | 489.0  | 195.0 | 309.0 | 156                 |
|          | 8        | NO         | 539.0  | 195.0 | 309.0 | 156+15              |
|          | 9        | NO         | 623.0  | 195.0 | 309.0 | 156+40              |
|          | 10       | NO         | 809.0  | 204.0 | 309.0 | 157                 |
|          |          |            | 934.0  | 204.0 | 309.0 | 157+40              |

=====

BARRIER DATA

-----

Barrier No. 1 Description: SWEETWATER MHP SOUTH WALL  
 Type (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X      | Y     | GROUND (Z0) | TOP (Z) | BARRIER HEIGHTS AT ENDS |
|------|--------|-------|-------------|---------|-------------------------|
| 1    | -500.0 | 226.0 | 304.0       | 310.0   | *153 * 6                |
| 2    | 0.0    | 226.0 | 304.0       | 310.0   | *154+40 * 6             |
| 3    | 36.0   | 226.0 | 304.0       | 310.0   | *154+50 * 6             |
| 4    | 169.0  | 226.0 | 308.0       | 314.0   | *155 * 6                |
| 5    | 312.0  | 226.0 | 308.0       | 314.0   | *SITE * 6               |
|      | 334.0  | 226.0 | 308.0       | 314.0   | *155+40 * 6             |

-----

Barrier No. 2 Description: SWEETWATER WALL NORTH OF SITE  
 Type (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 623.0 | 243.0 | 308.0          | 314.0 *156+40 | * 6                        |
| 2    | 809.0 | 252.0 | 308.0          | 314.0 *157    | * 6                        |
|      | 934.0 | 252.0 | 308.0          | 314.0 *157+40 | * 6                        |

Barrier No. 3 Description: SOUTH SIDE OF BLDG 1 UNIT 1-7  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 317.0 | 254.0 | 307.6          | 327.6 *B3 P1 | * 20                       |
|      | 317.0 | 422.0 | 319.0          | 339.0 *B3 P2 | * 20                       |

Barrier No. 4 Description: NORTH SIDE BLDG 1 UNIT 1-7  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 354.0 | 254.0 | 307.6          | 327.6 *B4 P1 | * 20                       |
|      | 354.0 | 422.0 | 319.0          | 339.0 *B4 P2 | * 20                       |

Barrier No. 5 Description: SOUTH MHP P/L WALL  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 307.0 | 232.0 | 306.6          | 313.6 *B5 P1 | * 7                        |
|      | 307.0 | 512.0 | 322.3          | 328.3 *B5 P2 | * 6                        |

Barrier No. 6 Description: UNIT 1 WALL  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 307.0 | 254.0 | 307.6          | 313.6 *B6 P1 | * 6                        |
|      | 317.0 | 254.0 | 307.6          | 313.6 *B6 P2 | * 6                        |

Barrier No. 7 Description: UNIT 8/9/10 BLDG  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 317.0 | 512.0 | 322.3          | 342.3 *B7 P1 | * 20                       |

392.0

512.0

322.0

342.0 \*B7 P2 \* 20

## =====

## RECEIVER DATA

| REC.<br>NO. | X     | Y     | Z     | DNL | PEOPLE | ID       |
|-------------|-------|-------|-------|-----|--------|----------|
| 1           | 312.0 | 274.0 | 312.6 | 67  | 500    | 1 REAR   |
| 2           | 312.0 | 300.0 | 314.6 | 67  | 500    | 2 REAR   |
| 3           | 312.0 | 314.0 | 316.6 | 67  | 500    | 3 REAR   |
| 4           | 312.0 | 338.0 | 318.6 | 67  | 500    | 4 REAR   |
| 5           | 312.0 | 364.0 | 320.6 | 67  | 500    | 5 REAR   |
| 6           | 312.0 | 396.0 | 322.6 | 67  | 500    | 6 REAR   |
| 7           | 312.0 | 412.0 | 324.6 | 67  | 500    | 7 REAR   |
| 8           | 382.0 | 274.0 | 312.1 | 67  | 500    | 8 FRONT  |
| 9           | 382.0 | 300.0 | 314.1 | 67  | 500    | 9 FRONT  |
| 10          | 382.0 | 324.0 | 316.1 | 67  | 500    | 10 FRONT |
| 11          | 382.0 | 338.0 | 318.1 | 67  | 500    | 11 FRONT |
| 12          | 382.0 | 364.0 | 320.1 | 67  | 500    | 12 FRONT |
| 13          | 382.0 | 396.0 | 322.1 | 67  | 500    | 13 FRONT |
| 14          | 382.0 | 412.0 | 324.1 | 67  | 500    | 14 FRONT |
| 15          | 376.0 | 452.0 | 327.0 | 67  | 500    | 15 FRONT |
| 16          | 356.0 | 452.0 | 327.5 | 67  | 500    | 16 FRONT |
| 17          | 329.0 | 452.0 | 328.0 | 67  | 500    | 17 FRONT |
| 18          | 329.0 | 516.0 | 330.0 | 67  | 500    | 18 REAR  |
| 19          | 356.0 | 516.0 | 329.5 | 67  | 500    | 19 REAR  |
| 20          | 376.0 | 516.0 | 329.0 | 67  | 500    | 20 REAR  |
| 21          | 407.0 | 479.0 | 313.0 | 67  | 500    | REC1     |
| 22          | 429.0 | 302.0 | 328.0 | 67  | 500    | REC2     |

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## DROP-OFF RATES

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ALL LANE/RECEIVER PAIRS = 3.0 DBA

## K - CONSTANTS

=====

ALL LANE RECEIVER/PAIRS = -4.7 DBA

SOUND32 - RELEASE 07/30/91

TITLE:

FUTURE LDN AT 22 POINTS GROUND LEVEL FOR BUILT SITE SWEETWATER ONLY

EFFECTIVENESS / COST RATIOS

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7 |        |
|------------|---|-----|---|---|---|---|---|---|--------|
| 1          | - | 0.* |   |   |   |   |   |   | 153    |
| 2          | - | 0.* |   |   |   |   |   |   | 154+40 |
| 3          | - | 0.* |   |   |   |   |   |   | 154+50 |
| 4          | - | 0.* |   |   |   |   |   |   | 155    |
| 5          | - | 0.* |   |   |   |   |   |   | SITE   |
| 6          | - | 0.* |   |   |   |   |   |   | 156+40 |
| 7          | - | 0.* |   |   |   |   |   |   | 157    |
| 8          | - | 0.* |   |   |   |   |   |   | B3 P1  |
| 9          | - | 0.* |   |   |   |   |   |   | B4 P1  |
| 10         | - | 0.* |   |   |   |   |   |   | B5 P1  |
| 11         | - | 0.* |   |   |   |   |   |   | B6 P1  |
| 12         | - | 0.* |   |   |   |   |   |   | B7 P1  |

0 1 2 3 4 5 6 7

BARRIER DATA

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| BAR<br>ELE | 0 | 1    | 2 | 3 | 4 | 5 | 6 | 7 | BAR<br>ID | LENGTH | TYPE    |
|------------|---|------|---|---|---|---|---|---|-----------|--------|---------|
| 1          | - | 6.*  |   |   |   |   |   |   | 153       | 500.0  | MASONRY |
| 2          | - | 6.*  |   |   |   |   |   |   | 154+40    | 36.0   | MASONRY |
| 3          | - | 6.*  |   |   |   |   |   |   | 154+50    | 133.1  | MASONRY |
| 4          | - | 6.*  |   |   |   |   |   |   | 155       | 143.0  | MASONRY |
| 5          | - | 6.*  |   |   |   |   |   |   | SITE      | 22.0   | MASONRY |
| 6          | - | 6.*  |   |   |   |   |   |   | 156+40    | 186.2  | MASONRY |
| 7          | - | 6.*  |   |   |   |   |   |   | 157       | 125.0  | MASONRY |
| 8          | - | 20.* |   |   |   |   |   |   | B3 P1     | 168.4  | MASONRY |
| 9          | - | 20.* |   |   |   |   |   |   | B4 P1     | 168.4  | MASONRY |
| 10         | - | 7.*  |   |   |   |   |   |   | B5 P1     | 280.4  | MASONRY |
| 11         | - | 6.*  |   |   |   |   |   |   | B6 P1     | 10.0   | MASONRY |
| 12         | - | 20.* |   |   |   |   |   |   | B7 P1     | 75.0   | MASONRY |

0 1 2 3 4 5 6 7



1

| REC | REC ID   | DNL | PEOPLE | LEQ(CAL) |
|-----|----------|-----|--------|----------|
| 1   | 1 REAR   | 67. | 500.   | 56.1     |
| 2   | 2 REAR   | 67. | 500.   | 55.9     |
| 3   | 3 REAR   | 67. | 500.   | 56.4     |
| 4   | 4 REAR   | 67. | 500.   | 56.2     |
| 5   | 5 REAR   | 67. | 500.   | 55.7     |
| 6   | 6 REAR   | 67. | 500.   | 55.0     |
| 7   | 7 REAR   | 67. | 500.   | 54.8     |
| 8   | 8 FRONT  | 67. | 500.   | 66.3     |
| 9   | 9 FRONT  | 67. | 500.   | 64.4     |
| 10  | 10 FRONT | 67. | 500.   | 63.0     |
| 11  | 11 FRONT | 67. | 500.   | 62.3     |
| 12  | 12 FRONT | 67. | 500.   | 61.2     |
| 13  | 13 FRONT | 67. | 500.   | 60.0     |
| 14  | 14 FRONT | 67. | 500.   | 59.5     |
| 15  | 15 FRONT | 67. | 500.   | 58.5     |
| 16  | 16 FRONT | 67. | 500.   | 58.6     |
| 17  | 17 FRONT | 67. | 500.   | 56.7     |
| 18  | 18 REAR  | 67. | 500.   | 40.3     |
| 19  | 19 REAR  | 67. | 500.   | 40.3     |
| 20  | 20 REAR  | 67. | 500.   | 40.3     |
| 21  | REC1     | 67. | 500.   | 57.7     |
| 22  | REC2     | 67. | 500.   | 65.2     |

| BARRIER TYPE | COST    |
|--------------|---------|
| BERM         | 0.      |
| SONRY        | 161959. |
| SONRY/JERSEY | 0.      |
| CONCRETE     | 0.      |

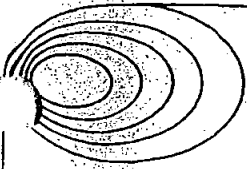
TOTAL COST = \$ 162000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

6. 6. 6. 6. 6. 6. 6.20.20. 7. 6.20.



# **GORDON BRICKEN & ASSOCIATES**

**ACOUSTICAL and ENERGY ENGINEERS**

## **A P P E N D I X      7**

**RUN 15GM**

1621 East Seventeenth Street, Suite K  
Phone (714) 835-0249

Santa Ana, California 92705-8518  
FAX (714) 835-1957

\* \* SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) \* \*

INPUT DATA FILE : HOSS15GM  
 BARRIER COST FILE : CALIFS.DTA  
 DATE : 08-01-2006

FUTURE LDN/GRND LEVEL/FW/VACANT/SW BERM/ #22M

=====

TRAFFIC DATA

-----

| LANE NO. | AUTO |     | MEDIUM TRKS |     | HEAVY TRKS |     | DESCRIPTION      |
|----------|------|-----|-------------|-----|------------|-----|------------------|
|          | VPH  | MPH | VPH         | MPH | VPH        | MPH |                  |
| 1        | 8096 | 65  | 239         | 65  | 273        | 65  | SR125 NORTHBOUND |
| 2        | 8096 | 65  | 239         | 65  | 273        | 65  | SR125 SOUTHBOUND |

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LANE DATA

-----

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 60.0  | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | 60.0  | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | 60.0  | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | 60.0  | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | 60.0  | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | 60.0  | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | 60.0  | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | 60.0  | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | 60.0  | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | 60.0  | 328.0 | 157                 |
| 2        | 1        | NO         | -500.0 | -60.0 | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | -60.0 | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | -60.0 | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | -60.0 | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | -60.0 | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | -60.0 | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | -60.0 | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | -60.0 | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | -60.0 | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | -60.0 | 328.0 | 157                 |
|          |          |            | 934.0  | -60.0 | 328.0 | 157+40              |

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BARRIER DATA

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Barrier No. 1 Description: SWEETWATER MHP SOUTH WALL  
 Type - (2) MASONRY  
 Light Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X | Y | GROUND (Z0) | TOP (Z) | BARRIER HEIGHTS AT ENDS |
|------|---|---|-------------|---------|-------------------------|
|------|---|---|-------------|---------|-------------------------|

|   |        |       |       |       |         |   |   |
|---|--------|-------|-------|-------|---------|---|---|
| 1 | -500.0 | 226.0 | 304.0 | 310.0 | *153    | * | 6 |
| 2 | 0.0    | 226.0 | 304.0 | 310.0 | *154+40 | * | 6 |
| 3 | 36.0   | 226.0 | 304.0 | 310.0 | *154+50 | * | 6 |
| 4 | 169.0  | 226.0 | 308.0 | 314.0 | *155    | * | 6 |
| 5 | 312.0  | 226.0 | 308.0 | 314.0 | *SITE   | * | 6 |
|   | 334.0  | 226.0 | 308.0 | 314.0 | *155+40 | * | 6 |

Barrier No. 2 Description: SWEETWATER WALL NORTH OF SITE  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |   |   |
|------|-------|-------|----------------|------------|----------------------------|---|---|
| 1    | 623.0 | 243.0 | 308.0          | 314.0      | *156+40                    | * | 6 |
| 2    | 809.0 | 252.0 | 308.0          | 314.0      | *157                       | * | 6 |
|      | 934.0 | 252.0 | 308.0          | 314.0      | *157+40                    | * | 6 |

Barrier No. 3 Description: SWEETWATER BERM WITH L#22M  
 Type - (1) BERM  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |   |   |
|------|-------|-------|----------------|------------|----------------------------|---|---|
| 1    | 334.0 | 242.0 | 308.0          | 314.5      | *B3 P1                     | * | 7 |
| 2    | 489.0 | 255.0 | 308.0          | 315.0      | *B3 P2                     | * | 7 |
|      | 539.0 | 255.0 | 308.0          | 315.0      | *B3 P3                     | * | 7 |

# RECEIVER DATA

| REC.<br>NO. | X     | Y     | Z     | DNL PEOPLE | ID       |
|-------------|-------|-------|-------|------------|----------|
| 1           | 312.0 | 274.0 | 312.6 | 67 500     | 1 REAR   |
| 2           | 312.0 | 300.0 | 314.6 | 67 500     | 2 REAR   |
| 3           | 312.0 | 314.0 | 316.6 | 67 500     | 3 REAR   |
| 4           | 312.0 | 338.0 | 318.6 | 67 500     | 4 REAR   |
| 5           | 312.0 | 364.0 | 320.6 | 67 500     | 5 REAR   |
| 6           | 312.0 | 396.0 | 322.6 | 67 500     | 6 REAR   |
| 7           | 312.0 | 412.0 | 324.6 | 67 500     | 7 REAR   |
| 8           | 382.0 | 274.0 | 312.1 | 67 500     | 8 FRONT  |
| 9           | 382.0 | 300.0 | 314.1 | 67 500     | 9 FRONT  |
| 10          | 382.0 | 324.0 | 316.1 | 67 500     | 10 FRONT |
| 11          | 382.0 | 338.0 | 318.1 | 67 500     | 11 FRONT |
| 12          | 382.0 | 364.0 | 320.1 | 67 500     | 12 FRONT |
| 13          | 382.0 | 396.0 | 322.1 | 67 500     | 13 FRONT |
| 14          | 382.0 | 412.0 | 324.1 | 67 500     | 14 FRONT |
| 15          | 376.0 | 452.0 | 327.0 | 67 500     | 15 FRONT |
| 16          | 356.0 | 452.0 | 327.5 | 67 500     | 16 FRONT |
| 17          | 329.0 | 452.0 | 328.0 | 67 500     | 17 FRONT |
| 18          | 329.0 | 516.0 | 330.0 | 67 500     | 18 REAR  |
| 19          | 356.0 | 516.0 | 329.5 | 67 500     | 19 REAR  |
| 20          | 376.0 | 516.0 | 329.0 | 67 500     | 20 REAR  |

|    |       |       |       |    |     |      |
|----|-------|-------|-------|----|-----|------|
| 21 | 407.0 | 479.0 | 313.0 | 67 | 500 | REC1 |
| 22 | 429.0 | 252.0 | 312.0 | 67 | 500 | REC2 |

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POP-OFF RATES

=====

ALL LANE/RECEIVER PAIRS = 3.0 DBA

=====

K - CONSTANTS

=====

ALL LANE RECEIVER/PAIRS = -4.7 DBA

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SOUND32 - RELEASE 07/30/91

TITLE:

FUTURE LDN/GRND LEVEL/FW/VACANT/SW BERM/ #22M

EFFECTIVENESS / COST RATIOS

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7 |        |
|------------|---|-----|---|---|---|---|---|---|--------|
| 1          | - | 0.* |   |   |   |   |   |   | 153    |
| 2          | - | 0.* |   |   |   |   |   |   | 154+40 |
| 3          | - | 0.* |   |   |   |   |   |   | 154+50 |
| 4          | - | 0.* |   |   |   |   |   |   | 155    |
| 5          | - | 0.* |   |   |   |   |   |   | SITE   |
| 6          | - | 0.* |   |   |   |   |   |   | 156+40 |
| 7          | - | 0.* |   |   |   |   |   |   | 157    |
| 8          | - | 0.* |   |   |   |   |   |   | B3 P1  |
| 9          | - | 0.* |   |   |   |   |   |   | B3 P2  |
|            | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7 |        |

BARRIER DATA

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | BARRIER HEIGHTS |   |   |   |   | 6 | 7 | BAR<br>ID | LENGTH | TYPE    |
|------------|---|-----|-----------------|---|---|---|---|---|---|-----------|--------|---------|
| 1          | - | 6.* |                 |   |   |   |   |   |   | 153       | 500.0  | MASONRY |
| 2          | - | 6.* |                 |   |   |   |   |   |   | 154+40    | 36.0   | MASONRY |
| 3          | - | 6.* |                 |   |   |   |   |   |   | 154+50    | 133.1  | MASONRY |
| 4          | - | 6.* |                 |   |   |   |   |   |   | 155       | 143.0  | MASONRY |
| 5          | - | 6.* |                 |   |   |   |   |   |   | SITE      | 22.0   | MASONRY |
| 6          | - | 6.* |                 |   |   |   |   |   |   | 156+40    | 186.2  | MASONRY |
| 7          | - | 6.* |                 |   |   |   |   |   |   | 157       | 125.0  | MASONRY |
| 8          | - | 7.* |                 |   |   |   |   |   |   | B3 P1     | 155.5  | BERM    |
| 9          | - | 7.* |                 |   |   |   |   |   |   | B3 P2     | 50.0   | BERM    |
|            | 0 | 1   | 2               | 3 | 4 | 5 | 6 | 7 |   |           |        |         |

| REC | REC ID   | DNL | PEOPLE | LEQ(CAL) |
|-----|----------|-----|--------|----------|
| 1   | 1 REAR   | 67. | 500.   | 68.7     |
| 2   | 2 REAR   | 67. | 500.   | 69.6     |
| 3   | 3 REAR   | 67. | 500.   | 70.6     |
| 4   | 4 REAR   | 67. | 500.   | 71.0     |
| 5   | 5 REAR   | 67. | 500.   | 70.9     |
| 6   | 6 REAR   | 67. | 500.   | 70.3     |
| 7   | 7 REAR   | 67. | 500.   | 70.1     |
| 8   | 8 FRONT  | 67. | 500.   | 65.1     |
| 9   | 9 FRONT  | 67. | 500.   | 66.8     |
| 10  | 10 FRONT | 67. | 500.   | 68.9     |
| 11  | 11 FRONT | 67. | 500.   | 70.6     |

|    |          |     |      |      |
|----|----------|-----|------|------|
| 12 | 12 FRONT | 67. | 500. | 70.8 |
| 13 | 13 FRONT | 67. | 500. | 70.3 |
| 14 | 14 FRONT | 67. | 500. | 70.0 |
| 15 | 15 FRONT | 67. | 500. | 69.4 |
| 16 | 16 FRONT | 67. | 500. | 69.4 |
| 17 | 17 FRONT | 67. | 500. | 69.5 |
| 18 | 18 REAR  | 67. | 500. | 68.6 |
| 19 | 19 REAR  | 67. | 500. | 68.5 |
| 20 | 20 REAR  | 67. | 500. | 68.5 |
| 21 | REC1     | 67. | 500. | 67.3 |
| 22 | REC2     | 67. | 500. | 58.2 |

| BARRIER TYPE | COST |
|--------------|------|
|--------------|------|

|                |        |
|----------------|--------|
| BERM           | 4739.  |
| MASONRY        | 60242. |
| MASONRY/JERSEY | 0.     |
| CONCRETE       | 0.     |

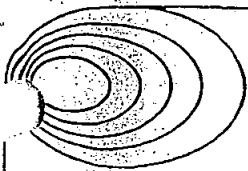
TOTAL COST = \$ 65000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

6. 6. 6. 6. 6. 6. 7. 7.



# **GORDON BRICKEN & ASSOCIATES**

**ACOUSTICAL and ENERGY ENGINEERS**

## **A P P E N D I X      8**

**RUN 15S**

1621 East Seventeenth Street, Suite K  
Phone (714) 835-0249

Santa Ana, California 92705-8518  
FAX (714) 835-1957



INPUT DATA FILE : HOSS15S  
 BARRIER COST FILE : CALIF\$.DTA  
 DATE : 07-19-2006

FUTURE LDN AT BALCONIES LEVEL FOR VACANT SITE FREEWAY ONLY NO WALL

=====

TRAFFIC DATA

-----

| LANE NO. | AUTO |     | MEDIUM TRKS |     | HEAVY TRKS |     | DESCRIPTION      |
|----------|------|-----|-------------|-----|------------|-----|------------------|
|          | VPH  | MPH | VPH         | MPH | VPH        | MPH |                  |
| 1        | 8096 | 65  | 239         | 65  | 273        | 65  | SR125 NORTHBOUND |
| 2        | 8096 | 65  | 239         | 65  | 273        | 65  | SR125 SOUTHBOUND |

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LANE DATA

-----

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 60.0  | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | 60.0  | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | 60.0  | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | 60.0  | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | 60.0  | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | 60.0  | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | 60.0  | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | 60.0  | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | 60.0  | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | 60.0  | 328.0 | 157                 |
| 2        | 1        | NO         | -500.0 | -60.0 | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | -60.0 | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | -60.0 | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | -60.0 | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | -60.0 | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | -60.0 | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | -60.0 | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | -60.0 | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | -60.0 | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | -60.0 | 328.0 | 157                 |
|          |          |            | 934.0  | -60.0 | 328.0 | 157+40              |

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BARRIER DATA

-----

Barrier No. 1 Description: SWEETWATER MHP SOUTH WALL  
 Type - (2) MASONRY  
 Light Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X | Y | GROUND (Z0) | TOP (Z) | BARRIER HEIGHTS AT ENDS |
|------|---|---|-------------|---------|-------------------------|
|------|---|---|-------------|---------|-------------------------|

|   |        |       |       |       |         |   |   |
|---|--------|-------|-------|-------|---------|---|---|
| 1 | -500.0 | 226.0 | 304.0 | 310.0 | *153    | * | 6 |
| 2 | 0.0    | 226.0 | 304.0 | 310.0 | *154+40 | * | 6 |
| 3 | 36.0   | 226.0 | 304.0 | 310.0 | *154+50 | * | 6 |
| 4 | 169.0  | 226.0 | 308.0 | 314.0 | *155    | * | 6 |
| 5 | 312.0  | 226.0 | 308.0 | 314.0 | *SITE   | * | 6 |
|   | 334.0  | 226.0 | 308.0 | 314.0 | *155+40 | * | 6 |

Barrier No. 2 Description: SWEETWATER WALL NORTH OF SITE  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 623.0 | 243.0 | 308.0          | 314.0      | *156+40 * 6                |
| 2    | 809.0 | 252.0 | 308.0          | 314.0      | *157 * 6                   |
|      | 934.0 | 252.0 | 308.0          | 314.0      | *157+40 * 6                |

#### RECEIVER DATA

| REC.<br>NO. | X     | Y     | Z     | DNL | PEOPLE | ID     |
|-------------|-------|-------|-------|-----|--------|--------|
| 1           | 377.0 | 274.0 | 322.1 | 67  | 500    | 8 BAL  |
| 2           | 377.0 | 300.0 | 324.1 | 67  | 500    | 9 BAL  |
| 3           | 377.0 | 324.0 | 326.1 | 67  | 500    | 10 BAL |
| 4           | 377.0 | 338.0 | 328.1 | 67  | 500    | 11 BAL |
| 5           | 377.0 | 364.0 | 330.1 | 67  | 500    | 12 BAL |
| 6           | 377.0 | 396.0 | 332.1 | 67  | 500    | 13 BAL |
| 7           | 377.0 | 412.0 | 334.1 | 67  | 500    | 14 BAL |
| 8           | 376.0 | 462.0 | 337.0 | 67  | 500    | 15 BAL |
| 9           | 356.0 | 462.0 | 337.5 | 67  | 500    | 16 BAL |
| 10          | 329.0 | 462.0 | 338.0 | 67  | 500    | 17 BAL |

#### DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

#### K - CONSTANTS

ALL LANE RECEIVER/PAIRS = 4.7 DBA

SOUND32 - RELEASE 07/30/91

TITLE:

UTURE LDN AT BALCONIES LEVEL FOR VACANT SITE FREEWAY ONLY NO WALL

EFFECTIVENESS / COST RATIOS

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7 |        |
|------------|---|-----|---|---|---|---|---|---|--------|
| 1          | - | 0.* |   |   |   |   |   |   | 153    |
| 2          | - | 0.* |   |   |   |   |   |   | 154+40 |
| 3          | - | 0.* |   |   |   |   |   |   | 154+50 |
| 4          | - | 0.* |   |   |   |   |   |   | 155    |
| 5          | - | 0.* |   |   |   |   |   |   | SITE   |
| 6          | - | 0.* |   |   |   |   |   |   | 156+40 |
| 7          | - | 0.* |   |   |   |   |   |   | 157    |

0 1 2 3 4 5 6 7

BARRIER DATA

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7 | BAR<br>ID | LENGTH | TYPE    |
|------------|---|-----|---|---|---|---|---|---|-----------|--------|---------|
| 1          | - | 6.* |   |   |   |   |   |   | 153       | 500.0  | MASONRY |
| 2          | - | 6.* |   |   |   |   |   |   | 154+40    | 36.0   | MASONRY |
| 3          | - | 6.* |   |   |   |   |   |   | 154+50    | 133.1  | MASONRY |
| 4          | - | 6.* |   |   |   |   |   |   | 155       | 143.0  | MASONRY |
| 5          | - | 6.* |   |   |   |   |   |   | SITE      | 22.0   | MASONRY |
| 6          | - | 6.* |   |   |   |   |   |   | 156+40    | 186.2  | MASONRY |
| 7          | - | 6.* |   |   |   |   |   |   | 157       | 125.0  | MASONRY |

0 1 2 3 4 5 6 7

| REC | REC ID | DNL | PEOPLE | LEQ(CAL) |
|-----|--------|-----|--------|----------|
| 1   | 8 BAL  | 67. | 500.   | 72.7     |
| 2   | 9 BAL  | 67. | 500.   | 72.1     |
| 3   | 10 BAL | 67. | 500.   | 71.6     |
| 4   | 11 BAL | 67. | 500.   | 71.3     |
| 5   | 12 BAL | 67. | 500.   | 70.9     |
| 6   | 13 BAL | 67. | 500.   | 70.3     |
| 7   | 14 BAL | 67. | 500.   | 70.1     |
| 8   | 15 BAL | 67. | 500.   | 69.3     |
| 9   | 16 BAL | 67. | 500.   | 69.3     |
| 10  | 17 BAL | 67. | 500.   | 69.3     |

| BARRIER TYPE   | COST   |
|----------------|--------|
| BERM           | 0.     |
| MASONRY        | 60242. |
| MASONRY/JERSEY | 0.     |

CONCRETE

0.

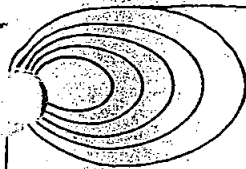
TOTAL COST = \$ 60000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

6. 6. 6. 6. 6. 6. 6.



# **GORDON BRICKEN & ASSOCIATES**

**ACOUSTICAL and ENERGY ENGINEERS**

A P P E N D I X      9

RUN 16S

1621 East Seventeenth Street, Suite K  
Phone (714) 835-0249

Santa Ana, California 92705-8518  
FAX (714) 835-1957

\* \* SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) \* \*

INPUT DATA FILE : HOSS16S  
 BARRIER COST FILE : CALIFS.DTA  
 DATE : 07-19-2006

SITE FUTURE LDN AT BALCONIES VACANT SITE FREEWAY WITH FW WALL ONLY

=====

TRAFFIC DATA

-----

| LANE NO. | AUTO |     | MEDIUM TRKS |     | HEAVY TRKS |     | DESCRIPTION      |
|----------|------|-----|-------------|-----|------------|-----|------------------|
|          | VPH  | MPH | VPH         | MPH | VPH        | MPH |                  |
| 1        | 8096 | 65  | 239         | 65  | 273        | 65  | SR125 NORTHBOUND |
| 2        | 8096 | 65  | 239         | 65  | 273        | 65  | SR125 SOUTHBOUND |

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LANE DATA

-----

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 60.0  | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | 60.0  | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | 60.0  | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | 60.0  | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | 60.0  | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | 60.0  | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | 60.0  | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | 60.0  | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | 60.0  | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | 60.0  | 328.0 | 157                 |
| 2        | 1        | NO         | -500.0 | -60.0 | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | -60.0 | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | -60.0 | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | -60.0 | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | -60.0 | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | -60.0 | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | -60.0 | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | -60.0 | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | -60.0 | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | -60.0 | 328.0 | 157                 |
|          |          |            | 934.0  | -60.0 | 328.0 | 157+40              |

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BARRIER DATA

-----

Barrier No. 1 Description: SR25 WALL  
 Type - (2) MASONRY  
 Light Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X | Y | GROUND (Z0) | TOP (Z) | BARRIER HEIGHTS AT ENDS |
|------|---|---|-------------|---------|-------------------------|
|------|---|---|-------------|---------|-------------------------|

|   |        |       |       |       |         |   |   |
|---|--------|-------|-------|-------|---------|---|---|
| 1 | -500.0 | 89.0  | 328.0 | 336.0 | *153    | * | 8 |
| 2 | 0.0    | 89.0  | 328.0 | 336.0 | *154+40 | * | 8 |
| 3 | 36.0   | 89.0  | 328.0 | 336.0 | *154+50 | * | 8 |
| 4 | 169.0  | 89.0  | 328.0 | 336.0 | *155    | * | 8 |
| 5 | 312.0  | 98.0  | 328.0 | 336.0 | *SITE   | * | 8 |
| 6 | 334.0  | 98.0  | 328.0 | 336.0 | *155+40 | * | 8 |
| 7 | 489.0  | 107.0 | 328.0 | 336.0 | *156    | * | 8 |
| 8 | 539.0  | 98.0  | 328.0 | 336.0 | *156+15 | * | 8 |
|   | 623.0  | 98.0  | 328.0 | 336.0 | *156+40 | * | 8 |

Barrier No. 2

Description: SR25 BERM

Type - (1) BERM

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

| SEG. | X     | Y    | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|------|----------------|------------|----------------------------|
| 1    | 623.0 | 98.0 | 328.0          | 336.0      | *156+40 * 8                |
| 2    | 809.0 | 98.0 | 328.0          | 336.0      | *157 * 8                   |
|      | 934.0 | 98.0 | 328.0          | 336.0      | *157+40 * 8                |

Barrier No. 3

Description: SWEETWATER MHP SOUTH WALL

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

| SEG. | X      | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|--------|-------|----------------|------------|----------------------------|
| 1    | -500.0 | 226.0 | 304.0          | 310.0      | *153 * 6                   |
| 2    | 0.0    | 226.0 | 304.0          | 310.0      | *154+40 * 6                |
| 3    | 36.0   | 226.0 | 304.0          | 310.0      | *154+50 * 6                |
| 4    | 169.0  | 226.0 | 308.0          | 314.0      | *155 * 6                   |
| 5    | 312.0  | 226.0 | 308.0          | 314.0      | *SITE * 6                  |
|      | 334.0  | 226.0 | 308.0          | 314.0      | *155+40 * 6                |

Barrier No. 4

Description: SWEETWATER WALL NORTH OF SITE

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 623.0 | 243.0 | 308.0          | 314.0      | *156+40 * 6                |
| 2    | 809.0 | 252.0 | 308.0          | 314.0      | *157 * 6                   |
|      | 934.0 | 252.0 | 308.0          | 314.0      | *157+40 * 6                |

# RECEIVER DATA

REC.

| NO. | X     | Y     | Z     | DNL | PEOPLE | ID    |
|-----|-------|-------|-------|-----|--------|-------|
| 1   | 377.0 | 274.0 | 322.1 | 67  | 500    | 8 BAL |
| 2   | 377.0 | 300.0 | 324.1 | 67  | 500    | 9 BAL |

|    |       |       |       |    |     |        |
|----|-------|-------|-------|----|-----|--------|
| 3  | 377.0 | 324.0 | 326.1 | 67 | 500 | 10 BAL |
| 4  | 377.0 | 338.0 | 328.1 | 67 | 500 | 11 BAL |
| 5  | 377.0 | 364.0 | 330.1 | 67 | 500 | 12 BAL |
| 6  | 377.0 | 396.0 | 332.1 | 67 | 500 | 13 BAL |
| 7  | 377.0 | 412.0 | 334.1 | 67 | 500 | 14 BAL |
| 8  | 376.0 | 462.0 | 337.0 | 67 | 500 | 15 BAL |
| 9  | 356.0 | 462.0 | 337.5 | 67 | 500 | 16 BAL |
| 10 | 329.0 | 462.0 | 338.0 | 67 | 500 | 17 BAL |

# DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

# K - CONSTANTS

ALL LANE RECEIVER/PAIRS = -4.7 DBA



SOUND32 - RELEASE 07/30/91

TITLE:

SITE FUTURE LDN AT BALCONIES VACANT SITE FREEWAY WITH FW WALL ONLY

EFFECTIVENESS / COST RATIOS

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7      |
|------------|---|-----|---|---|---|---|---|--------|
| 1          | - | 0.* |   |   |   |   |   | 153    |
| 2          | - | 0.* |   |   |   |   |   | 154+40 |
| 3          | - | 0.* |   |   |   |   |   | 154+50 |
| 4          | - | 0.* |   |   |   |   |   | 155    |
| 5          | - | 0.* |   |   |   |   |   | SITE   |
| 6          | - | 0.* |   |   |   |   |   | 155+40 |
| 7          | - | 0.* |   |   |   |   |   | 156    |
| 8          | - | 0.* |   |   |   |   |   | 156+15 |
| 9          | - | 0.* |   |   |   |   |   | 156+40 |
| 10         | - | 0.* |   |   |   |   |   | 157    |
| 11         | - | 0.* |   |   |   |   |   | 153    |
| 12         | - | 0.* |   |   |   |   |   | 154+40 |
| 13         | - | 0.* |   |   |   |   |   | 154+50 |
| 14         | - | 0.* |   |   |   |   |   | 155    |
| 15         | - | 0.* |   |   |   |   |   | SITE   |
| 16         | - | 0.* |   |   |   |   |   | 156+40 |
| 17         | - | 0.* |   |   |   |   |   | 157    |

0 1 2 3 4 5 6 7

BARRIER DATA

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| BAR<br>ELE | 0 | 1   | BARRIER HEIGHTS |  |  |  |  | 6 | 7 | BAR<br>ID | LENGTH | TYPE    |
|------------|---|-----|-----------------|--|--|--|--|---|---|-----------|--------|---------|
| 1          | - | 8.* |                 |  |  |  |  |   |   | 153       | 500.0  | MASONRY |
| 2          | - | 8.* |                 |  |  |  |  |   |   | 154+40    | 36.0   | MASONRY |
| 3          | - | 8.* |                 |  |  |  |  |   |   | 154+50    | 133.0  | MASONRY |
| 4          | - | 8.* |                 |  |  |  |  |   |   | 155       | 143.3  | MASONRY |
| 5          | - | 8.* |                 |  |  |  |  |   |   | SITE      | 22.0   | MASONRY |
| 6          | - | 8.* |                 |  |  |  |  |   |   | 155+40    | 155.3  | MASONRY |
| 7          | - | 8.* |                 |  |  |  |  |   |   | 156       | 50.8   | MASONRY |
| 8          | - | 8.* |                 |  |  |  |  |   |   | 156+15    | 84.0   | MASONRY |
| 9          | - | 8.* |                 |  |  |  |  |   |   | 156+40    | 186.0  | BERM    |
| 10         | - | 8.* |                 |  |  |  |  |   |   | 157       | 125.0  | BERM    |
| 11         | - | 6.* |                 |  |  |  |  |   |   | 153       | 500.0  | MASONRY |
| 12         | - | 6.* |                 |  |  |  |  |   |   | 154+40    | 36.0   | MASONRY |
| 13         | - | 6.* |                 |  |  |  |  |   |   | 154+50    | 133.1  | MASONRY |
| 14         | - | 6.* |                 |  |  |  |  |   |   | 155       | 143.0  | MASONRY |
| 15         | - | 6.* |                 |  |  |  |  |   |   | SITE      | 22.0   | MASONRY |

|    |   |     |        |       |         |
|----|---|-----|--------|-------|---------|
| 16 | - | 6.* | 156+40 | 186.2 | MASONRY |
| 17 | - | 6.* | 157    | 125.0 | MASONRY |

0 1 2 3 4 5 6 7

| LC | REC | ID  | DNL | PEOPLE | LEQ (CAL) |
|----|-----|-----|-----|--------|-----------|
| 1  | 8   | BAL | 67. | 500.   | 62.6      |
| 2  | 9   | BAL | 67. | 500.   | 62.6      |
| 3  | 10  | BAL | 67. | 500.   | 62.6      |
| 4  | 11  | BAL | 67. | 500.   | 62.6      |
| 5  | 12  | BAL | 67. | 500.   | 62.4      |
| 6  | 13  | BAL | 67. | 500.   | 62.1      |
| 7  | 14  | BAL | 67. | 500.   | 62.1      |
| 8  | 15  | BAL | 67. | 500.   | 61.5      |
| 9  | 16  | BAL | 67. | 500.   | 61.5      |
| 10 | 17  | BAL | 67. | 500.   | 61.6      |

| BARRIER TYPE   | COST    |
|----------------|---------|
| BERM           | 9019.   |
| MASONRY        | 138721. |
| MASONRY/JERSEY | 0.      |
| CONCRETE       | 0.      |

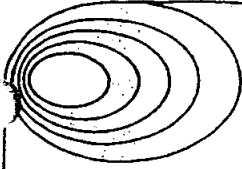
TOTAL COST = \$ 148000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 6. 6. 6. 6. 6. 6.



# **GORDON BRICKEN & ASSOCIATES**

**ACOUSTICAL and ENERGY ENGINEERS**

A P P E N D I X      1 0

**RUN 17S**

1621 East Seventeenth Street, Suite K  
Phone (714) 835-0249

Santa Ana, California 92705-8518  
FAX (714) 835-1957

INPUT DATA FILE : HOSS17S  
 BARRIER COST FILE : CALIF\$.DTA  
 DATE : 07-19-2006

FUTURE LDN AT BALCONCIES FOR SWEETWATER ALONE VACANT SITE

=====

TRAFFIC DATA

-----

| LANE NO. | AUTO VPH | MPH | MEDIUM TRKS VPH | MPH | HEAVY TRKS VPH | MPH | DESCRIPTION |
|----------|----------|-----|-----------------|-----|----------------|-----|-------------|
| 1        | 1977     | 55  | 95              | 55  | 38             | 55  | SWEETWATER  |

=====

LANE DATA

-----

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 178.0 | 304.0 | 153                 |
|          | 2        | NO         | 0.0    | 178.0 | 304.0 | 154+40              |
|          | 3        | NO         | 36.0   | 178.0 | 304.0 | 154+50              |
|          | 4        | NO         | 169.0  | 178.0 | 308.0 | 155                 |
|          | 5        | NO         | 312.0  | 182.0 | 308.0 | SITE                |
|          | 6        | NO         | 334.0  | 182.0 | 308.0 | 155+40              |
|          | 7        | NO         | 489.0  | 195.0 | 309.0 | 156                 |
|          | 8        | NO         | 539.0  | 195.0 | 309.0 | 156+15              |
|          | 9        | NO         | 623.0  | 195.0 | 309.0 | 156+40              |
|          | 10       | NO         | 809.0  | 204.0 | 309.0 | 157                 |
|          |          |            | 934.0  | 204.0 | 309.0 | 157+40              |

=====

BARRIER DATA

-----

Barrier No. 1 Description: SWEETWATER MHP SOUTH WALL  
 Type - (2)MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X      | Y     | GROUND (Z0) | TOP (Z) | BARRIER HEIGHTS AT ENDS |
|------|--------|-------|-------------|---------|-------------------------|
| 1    | -500.0 | 226.0 | 304.0       | 310.0   | *153 * 6                |
| 2    | 0.0    | 226.0 | 304.0       | 310.0   | *154+40 * 6             |
| 3    | 36.0   | 226.0 | 304.0       | 310.0   | *154+50 * 6             |
| 4    | 169.0  | 226.0 | 308.0       | 314.0   | *155 * 6                |
| 5    | 312.0  | 226.0 | 308.0       | 314.0   | *SITE * 6               |
|      | 334.0  | 226.0 | 308.0       | 314.0   | *155+40 * 6             |

-----

Barrier No. 2 Description: SWEETWATER WALL NORTH OF SITE  
 Type - (2)MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 623.0 | 243.0 | 308.0          | 314.0 *156+40 | * 6                        |
| 2    | 809.0 | 252.0 | 308.0          | 314.0 *157    | * 6                        |
|      | 934.0 | 252.0 | 308.0          | 314.0 *157+40 | * 6                        |

# RECEIVER DATA

## REC.

| NO. | X     | Y     | Z     | DNL | PEOPLE | ID     |
|-----|-------|-------|-------|-----|--------|--------|
| 1   | 377.0 | 274.0 | 322.1 | 67  | 500    | 8 BAL  |
| 2   | 377.0 | 300.0 | 324.1 | 67  | 500    | 9 BAL  |
| 3   | 377.0 | 324.0 | 326.1 | 67  | 500    | 10 BAL |
| 4   | 377.0 | 338.0 | 328.1 | 67  | 500    | 11 BAL |
| 5   | 377.0 | 364.0 | 330.1 | 67  | 500    | 12 BAL |
| 6   | 377.0 | 396.0 | 332.1 | 67  | 500    | 13 BAL |
| 7   | 377.0 | 412.0 | 334.1 | 67  | 500    | 14 BAL |
| 8   | 376.0 | 462.0 | 337.0 | 67  | 500    | 15 BAL |
| 9   | 356.0 | 462.0 | 337.5 | 67  | 500    | 16 BAL |
| 10  | 329.0 | 462.0 | 338.0 | 67  | 500    | 17 BAL |

## DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

## K - CONSTANTS

ALL LANE RECEIVER/PAIRS = -4.7 DBA

## TITLE:

FUTURE LDN AT BALCONCIES FOR SWEETWATER ALONE VACANT SITE

## EFFECTIVENESS / COST RATIOS

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7      |
|------------|---|-----|---|---|---|---|---|--------|
| 1          | - | 0.* |   |   |   |   |   | 153    |
| 2          | - | 0.* |   |   |   |   |   | 154+40 |
| 3          | - | 0.* |   |   |   |   |   | 154+50 |
| 4          | - | 0.* |   |   |   |   |   | 155    |
| 5          | - | 0.* |   |   |   |   |   | SITE   |
| 6          | - | 0.* |   |   |   |   |   | 156+40 |
| 7          | - | 0.* |   |   |   |   |   | 157    |

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|

## BARRIER DATA

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7 | BAR<br>ID | LENGTH | TYPE    |
|------------|---|-----|---|---|---|---|---|---|-----------|--------|---------|
| 1          | - | 6.* |   |   |   |   |   |   | 153       | 500.0  | MASONRY |
| 2          | - | 6.* |   |   |   |   |   |   | 154+40    | 36.0   | MASONRY |
| 3          | - | 6.* |   |   |   |   |   |   | 154+50    | 133.1  | MASONRY |
| 4          | - | 6.* |   |   |   |   |   |   | 155       | 143.0  | MASONRY |
| 5          | - | 6.* |   |   |   |   |   |   | SITE      | 22.0   | MASONRY |
| 6          | - | 6.* |   |   |   |   |   |   | 156+40    | 186.2  | MASONRY |
| 7          | - | 6.* |   |   |   |   |   |   | 157       | 125.0  | MASONRY |

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|

| REC | REC ID | DNL | PEOPLE | LEQ (CAL) |
|-----|--------|-----|--------|-----------|
| 1   | 8 BAL  | 67. | 500.   | 66.5      |
| 2   | 9 BAL  | 67. | 500.   | 64.9      |
| 3   | 10 BAL | 67. | 500.   | 63.7      |
| 4   | 11 BAL | 67. | 500.   | 63.2      |
| 5   | 12 BAL | 67. | 500.   | 62.2      |
| 6   | 13 BAL | 67. | 500.   | 61.2      |
| 7   | 14 BAL | 67. | 500.   | 60.8      |
| 8   | 15 BAL | 67. | 500.   | 59.5      |
| 9   | 16 BAL | 67. | 500.   | 59.2      |
| 10  | 17 BAL | 67. | 500.   | 59.1      |

| BARRIER TYPE   | COST   |
|----------------|--------|
| BERM           | 0.     |
| MASONRY        | 60242. |
| MASONRY/JERSEY | 0.     |

CONCRETE

0.

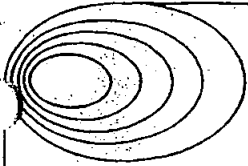
-----  
TOTAL COST = \$ 60000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

6. 6. 6. 6. 6. 6. 6.



# **GORDON BRICKEN & ASSOCIATES**

**ACOUSTICAL and ENERGY ENGINEERS**

**A P P E N D I X      1 1**

**RUN 18S**

1621 East Seventeenth Street, Suite K  
Phone (714) 835-0249

Santa Ana, California 92705-8518  
FAX (714) 835-1957



INPUT DATA FILE : HOSS18S  
 BARRIER COST FILE : CALIF\$.DTA  
 DATE : 07-19-2006

FUTURE LDN AT BALCONIES SWEETWATER ONLY VACANT SITE WITH BERM

=====

TRAFFIC DATA

-----

| LANE NO. | AUTO VPH | MPH | MEDIUM TRKS VPH | MPH | HEAVY TRKS VPH | MPH | DESCRIPTION |
|----------|----------|-----|-----------------|-----|----------------|-----|-------------|
| 1        | 1977     | 55  | 95              | 55  | 38             | 55  | SWEETWATER  |

=====

LANE DATA

-----

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 178.0 | 304.0 | 153                 |
|          | 2        | NO         | 0.0    | 178.0 | 304.0 | 154+40              |
|          | 3        | NO         | 36.0   | 178.0 | 304.0 | 154+50              |
|          | 4        | NO         | 169.0  | 178.0 | 308.0 | 155                 |
|          | 5        | NO         | 312.0  | 182.0 | 308.0 | SITE                |
|          | 6        | NO         | 334.0  | 182.0 | 308.0 | 155+40              |
|          | 7        | NO         | 489.0  | 195.0 | 309.0 | 156                 |
|          | 8        | NO         | 539.0  | 195.0 | 309.0 | 156+15              |
|          | 9        | NO         | 623.0  | 195.0 | 309.0 | 156+40              |
|          | 10       | NO         | 809.0  | 204.0 | 309.0 | 157                 |
|          |          |            | 934.0  | 204.0 | 309.0 | 157+40              |

=====

BARRIER DATA

-----

Barrier No. 1 Description: SWEETWATER MHP SOUTH WALL  
 Type (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X      | Y     | GROUND (Z0) | TOP (Z) | BARRIER HEIGHTS AT ENDS |
|------|--------|-------|-------------|---------|-------------------------|
| 1    | -500.0 | 226.0 | 304.0       | 310.0   | *153 * 6                |
| 2    | 0.0    | 226.0 | 304.0       | 310.0   | *154+40 * 6             |
| 3    | 36.0   | 226.0 | 304.0       | 310.0   | *154+50 * 6             |
| 4    | 169.0  | 226.0 | 308.0       | 314.0   | *155 * 6                |
| 5    | 312.0  | 226.0 | 308.0       | 314.0   | *SITE * 6               |
|      | 334.0  | 226.0 | 308.0       | 314.0   | *155+40 * 6             |

-----

Barrier No. 2 Description: SWEETWATER SITE BERM  
 Type (1) BERM  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG# | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 334.0 | 242.0 | 308.0          | 314.5 *155+40 | * 7                        |
| 2    | 489.0 | 255.0 | 308.0          | 315.0 *156    | * 7                        |
|      | 539.0 | 255.0 | 308.0          | 315.0 *156+15 | * 7                        |

Barrier No. 3 Description: SWEETWATER WALL NORTH OF SITE  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 623.0 | 243.0 | 308.0          | 314.0 *156+40 | * 6                        |
| 2    | 809.0 | 252.0 | 308.0          | 314.0 *157    | * 6                        |
|      | 934.0 | 252.0 | 308.0          | 314.0 *157+40 | * 6                        |

#### RECEIVER DATA

| REC.<br>NO. | X     | Y     | Z     | DNL PEOPLE | ID     |
|-------------|-------|-------|-------|------------|--------|
| 1           | 377.0 | 274.0 | 322.1 | 67 500     | 8 BAL  |
| 2           | 377.0 | 300.0 | 324.1 | 67 500     | 9 BAL  |
| 3           | 377.0 | 324.0 | 326.1 | 67 500     | 10 BAL |
| 4           | 377.0 | 338.0 | 328.1 | 67 500     | 11 BAL |
| 5           | 377.0 | 364.0 | 330.1 | 67 500     | 12 BAL |
| 6           | 377.0 | 396.0 | 332.1 | 67 500     | 13 BAL |
| 7           | 377.0 | 412.0 | 334.1 | 67 500     | 14 BAL |
| 8           | 376.0 | 462.0 | 337.0 | 67 500     | 15 BAL |
| 9           | 356.0 | 462.0 | 337.5 | 67 500     | 16 BAL |
| 10          | 329.0 | 462.0 | 338.0 | 67 500     | 17 BAL |

#### DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

#### K - CONSTANTS

ALL LANE RECEIVER/PAIRS = -4.7 DBA

## TITLE:

FUTURE LDN AT BALCONIES SWEETWATER ONLY VACANT SITE WITH BERM

## EFFECTIVENESS / COST RATIOS

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7 |        |
|------------|---|-----|---|---|---|---|---|---|--------|
| 1          | - | 0.* |   |   |   |   |   |   | 153    |
| 2          | - | 0.* |   |   |   |   |   |   | 154+40 |
| 3          | - | 0.* |   |   |   |   |   |   | 154+50 |
| 4          | - | 0.* |   |   |   |   |   |   | 155    |
| 5          | - | 0.* |   |   |   |   |   |   | SITE   |
| 6          | - | 0.* |   |   |   |   |   |   | 155+40 |
| 7          | - | 0.* |   |   |   |   |   |   | 156    |
| 8          | - | 0.* |   |   |   |   |   |   | 156+40 |
| 9          | - | 0.* |   |   |   |   |   |   | 157    |

0 1 2 3 4 5 6 7

## BARRIER DATA

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7 | BAR<br>ID | LENGTH | TYPE    |
|------------|---|-----|---|---|---|---|---|---|-----------|--------|---------|
| 1          | - | 6.* |   |   |   |   |   |   | 153       | 500.0  | MASONRY |
| 2          | - | 6.* |   |   |   |   |   |   | 154+40    | 36.0   | MASONRY |
| 3          | - | 6.* |   |   |   |   |   |   | 154+50    | 133.1  | MASONRY |
| 4          | - | 6.* |   |   |   |   |   |   | 155       | 143.0  | MASONRY |
| 5          | - | 6.* |   |   |   |   |   |   | SITE      | 22.0   | MASONRY |
| 6          | - | 7.* |   |   |   |   |   |   | 155+40    | 155.5  | BERM    |
| 7          | - | 7.* |   |   |   |   |   |   | 156       | 50.0   | BERM    |
| 8          | - | 6.* |   |   |   |   |   |   | 156+40    | 186.2  | MASONRY |
| 9          | - | 6.* |   |   |   |   |   |   | 157       | 125.0  | MASONRY |

0 1 2 3 4 5 6 7

| REC | REC ID | DNL | PEOPLE | LEQ (CAL) |
|-----|--------|-----|--------|-----------|
| 1   | 8 BAL  | 67. | 500.   | 63.7      |
| 2   | 9 BAL  | 67. | 500.   | 60.5      |
| 3   | 10 BAL | 67. | 500.   | 59.7      |
| 4   | 11 BAL | 67. | 500.   | 59.5      |
| 5   | 12 BAL | 67. | 500.   | 59.0      |
| 6   | 13 BAL | 67. | 500.   | 58.3      |
| 7   | 14 BAL | 67. | 500.   | 58.2      |
| 8   | 15 BAL | 67. | 500.   | 57.3      |
| 9   | 16 BAL | 67. | 500.   | 56.6      |
| 10  | 17 BAL | 67. | 500.   | 56.7      |

BARRIER TYPE COST

|                |        |
|----------------|--------|
| BERM           | 4739.  |
| MASONRY        | 60242. |
| MASONRY/JERSEY | 0.     |
| CONCRETE       | 0.     |

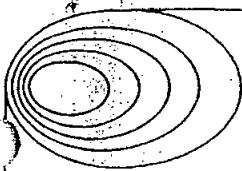
TOTAL COST = \$ 65000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

6. 6. 6. 6. 6. 7. 7. 6. 6.



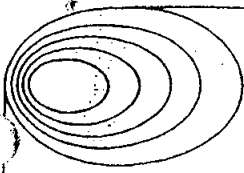
# **GORDON BRICKEN & ASSOCIATES**

**ACOUSTICAL and ENERGY ENGINEERS**

**A P P E N D I X      1 2**

**RUN 23SA**

1621 East Seventeenth Street, Suite K      Santa Ana, California 92705-8518  
Phone (714) 835-0249      FAX (714) 835-1957



# **GORDON BRICKEN & ASSOCIATES**

**ACOUSTICAL and ENERGY ENGINEERS**

A P P E N D I X      1 2

**RUN 23SA**

1621 East Seventeenth Street, Suite K      Santa Ana, California 92705-8518  
Phone (714) 835-0249      FAX (714) 835-1957

\* \* SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) \* \*

INPUT DATA FILE : HOSS23SA  
BARRIER COST FILE : CALIF\$.DTA  
DATE : 07-20-2006

FUTURE LDN/BALCONIES/BUILT SITE/NO FW OR SW WALLS/BERMS UNITS 8-13 FW ONLY

=====

TRAFFIC DATA

| LANE NO. | AUTO |     | MEDIUM TRKS |     | HEAVY TRKS |     | DESCRIPTION      |
|----------|------|-----|-------------|-----|------------|-----|------------------|
|          | VPH  | MPH | VPH         | MPH | VPH        | MPH |                  |
| 1        | 8096 | 65  | 239         | 65  | 273        | 65  | SR125 NORTHBOUND |
| 2        | 8096 | 65  | 239         | 65  | 273        | 65  | SR125 SOUTHBOUND |

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LANE DATA

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 60.0  | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | 60.0  | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | 60.0  | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | 60.0  | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | 60.0  | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | 60.0  | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | 60.0  | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | 60.0  | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | 60.0  | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | 60.0  | 328.0 | 157                 |
|          |          |            | 934.0  | 60.0  | 328.0 | 157+40              |
| 2        | 1        | NO         | -500.0 | -60.0 | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | -60.0 | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | -60.0 | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | -60.0 | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | -60.0 | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | -60.0 | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | -60.0 | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | -60.0 | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | -60.0 | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | -60.0 | 328.0 | 157                 |
|          |          |            | 934.0  | -60.0 | 328.0 | 157+40              |

=====

BARRIER DATA

Barrier No. 1 Description: SWEETWATER MHP SOUTH WALL  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X | Y | GROUND (Z0) | TOP (Z) | BARRIER HEIGHTS AT ENDS |
|------|---|---|-------------|---------|-------------------------|
|------|---|---|-------------|---------|-------------------------|

|   |        |       |       |       |         |   |   |
|---|--------|-------|-------|-------|---------|---|---|
| 1 | -500.0 | 226.0 | 304.0 | 310.0 | *153    | * | 6 |
| 2 | 0.0    | 226.0 | 304.0 | 310.0 | *154+40 | * | 6 |
| 3 | 36.0   | 226.0 | 304.0 | 310.0 | *154+50 | * | 6 |
| 4 | 169.0  | 226.0 | 308.0 | 314.0 | *155    | * | 6 |
| 5 | 312.0  | 226.0 | 308.0 | 314.0 | *SITE   | * | 6 |
|   | 334.0  | 226.0 | 308.0 | 314.0 | *155+40 | * | 6 |

Barrier No. 2 Description: SWEETWATER WALL NORTH OF SITE  
 Type - (2)MASONRY  
 Height Increment (DELZ)= 0.0 No. Height Changes (P)=0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 623.0 | 243.0 | 308.0          | 314.0      | *156+40 * 6                |
| 2    | 809.0 | 252.0 | 308.0          | 314.0      | *157 * 6                   |
|      | 934.0 | 252.0 | 308.0          | 314.0      | *157+40 * 6                |

Barrier No. 3 Description: NORTH SIDE BLDG 1  
 Type - (2)MASONRY  
 Height Increment (DELZ)= 0.0 No. Height Changes (P)=0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 372.0 | 254.0 | 307.6          | 327.6      | *B3 P1 * 20                |
|      | 372.0 | 433.0 | 319.0          | 339.0      | *B3 P2 * 20                |

Barrier No. 4 Description: UNIT 8/9/10 BLDG  
 Type - (2)MASONRY  
 Height Increment (DELZ)= 0.0 No. Height Changes (P)=0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 317.0 | 467.0 | 323.0          | 343.0      | *B4 P1 * 20                |
|      | 392.0 | 467.0 | 323.0          | 343.0      | *B4 P2 * 20                |

Barrier No. 5 Description: WING ALL 8 WEST  
 Type - (2)MASONRY  
 Height Increment (DELZ)= 0.0 No. Height Changes (P)=0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 372.0 | 267.0 | 307.0          | 327.0      | *B5 P1 * 20                |
|      | 382.0 | 267.0 | 307.0          | 327.0      | *B5 P2 * 20                |

Barrier No. 6 Description: WING ALL 8 EAST  
 Type - (2)MASONRY  
 Height Increment (DELZ)= 0.0 No. Height Changes (P)=0

| SEG. | X | Y | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|---|---|----------------|------------|----------------------------|
|------|---|---|----------------|------------|----------------------------|



|   |       |       |       |              |      |
|---|-------|-------|-------|--------------|------|
| 1 | 372.0 | 283.0 | 307.0 | 327.0 *B6 P1 | * 20 |
|   | 382.0 | 283.0 | 307.0 | 327.0 *B6 P2 | * 20 |

Barrier No. 7 Description: WING ALL 9 WEST  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 372.0 | 296.0 | 309.0          | 329.0 *B7 P1 | * 20                       |
|      | 382.0 | 296.0 | 309.0          | 329.0 *B7 P2 | * 20                       |

Barrier No. 8 Description: WING ALL 9 EAST/10 WEST  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 372.0 | 316.0 | 309.0          | 329.0 *B8 P1 | * 20                       |
|      | 382.0 | 316.0 | 309.0          | 329.0 *B8 P2 | * 20                       |

Barrier No. 9 Description: WING ALL 10 EAST  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 372.0 | 336.0 | 311.0          | 331.0 *B9 P1 | * 20                       |
|      | 382.0 | 336.0 | 311.0          | 323.0 *B9 P2 | * 12                       |

Barrier No. 10 Description: WING ALL 11 WEST  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 346.0 | 313.0          | 333.0 *B10 P1 | * 20                       |
|      | 382.0 | 346.0 | 313.0          | 333.0 *B10 P2 | * 20                       |

Barrier No. 11 Description: WING ALL 11 EAST/12 WEST  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 365.0 | 313.0          | 333.0 *B11 P1 | * 20                       |
|      | 382.0 | 365.0 | 313.0          | 333.0 *B11 P2 | * 20                       |

Barrier No. 12 Description: WING ALL 12 EAST  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 387.0 | 315.0          | 335.0 *B12 P1 | * 20                       |
|      | 382.0 | 387.0 | 315.0          | 335.0 *B12 P2 | * 20                       |

Barrier No. 13 Description: WING ALL 13 WEST  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 395.0 | 317.0          | 337.0 *B13 P1 | * 20                       |
|      | 382.0 | 395.0 | 317.0          | 337.0 *B13 P2 | * 20                       |

Barrier No. 14 Description: WING ALL 13 EAST/14 WEST  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 414.0 | 317.0          | 337.0 *B14 P1 | * 20                       |
|      | 382.0 | 414.0 | 317.0          | 337.0 *B14 P2 | * 20                       |

Barrier No. 15 Description: BAL 8 42" WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 382.0 | 267.0 | 307.0          | 320.5 *B15 P1 | * 14                       |
|      | 382.0 | 283.0 | 307.0          | 320.5 *B15 P2 | * 14                       |

Barrier No. 16 Description: BAL 9 42" WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 382.0 | 296.0 | 309.0          | 322.5 *B16 P1 | * 14                       |
|      | 382.0 | 316.0 | 309.0          | 322.5 *B16 P2 | * 14                       |

Barrier No. 17 Description: BAL 10 42" WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| GROUND | TOP | BARRIER |
|--------|-----|---------|
|--------|-----|---------|

| SEG. | X | Y | (Z0) | (Z) | HEIGHTS AT ENDS |
|------|---|---|------|-----|-----------------|
|------|---|---|------|-----|-----------------|

|   |       |       |       |               |      |
|---|-------|-------|-------|---------------|------|
| 1 | 382.0 | 316.0 | 312.0 | 325.5 *B17 P1 | * 14 |
|   | 382.0 | 336.0 | 312.0 | 325.5 *B17 P2 | * 14 |

Barrier No. 18 Description: BAL 11 42" WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X | Y | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|---|---|----------------|------------|----------------------------|
|------|---|---|----------------|------------|----------------------------|

|   |       |       |       |               |      |
|---|-------|-------|-------|---------------|------|
| 1 | 382.0 | 346.0 | 313.0 | 326.5 *B18 P1 | * 14 |
|   | 382.0 | 365.0 | 313.0 | 326.5 *B18 P2 | * 14 |

Barrier No. 19 Description: BAL 12 42" WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X | Y | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|---|---|----------------|------------|----------------------------|
|------|---|---|----------------|------------|----------------------------|

|   |       |       |       |               |      |
|---|-------|-------|-------|---------------|------|
| 1 | 382.0 | 365.0 | 315.0 | 328.5 *B19 P1 | * 14 |
|   | 382.0 | 387.0 | 315.0 | 328.5 *B19 P2 | * 14 |

Barrier No. 20 Description: BAL 13 42" WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X | Y | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|---|---|----------------|------------|----------------------------|
|------|---|---|----------------|------------|----------------------------|

|   |       |       |       |               |      |
|---|-------|-------|-------|---------------|------|
| 1 | 382.0 | 395.0 | 317.0 | 330.5 *B20 P1 | * 14 |
|   | 382.0 | 414.0 | 317.0 | 330.5 *B20 P2 | * 14 |

# RECEIVER DATA

| REC.<br>NO. | X     | Y     | Z     | DNL PEOPLE | ID     |
|-------------|-------|-------|-------|------------|--------|
| 1           | 377.0 | 274.0 | 322.1 | 67 500     | 8 BAL  |
| 2           | 377.0 | 306.0 | 324.1 | 67 500     | 9 BAL  |
| 3           | 377.0 | 324.0 | 326.1 | 67 500     | 10 BAL |
| 4           | 377.0 | 353.0 | 328.1 | 67 500     | 11 BAL |
| 5           | 377.0 | 364.0 | 330.1 | 67 500     | 12 BAL |
| 6           | 377.0 | 405.0 | 332.1 | 67 500     | 13 BAL |

# DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

K - CONSTANTS

-----  
ALL LANE RECEIVER/PAIRS = -4.7 DBA  
=====

SOUND32 - RELEASE 07/30/91

TITLE:

FUTURE LDN/BALCONIES/BUILT SITE/NO FW OR SW WALLS/BERMS UNITS 8-13 FW ONLY

EFFECTIVENESS / COST RATIOS

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7      |
|------------|---|-----|---|---|---|---|---|--------|
| 1          | - | 0.* |   |   |   |   |   | 153    |
| 2          | - | 0.* |   |   |   |   |   | 154+40 |
| 3          | - | 0.* |   |   |   |   |   | 154+50 |
| 4          | - | 0.* |   |   |   |   |   | 155    |
| 5          | - | 0.* |   |   |   |   |   | SITE   |
| 6          | - | 0.* |   |   |   |   |   | 156+40 |
| 7          | - | 0.* |   |   |   |   |   | 157    |
| 8          | - | 0.* |   |   |   |   |   | B3 P1  |
| 9          | - | 0.* |   |   |   |   |   | B4 P1  |
| 10         | - | 0.* |   |   |   |   |   | B5 P1  |
| 11         | - | 0.* |   |   |   |   |   | B6 P1  |
| 12         | - | 0.* |   |   |   |   |   | B7 P1  |
| 13         | - | 0.* |   |   |   |   |   | B8 P1  |
| 14         | - | 0.* |   |   |   |   |   | B9 P1  |
| 15         | - | 0.* |   |   |   |   |   | B10 P1 |
| 16         | - | 0.* |   |   |   |   |   | B11 P1 |
| 17         | - | 0.* |   |   |   |   |   | B12 P1 |
| 18         | - | 0.* |   |   |   |   |   | B13 P1 |
| 19         | - | 0.* |   |   |   |   |   | B14 P1 |
| 20         | - | 0.* |   |   |   |   |   | B15 P1 |
| 21         | - | 0.* |   |   |   |   |   | B16 P1 |
| 22         | - | 0.* |   |   |   |   |   | B17 P1 |
| 23         | - | 0.* |   |   |   |   |   | B18 P1 |
| 24         | - | 0.* |   |   |   |   |   | B19 P1 |
| 25         | - | 0.* |   |   |   |   |   | B20 P1 |
|            | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7      |

BARRIER DATA  
\*\*\*\*\*

| BAR<br>ELE | 0 | 1    | BARRIER HEIGHTS |  |  |  |  | 6 | 7 | BAR<br>ID | LENGTH | TYPE    |
|------------|---|------|-----------------|--|--|--|--|---|---|-----------|--------|---------|
| 1          | - | 6.*  |                 |  |  |  |  |   |   | 153       | 500.0  | MASONRY |
| 2          | - | 6.*  |                 |  |  |  |  |   |   | 154+40    | 36.0   | MASONRY |
| 3          | - | 6.*  |                 |  |  |  |  |   |   | 154+50    | 133.1  | MASONRY |
| 4          | - | 6.*  |                 |  |  |  |  |   |   | 155       | 143.0  | MASONRY |
| 5          | - | 6.*  |                 |  |  |  |  |   |   | SITE      | 22.0   | MASONRY |
| 6          | - | 6.*  |                 |  |  |  |  |   |   | 156+40    | 186.2  | MASONRY |
| 7          | - | 6.*  |                 |  |  |  |  |   |   | 157       | 125.0  | MASONRY |
| 8          | - | 20.* |                 |  |  |  |  |   |   | B3 P1     | 179.4  | MASONRY |
| 9          | - | 20.* |                 |  |  |  |  |   |   | B4 P1     | 75.0   | MASONRY |
| 10         | - | 20.* |                 |  |  |  |  |   |   | B5 P1     | 10.0   | MASONRY |
| 11         | - | 20.* |                 |  |  |  |  |   |   | B6 P1     | 10.0   | MASONRY |
| 12         | - | 20.* |                 |  |  |  |  |   |   | B7 P1     | 10.0   | MASONRY |
| 13         | - | 20.* |                 |  |  |  |  |   |   | B8 P1     | 10.0   | MASONRY |
| 14         | - | 16.* |                 |  |  |  |  |   |   | B9 P1     | 12.8   | MASONRY |
| 15         | - | 20.* |                 |  |  |  |  |   |   | B10 P1    | 10.0   | MASONRY |
| 16         | - | 20.* |                 |  |  |  |  |   |   | B11 P1    | 10.0   | MASONRY |
| 17         | - | 20.* |                 |  |  |  |  |   |   | B12 P1    | 10.0   | MASONRY |
| 18         | - | 20.* |                 |  |  |  |  |   |   | B13 P1    | 10.0   | MASONRY |
| 19         | - | 20.* |                 |  |  |  |  |   |   | B14 P1    | 10.0   | MASONRY |
| 20         | - | 14.* |                 |  |  |  |  |   |   | B15 P1    | 16.0   | MASONRY |
| 21         | - | 14.* |                 |  |  |  |  |   |   | B16 P1    | 20.0   | MASONRY |
| 22         | - | 14.* |                 |  |  |  |  |   |   | B17 P1    | 20.0   | MASONRY |
| 23         | - | 14.* |                 |  |  |  |  |   |   | B18 P1    | 19.0   | MASONRY |
| 24         | - | 14.* |                 |  |  |  |  |   |   | B19 P1    | 22.0   | MASONRY |
| 25         | - | 14.* |                 |  |  |  |  |   |   | B20 P1    | 19.0   | MASONRY |

| 1 | REC | REC ID | DNL | PEOPLE | LEQ(CAL) |
|---|-----|--------|-----|--------|----------|
| 1 | 8   | BAL    | 67. | 500.   | 66.2     |
| 2 | 9   | BAL    | 67. | 500.   | 65.8     |
| 3 | 10  | BAL    | 67. | 500.   | 62.8     |
| 4 | 11  | BAL    | 67. | 500.   | 63.2     |
| 5 | 12  | BAL    | 67. | 500.   | 66.9     |

## BARRIER DATA

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| BAR<br>ELE | 0 | 1    | 2 | 3 | 4 | 5 | 6 | 7 | BAR<br>ID | LENGTH | TYPE    |
|------------|---|------|---|---|---|---|---|---|-----------|--------|---------|
| 1          | - | 6.*  |   |   |   |   |   |   | 153       | 500.0  | MASONRY |
| 2          | - | 6.*  |   |   |   |   |   |   | 154+40    | 36.0   | MASONRY |
| 3          | - | 6.*  |   |   |   |   |   |   | 154+50    | 133.1  | MASONRY |
| 4          | - | 6.*  |   |   |   |   |   |   | 155       | 143.0  | MASONRY |
| 5          | - | 6.*  |   |   |   |   |   |   | SITE      | 22.0   | MASONRY |
| 6          | - | 6.*  |   |   |   |   |   |   | 156+40    | 186.2  | MASONRY |
| 7          | - | 6.*  |   |   |   |   |   |   | 157       | 125.0  | MASONRY |
| 8          | - | 20.* |   |   |   |   |   |   | B3 P1     | 179.4  | MASONRY |
| 9          | - | 20.* |   |   |   |   |   |   | B4 P1     | 75.0   | MASONRY |
| 10         | - | 20.* |   |   |   |   |   |   | B5 P1     | 10.0   | MASONRY |
| 11         | - | 20.* |   |   |   |   |   |   | B6 P1     | 10.0   | MASONRY |
| 12         | - | 20.* |   |   |   |   |   |   | B7 P1     | 10.0   | MASONRY |
| 13         | - | 20.* |   |   |   |   |   |   | B8 P1     | 10.0   | MASONRY |
| 14         | - | 16.* |   |   |   |   |   |   | B9 P1     | 12.8   | MASONRY |
| 15         | - | 20.* |   |   |   |   |   |   | B10 P1    | 10.0   | MASONRY |
| 16         | - | 20.* |   |   |   |   |   |   | B11 P1    | 10.0   | MASONRY |
| 17         | - | 20.* |   |   |   |   |   |   | B12 P1    | 10.0   | MASONRY |
| 18         | - | 20.* |   |   |   |   |   |   | B13 P1    | 10.0   | MASONRY |
| 19         | - | 20.* |   |   |   |   |   |   | B14 P1    | 10.0   | MASONRY |
| 20         | - | 14.* |   |   |   |   |   |   | B15 P1    | 16.0   | MASONRY |
| 21         | - | 14.* |   |   |   |   |   |   | B16 P1    | 20.0   | MASONRY |
| 22         | - | 14.* |   |   |   |   |   |   | B17 P1    | 20.0   | MASONRY |
| 23         | - | 14.* |   |   |   |   |   |   | B18 P1    | 19.0   | MASONRY |
| 24         | - | 14.* |   |   |   |   |   |   | B19 P1    | 22.0   | MASONRY |
| 25         | - | 14.* |   |   |   |   |   |   | B20 P1    | 19.0   | MASONRY |

0 1 2 3 4 5 6 7

1 REC REC ID DNL PEOPLE LEQ(CAL)

|   |    |     |     |      |      |
|---|----|-----|-----|------|------|
| 1 | 8  | BAL | 67. | 500. | 66.2 |
| 2 | 9  | BAL | 67. | 500. | 65.8 |
| 3 | 10 | BAL | 67. | 500. | 62.8 |
| 4 | 11 | BAL | 67. | 500. | 63.2 |
| 5 | 12 | BAL | 67. | 500. | 66.9 |

6 13 BAL 67. 500. 62.6

BARRIER TYPE COST

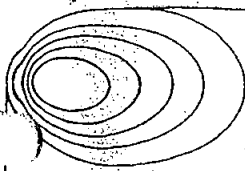
JERSEY 0.  
MASONRY 149337.  
MASONRY/JERSEY 0.  
CONCRETE 0.

TOTAL COST = \$ 149000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1  
CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION  
6. 6. 6. 6. 6. 6. 6. 20. 20. 20. 20. 20. 20. 16. 20. 20. 20. 20. 20. 14. 14. 14. 14. 14.





# **GORDON BRICKEN & ASSOCIATES**

**ACOUSTICAL and ENERGY ENGINEERS**

A P P E N D I X      1 3

RUN 24SA

1621 East Seventeenth Street, Suite K  
Phone (714) 835-0249

Santa Ana, California 92705-8518  
FAX (714) 835-1957

\* \* SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) \* \*

INPUT DATA FILE : HOSS24SA  
 PRIER COST FILE : CALIF\$.DTA  
 DATE : 07-20-2006

FUTURE LDN/BALCONIES/BUILT SITE/NO FW OR SW WALLS/BERMS UNITS 8-13 SW ONLY

=====

TRAFFIC DATA

| LANE NO. | AUTO VPH | MPH | MEDIUM TRKS VPH | MPH | HEAVY TRKS VPH | MPH | DESCRIPTION |
|----------|----------|-----|-----------------|-----|----------------|-----|-------------|
| 1        | 1977     | 55  | 95              | 55  | 38             | 55  | SWEETWATER  |

=====

LANE DATA

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 178.0 | 304.0 | 153                 |
|          | 2        | NO         | 0.0    | 178.0 | 304.0 | 154+40              |
|          | 3        | NO         | 36.0   | 178.0 | 304.0 | 154+50              |
|          | 4        | NO         | 169.0  | 178.0 | 308.0 | 155                 |
|          | 5        | NO         | 312.0  | 182.0 | 308.0 | SITE                |
|          | 6        | NO         | 334.0  | 182.0 | 308.0 | 155+40              |
|          | 7        | NO         | 489.0  | 195.0 | 309.0 | 156                 |
|          | 8        | NO         | 539.0  | 195.0 | 309.0 | 156+15              |
|          | 9        | NO         | 623.0  | 195.0 | 309.0 | 156+40              |
|          | 10       | NO         | 809.0  | 204.0 | 309.0 | 157                 |
|          |          |            | 934.0  | 204.0 | 309.0 | 157+40              |

=====

BARRIER DATA

Barrier No. 1 Description: SWEETWATER MHP SOUTH WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X      | Y     | GROUND (Z0) | TOP (Z) | BARRIER HEIGHTS AT ENDS |
|------|--------|-------|-------------|---------|-------------------------|
| 1    | -500.0 | 226.0 | 304.0       | 310.0   | *153 * 6                |
| 2    | 0.0    | 226.0 | 304.0       | 310.0   | *154+40 * 6             |
| 3    | 36.0   | 226.0 | 304.0       | 310.0   | *154+50 * 6             |
| 4    | 169.0  | 226.0 | 308.0       | 314.0   | *155 * 6                |
| 5    | 312.0  | 226.0 | 308.0       | 314.0   | *SITE * 6               |
|      | 334.0  | 226.0 | 308.0       | 314.0   | *155+40 * 6             |

=====

Barrier No. 2 Description: SWEETWATER WALL NORTH OF SITE  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 623.0 | 243.0 | 308.0          | 314.0 *156+40 | * 6                        |
| 2    | 809.0 | 252.0 | 308.0          | 314.0 *157    | * 6                        |
|      | 934.0 | 252.0 | 308.0          | 314.0 *157+40 | * 6                        |

Barrier No. 3 Description: NORTH SIDE BLDG 1  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 372.0 | 254.0 | 307.6          | 327.6 *B3 P1 | * 20                       |
|      | 372.0 | 433.0 | 319.0          | 339.0 *B3 P2 | * 20                       |

Barrier No. 4 Description: UNIT 8/9/10 BLDG  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 317.0 | 467.0 | 323.0          | 343.0 *B4 P1 | * 20                       |
|      | 392.0 | 467.0 | 323.0          | 343.0 *B4 P2 | * 20                       |

Barrier No. 5 Description: WING ALL 8 WEST  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 372.0 | 267.0 | 307.0          | 327.0 *B5 P1 | * 20                       |
|      | 382.0 | 267.0 | 307.0          | 327.0 *B5 P2 | * 20                       |

Barrier No. 6 Description: WING ALL 8 EAST  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 372.0 | 283.0 | 307.0          | 327.0 *B6 P1 | * 20                       |
|      | 382.0 | 283.0 | 307.0          | 327.0 *B6 P2 | * 20                       |

Barrier No. 7 Description: WING ALL 9 WEST  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 372.0 | 296.0 | 309.0          | 329.0 *B7 P1 | * 20                       |

382.0

296.0

309.0

329.0 \*B7 P2 \* 20

Barrier No. 8

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

Description: WING ALL 9 EAST/10 WEST

No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 372.0 | 316.0 | 309.0          | 329.0 *B8 P1 | * 20                       |
|      | 382.0 | 316.0 | 309.0          | 329.0 *B8 P2 | * 20                       |

Barrier No. 9

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

Description: WING ALL 10 EAST

No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 372.0 | 336.0 | 311.0          | 331.0 *B9 P1 | * 20                       |
|      | 382.0 | 336.0 | 311.0          | 323.0 *B9 P2 | * 12                       |

Barrier No. 10

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

Description: WING ALL 11 WEST

No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 346.0 | 313.0          | 333.0 *B10 P1 | * 20                       |
|      | 382.0 | 346.0 | 313.0          | 333.0 *B10 P2 | * 20                       |

Barrier No. 11

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

Description: WING ALL 11 EAST/12 WEST

No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 365.0 | 313.0          | 333.0 *B11 P1 | * 20                       |
|      | 382.0 | 365.0 | 313.0          | 333.0 *B11 P2 | * 20                       |

Barrier No. 12

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

Description: WING ALL 12 EAST

No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 387.0 | 315.0          | 335.0 *B12 P1 | * 20                       |
|      | 382.0 | 387.0 | 315.0          | 335.0 *B12 P2 | * 20                       |

Barrier No. 13

Type - (2) MASONRY

Description: WING ALL 13 WEST

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 395.0 | 317.0          | 337.0 *B13 P1 | * 20                       |
|      | 382.0 | 395.0 | 317.0          | 337.0 *B13 P2 | * 20                       |

Barrier No. 14

Description: WING ALL 13 EAST/14 WEST

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 414.0 | 317.0          | 337.0 *B14 P1 | * 20                       |
|      | 382.0 | 414.0 | 317.0          | 337.0 *B14 P2 | * 20                       |

Barrier No. 15

Description: BAL 8 42" WALL

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 382.0 | 267.0 | 307.0          | 320.5 *B15 P1 | * 14                       |
|      | 382.0 | 283.0 | 307.0          | 320.5 *B15 P2 | * 14                       |

Barrier No. 16

Description: BAL 9 42" WALL

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 382.0 | 296.0 | 309.0          | 322.5 *B16 P1 | * 14                       |
|      | 382.0 | 316.0 | 309.0          | 322.5 *B16 P2 | * 14                       |

Barrier No. 17

Description: BAL 10 42" WALL

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 382.0 | 316.0 | 312.0          | 325.5 *B17 P1 | * 14                       |
|      | 382.0 | 336.0 | 312.0          | 325.5 *B17 P2 | * 14                       |

Barrier No. 18

Description: BAL 11 42" WALL

Type - (2) MASONRY

Height Increment (DELZ) = 0.0

No. Height Changes (P) = 0

| SEG. | X | Y | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|---|---|----------------|------------|----------------------------|
|------|---|---|----------------|------------|----------------------------|

|   |       |       |       |               |      |
|---|-------|-------|-------|---------------|------|
| 1 | 382.0 | 346.0 | 313.0 | 326.5 *B18 P1 | * 14 |
|   | 382.0 | 365.0 | 313.0 | 326.5 *B18 P2 | * 14 |

Barrier No. 19 Description: BAL 12 42" WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 382.0 | 365.0 | 315.0          | 328.5 *B19 P1 | * 14                       |
|      | 382.0 | 387.0 | 315.0          | 328.5 *B19 P2 | * 14                       |

Barrier No. 20 Description: BAL 13 42" WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 382.0 | 395.0 | 317.0          | 330.5 *B20 P1 | * 14                       |
|      | 382.0 | 414.0 | 317.0          | 330.5 *B20 P2 | * 14                       |

#### RECEIVER DATA

|   | X     | Y     | Z     | DNL | PEOPLE | ID     |
|---|-------|-------|-------|-----|--------|--------|
| 1 | 377.0 | 274.0 | 322.1 | 67  | 500    | 8 BAL  |
| 2 | 377.0 | 306.0 | 324.1 | 67  | 500    | 9 BAL  |
| 3 | 377.0 | 324.0 | 326.1 | 67  | 500    | 10 BAL |
| 4 | 377.0 | 353.0 | 328.1 | 67  | 500    | 11 BAL |
| 5 | 377.0 | 364.0 | 330.1 | 67  | 500    | 12 BAL |
| 6 | 377.0 | 405.0 | 332.1 | 67  | 500    | 13 BAL |

#### DROP-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

#### K - CONSTANTS

ALL LANE RECEIVER/PAIRS = -4.7 DBA

SOUND32 - RELEASE 07/30/91

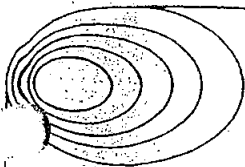
TITLE:

FUTURE LDN/BALCONIES/BUILT SITE/NO FW OR SW WALLS/BERMS UNITS 8-13 SW ONLY

EFFECTIVENESS / COST RATIOS

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7      |
|------------|---|-----|---|---|---|---|---|--------|
| 1          | - | 0.* |   |   |   |   |   | 153    |
| 2          | - | 0.* |   |   |   |   |   | 154+40 |
| 3          | - | 0.* |   |   |   |   |   | 154+50 |
| 4          | - | 0.* |   |   |   |   |   | 155    |
| 5          | - | 0.* |   |   |   |   |   | SITE   |
| 6          | - | 0.* |   |   |   |   |   | 156+40 |
| 7          | - | 0.* |   |   |   |   |   | 157    |
| 8          | - | 0.* |   |   |   |   |   | B3 P1  |
| 9          | - | 0.* |   |   |   |   |   | B4 P1  |
| 10         | - | 0.* |   |   |   |   |   | B5 P1  |
| 11         | - | 0.* |   |   |   |   |   | B6 P1  |
| 12         | - | 0.* |   |   |   |   |   | B7 P1  |
| 13         | - | 0.* |   |   |   |   |   | B8 P1  |
| 14         | - | 0.* |   |   |   |   |   | B9 P1  |
| 15         | - | 0.* |   |   |   |   |   | B10 P1 |
| 16         | - | 0.* |   |   |   |   |   | B11 P1 |
| 17         | - | 0.* |   |   |   |   |   | B12 P1 |
| 18         | - | 0.* |   |   |   |   |   | B13 P1 |
| 19         | - | 0.* |   |   |   |   |   | B14 P1 |
| 20         | - | 0.* |   |   |   |   |   | B15 P1 |
| 21         | - | 0.* |   |   |   |   |   | B16 P1 |
| 22         | - | 0.* |   |   |   |   |   | B17 P1 |
| 23         | - | 0.* |   |   |   |   |   | B18 P1 |
| 24         | - | 0.* |   |   |   |   |   | B19 P1 |
| 25         | - | 0.* |   |   |   |   |   | B20 P1 |
|            | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7      |



# GORDON BRICKEN & ASSOCIATES

ACOUSTICAL and ENERGY ENGINEERS

A P P E N D I X 1 4

RUN 25SB

1621 East Seventeenth Street, Suite K  
Phone (714) 835-0249

Santa Ana, California 92705-8518  
FAX (714) 835-1957



\* \* SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) \* \*

INPUT DATA FILE : HOSS25SB  
 BARRIER COST FILE : CALIF\$ DTA  
 DATE : 07-20-2006

LDN/BALCONIES/BUILT/NO FW OR SW WALLS/BERMS UNITS 14-17/15-17 60"/SW ONLY

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TRAFFIC DATA

| LANE NO. | AUTO VPH | MPH | MEDIUM TRKS VPH | MPH | HEAVY TRKS VPH | MPH | DESCRIPTION |
|----------|----------|-----|-----------------|-----|----------------|-----|-------------|
| 1        | 1977     | 55  | 95              | 55  | 38             | 55  | SWEETWATER  |

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LANE DATA

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 178.0 | 304.0 | 153                 |
|          | 2        | NO         | 0.0    | 178.0 | 304.0 | 154+40              |
|          | 3        | NO         | 36.0   | 178.0 | 304.0 | 154+50              |
|          | 4        | NO         | 169.0  | 178.0 | 308.0 | 155                 |
|          | 5        | NO         | 312.0  | 182.0 | 308.0 | SITE                |
|          | 6        | NO         | 334.0  | 182.0 | 308.0 | 155+40              |
|          | 7        | NO         | 489.0  | 195.0 | 309.0 | 156                 |
|          | 8        | NO         | 539.0  | 195.0 | 309.0 | 156+15              |
|          | 9        | NO         | 623.0  | 195.0 | 309.0 | 156+40              |
|          | 10       | NO         | 809.0  | 204.0 | 309.0 | 157                 |
|          |          |            | 934.0  | 204.0 | 309.0 | 157+40              |

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BARRIER DATA

Barrier No. 1 Description: SWEETWATER MHP SOUTH WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X      | Y     | GROUND (Z0) | TOP (Z) | BARRIER HEIGHTS AT ENDS |
|------|--------|-------|-------------|---------|-------------------------|
| 1    | -500.0 | 226.0 | 304.0       | 310.0   | *153 * 6                |
| 2    | 0.0    | 226.0 | 304.0       | 310.0   | *154+40 * 6             |
| 3    | 36.0   | 226.0 | 304.0       | 310.0   | *154+50 * 6             |
| 4    | 169.0  | 226.0 | 308.0       | 314.0   | *155 * 6                |
| 5    | 312.0  | 226.0 | 308.0       | 314.0   | *SITE * 6               |
|      | 334.0  | 226.0 | 308.0       | 314.0   | *155+40 * 6             |

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Barrier No. 2 Description: SWEETWATER WALL NORTH OF SITE  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 623.0 | 243.0 | 308.0          | 314.0 *156+40 | * 6                        |
| 2    | 809.0 | 252.0 | 308.0          | 314.0 *157    | * 6                        |
|      | 934.0 | 252.0 | 308.0          | 314.0 *157+40 | * 6                        |

Barrier No. 3 Description: NORTH SIDE BLDG 1  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 372.0 | 254.0 | 307.6          | 327.6 *B3 P1 | * 20                       |
|      | 372.0 | 433.0 | 319.0          | 339.0 *B3 P2 | * 20                       |

Barrier No. 4 Description: UNIT 8/9/10 BLDG  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 317.0 | 467.0 | 323.0          | 343.0 *B4 P1 | * 20                       |
|      | 392.0 | 467.0 | 323.0          | 343.0 *B4 P2 | * 20                       |

Barrier No. 5 Description: WING ALL 8 WEST  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 372.0 | 267.0 | 307.0          | 327.0 *B5 P1 | * 20                       |
|      | 382.0 | 267.0 | 307.0          | 327.0 *B5 P2 | * 20                       |

Barrier No. 6 Description: WING ALL 8 EAST  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 372.0 | 283.0 | 307.0          | 327.0 *B6 P1 | * 20                       |
|      | 382.0 | 283.0 | 307.0          | 327.0 *B6 P2 | * 20                       |

Barrier No. 7 Description: WING ALL 9 WEST  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 372.0 | 296.0 | 309.0          | 329.0 *B7 P1 | * 20                       |

382.0 296.0 309.0 329.0 \*B7 P2 \* 20

Barrier No. 8 Description: WING ALL 9 EAST/10 WEST  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 372.0 | 316.0 | 309.0          | 329.0 *B8 P1 | * 20                       |
|      | 382.0 | 316.0 | 309.0          | 329.0 *B8 P2 | * 20                       |

Barrier No. 9 Description: WING ALL 10 EAST  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)   | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|--------------|----------------------------|
| 1    | 372.0 | 336.0 | 311.0          | 331.0 *B9 P1 | * 20                       |
|      | 382.0 | 336.0 | 311.0          | 323.0 *B9 P2 | * 12                       |

Barrier No. 10 Description: WING ALL 11 WEST  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 346.0 | 313.0          | 333.0 *B10 P1 | * 20                       |
|      | 382.0 | 346.0 | 313.0          | 333.0 *B10 P2 | * 20                       |

Barrier No. 11 Description: WING ALL 11 EAST/12 WEST  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 365.0 | 313.0          | 333.0 *B11 P1 | * 20                       |
|      | 382.0 | 365.0 | 313.0          | 333.0 *B11 P2 | * 20                       |

Barrier No. 12 Description: WING ALL 12 EAST  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 387.0 | 315.0          | 335.0 *B12 P1 | * 20                       |
|      | 382.0 | 387.0 | 315.0          | 335.0 *B12 P2 | * 20                       |

Barrier No. 13 Description: WING ALL 13 WEST  
 Type - (2) MASONRY

Height Increment (DELZ)= 0.0

No. Height Changes (P)=0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 372.0 | 395.0 | 317.0          | 337.0      | *B13 P1 * 20               |
|      | 382.0 | 395.0 | 317.0          | 337.0      | *B13 P2 * 20               |

Barrier No. 14

Description: WING ALL 13 EAST/14 WEST

Type - (2) MASONRY

Height Increment (DELZ)= 0.0

No. Height Changes (P)=0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 372.0 | 414.0 | 317.0          | 337.0      | *B14 P1 * 20               |
|      | 382.0 | 414.0 | 317.0          | 337.0      | *B14 P2 * 20               |

Barrier No. 15

Description: BAL 14 60" WALL

Type - (2) MASONRY

Height Increment (DELZ)= 0.0

No. Height Changes (P)=0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 382.0 | 414.0 | 319.0          | 332.5      | *B15 P1 * 14               |
|      | 382.0 | 434.0 | 319.0          | 332.5      | *B15 P2 * 14               |

Barrier No. 16

Description: BAL 15 42" WALL

Type - (2) MASONRY

Height Increment (DELZ)= 0.0

No. Height Changes (P)=0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 372.0 | 457.0 | 322.0          | 337.0      | *B16 P1 * 15               |
|      | 392.0 | 457.0 | 322.0          | 337.0      | *B16 P2 * 15               |

Barrier No. 17

Description: BAL 16 60" WALL

Type - (2) MASONRY

Height Increment (DELZ)= 0.0

No. Height Changes (P)=0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 352.0 | 457.0 | 323.0          | 338.0      | *B17 P1 * 15               |
|      | 372.0 | 457.0 | 323.0          | 338.0      | *B17 P2 * 15               |

Barrier No. 18

Description: BAL 17 60" WALL

Type - (2) MASONRY

Height Increment (DELZ)= 0.0

No. Height Changes (P)=0

| SEG. | X | Y | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|---|---|----------------|------------|----------------------------|
|------|---|---|----------------|------------|----------------------------|

|   |       |       |       |               |      |
|---|-------|-------|-------|---------------|------|
| 1 | 322.0 | 457.0 | 323.0 | 338.0 *B18 P1 | * 15 |
|   | 342.0 | 457.0 | 323.0 | 338.0 *B18 P2 | * 15 |

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RECEIVER DATA

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| REC.<br>NO. | X     | Y     | Z     | DNL PEOPLE | ID     |
|-------------|-------|-------|-------|------------|--------|
| 1           | 377.0 | 412.0 | 334.1 | 67 500     | 14 BAL |
| 2           | 376.0 | 462.0 | 337.0 | 67 500     | 15 BAL |
| 3           | 356.0 | 462.0 | 337.5 | 67 500     | 16 BAL |
| 4           | 329.0 | 462.0 | 338.0 | 67 500     | 17 BAL |

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DROP-OFF RATES

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ALL LANE/RECEIVER PAIRS = 3.0 DBA

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K - CONSTANTS

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ALL LANE RECEIVER/PAIRS = 4.7 DBA

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SOUND32 - RELEASE 07/30/91

TITLE:

LDN/BALCONIES/BUILT/NO FW OR SW WALLS/BERMS UNITS 14-17/15-17 60"/SW ONLY

EFFECTIVENESS / COST RATIOS

\*\*\*\*\*

| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7      |
|------------|---|-----|---|---|---|---|---|--------|
| 1          | - | 0.* |   |   |   |   |   | 153    |
| 2          | - | 0.* |   |   |   |   |   | 154+40 |
| 3          | - | 0.* |   |   |   |   |   | 154+50 |
| 4          | - | 0.* |   |   |   |   |   | 155    |
| 5          | - | 0.* |   |   |   |   |   | SITE   |
| 6          | - | 0.* |   |   |   |   |   | 156+40 |
| 7          | - | 0.* |   |   |   |   |   | 157    |
| 8          | - | 0.* |   |   |   |   |   | B3 P1  |
| 9          | - | 0.* |   |   |   |   |   | B4 P1  |
| 10         | - | 0.* |   |   |   |   |   | B5 P1  |
| 11         | - | 0.* |   |   |   |   |   | B6 P1  |
| 12         | - | 0.* |   |   |   |   |   | B7 P1  |
| 13         | - | 0.* |   |   |   |   |   | B8 P1  |
| 14         | - | 0.* |   |   |   |   |   | B9 P1  |
| 15         | - | 0.* |   |   |   |   |   | B10 P1 |
| 16         | - | 0.* |   |   |   |   |   | B11 P1 |
| 17         | - | 0.* |   |   |   |   |   | B12 P1 |
| 18         | - | 0.* |   |   |   |   |   | B13 P1 |
| 19         | - | 0.* |   |   |   |   |   | B14 P1 |
| 20         | - | 0.* |   |   |   |   |   | B15 P1 |
| 21         | - | 0.* |   |   |   |   |   | B16 P1 |
| 22         | - | 0.* |   |   |   |   |   | B17 P1 |
| 23         | - | 0.* |   |   |   |   |   | B18 P1 |

0 1 2 3 4 5 6 7

BARRIER DATA

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BAR

BARRIER HEIGHTS

BAR

| ELE | 0 | 1    | 2 | 3 | 4 | 5 | 6 | 7 | ID     | LENGTH | TYPE    |
|-----|---|------|---|---|---|---|---|---|--------|--------|---------|
| 1   | - | 6.*  |   |   |   |   |   |   | 153    | 500.0  | MASONRY |
| 2   | - | 6.*  |   |   |   |   |   |   | 154+40 | 36.0   | MASONRY |
|     | - | 6.*  |   |   |   |   |   |   | 154+50 | 133.1  | MASONRY |
|     | - | 6.*  |   |   |   |   |   |   | 155    | 143.0  | MASONRY |
| 5   | - | 6.*  |   |   |   |   |   |   | SITE   | 22.0   | MASONRY |
| 6   | - | 6.*  |   |   |   |   |   |   | 156+40 | 186.2  | MASONRY |
| 7   | - | 6.*  |   |   |   |   |   |   | 157    | 125.0  | MASONRY |
| 8   | - | 20.* |   |   |   |   |   |   | B3 P1  | 179.4  | MASONRY |
| 9   | - | 20.* |   |   |   |   |   |   | B4 P1  | 75.0   | MASONRY |
| 10  | - | 20.* |   |   |   |   |   |   | B5 P1  | 10.0   | MASONRY |
| 11  | - | 20.* |   |   |   |   |   |   | B6 P1  | 10.0   | MASONRY |
| 12  | - | 20.* |   |   |   |   |   |   | B7 P1  | 10.0   | MASONRY |
| 13  | - | 20.* |   |   |   |   |   |   | B8 P1  | 10.0   | MASONRY |
| 14  | - | 16.* |   |   |   |   |   |   | B9 P1  | 12.8   | MASONRY |
| 15  | - | 20.* |   |   |   |   |   |   | B10 P1 | 10.0   | MASONRY |
| 16  | - | 20.* |   |   |   |   |   |   | B11 P1 | 10.0   | MASONRY |
| 17  | - | 20.* |   |   |   |   |   |   | B12 P1 | 10.0   | MASONRY |
| 18  | - | 20.* |   |   |   |   |   |   | B13 P1 | 10.0   | MASONRY |
| 19  | - | 20.* |   |   |   |   |   |   | B14 P1 | 10.0   | MASONRY |
| 20  | - | 14.* |   |   |   |   |   |   | B15 P1 | 20.0   | MASONRY |
| 21  | - | 15.* |   |   |   |   |   |   | B16 P1 | 20.0   | MASONRY |
| 22  | - | 15.* |   |   |   |   |   |   | B17 P1 | 20.0   | MASONRY |
| 23  | - | 15.* |   |   |   |   |   |   | B18 P1 | 20.0   | MASONRY |

|   | 0   | 1   | 2   | 3    | 4      | 5         | 6 | 7 |
|---|-----|-----|-----|------|--------|-----------|---|---|
| 1 | REC | REC | ID  | DNL  | PEOPLE | LEQ (CAL) |   |   |
| 1 | 14  | BAL | 67. | 500. | 58.0   |           |   |   |
| 2 | 15  | BAL | 67. | 500. | 55.4   |           |   |   |
| 3 | 16  | BAL | 67. | 500. | 55.2   |           |   |   |
| 4 | 17  | BAL | 67. | 500. | 55.6   |           |   |   |

| BARRIER TYPE   | COST    |
|----------------|---------|
| BERM           | 0.      |
| MASONRY        | 146265. |
| MASONRY/JERSEY | 0.      |
| CONCRETE       | 0.      |

TOTAL COST = \$ 146000.

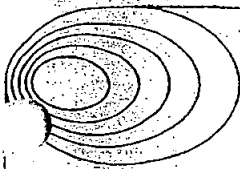
BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

6. 6. 6. 6. 6. 6. 6. 20. 20. 20. 20. 20. 20. 16. 20. 20. 20. 20. 20. 14. 15. 15. 15.





# GORDON BRICKEN & ASSOCIATES

ACOUSTICAL and ENERGY ENGINEERS

A P P E N D I X 1 5

RUN 26SB

1621 East Seventeenth Street, Suite K  
Phone (714) 835-0249

Santa Ana, California 92705-8518  
FAX (714) 835-1957

\* \* SOUND32 (CALTRANS VERSION OF STAMINA2/OPTIMA) \* \*

INPUT DATA FILE : HOSS26SB  
 BARRIER COST FILE : CALIFS.DTA  
 DATE : 07-20-2006

LDN/BALCONIES/BUILTE/NO FW OR SW WALLS/BERMS UNITS 14-17/ 15-17 60"/FW ONLY

TRAFFIC DATA

| LANE NO. | AUTO VPH | MPH | MEDIUM TRKS VPH | MPH | HEAVY TRKS VPH | MPH | DESCRIPTION      |
|----------|----------|-----|-----------------|-----|----------------|-----|------------------|
| 1        | 8096     | 65  | 239             | 65  | 273            | 65  | SR125 NORTHBOUND |
| 2        | 8096     | 65  | 239             | 65  | 273            | 65  | SR125 SOUTHBOUND |

LANE DATA

| LANE NO. | SEG. NO. | GRADE COR. | X      | Y     | Z     | SEGMENT DESCRIPTION |
|----------|----------|------------|--------|-------|-------|---------------------|
| 1        | 1        | NO         | -500.0 | 60.0  | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | 60.0  | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | 60.0  | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | 60.0  | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | 60.0  | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | 60.0  | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | 60.0  | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | 60.0  | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | 60.0  | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | 60.0  | 328.0 | 157                 |
| 2        | 1        | NO         | -500.0 | -60.0 | 328.0 | 153                 |
|          | 2        | NO         | 0.0    | -60.0 | 328.0 | 154+40              |
|          | 3        | NO         | 36.0   | -60.0 | 328.0 | 154+50              |
|          | 4        | NO         | 169.0  | -60.0 | 328.0 | 155                 |
|          | 5        | NO         | 312.0  | -60.0 | 328.0 | SITE                |
|          | 6        | NO         | 334.0  | -60.0 | 328.0 | 155+40              |
|          | 7        | NO         | 489.0  | -60.0 | 328.0 | 156                 |
|          | 8        | NO         | 539.0  | -60.0 | 328.0 | 156+15              |
|          | 9        | NO         | 623.0  | -60.0 | 328.0 | 156+40              |
|          | 10       | NO         | 809.0  | -60.0 | 328.0 | 157                 |

BARRIER DATA

Barrier No. 1 Description: SWEETWATER MHP SOUTH WALL  
 Type: (2) MASONRY  
 Light Increment (DELZ)=0.0 No. Height Changes (P)=0

| SEG. | X | Y | GROUND (Z0) | TOP (Z) | BARRIER HEIGHTS AT ENDS |
|------|---|---|-------------|---------|-------------------------|
|------|---|---|-------------|---------|-------------------------|

|   |        |       |       |       |         |   |   |
|---|--------|-------|-------|-------|---------|---|---|
| 1 | -500.0 | 226.0 | 304.0 | 310.0 | *153    | * | 6 |
| 2 | 0.0    | 226.0 | 304.0 | 310.0 | *154+40 | * | 6 |
| 3 | 36.0   | 226.0 | 304.0 | 310.0 | *154+50 | * | 6 |
| 4 | 169.0  | 226.0 | 308.0 | 314.0 | *155    | * | 6 |
| 5 | 312.0  | 226.0 | 308.0 | 314.0 | *SITE   | * | 6 |
|   | 334.0  | 226.0 | 308.0 | 314.0 | *155+40 | * | 6 |

Barrier No. 2 Description: SWEETWATER WALL NORTH OF SITE  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 623.0 | 243.0 | 308.0          | 314.0      | *156+40 * 6                |
| 2    | 809.0 | 252.0 | 308.0          | 314.0      | *157 * 6                   |
|      | 934.0 | 252.0 | 308.0          | 314.0      | *157+40 * 6                |

Barrier No. 3 Description: NORTH SIDE BLDG 1  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 372.0 | 254.0 | 307.6          | 327.6      | *B3 P1 * 20                |
|      | 372.0 | 433.0 | 319.0          | 339.0      | *B3 P2 * 20                |

Barrier No. 4 Description: UNIT 8/9/10 BLDG  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 317.0 | 467.0 | 323.0          | 343.0      | *B4 P1 * 20                |
|      | 392.0 | 467.0 | 323.0          | 343.0      | *B4 P2 * 20                |

Barrier No. 5 Description: WING ALL 8 WEST  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|------------|----------------------------|
| 1    | 372.0 | 267.0 | 307.0          | 327.0      | *B5 P1 * 20                |
|      | 382.0 | 267.0 | 307.0          | 327.0      | *B5 P2 * 20                |

Barrier No. 6 Description: WING ALL 8 EAST  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X | Y | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |
|------|---|---|----------------|------------|----------------------------|
|------|---|---|----------------|------------|----------------------------|

|   |       |       |       |       |        |      |
|---|-------|-------|-------|-------|--------|------|
| 1 | 372.0 | 283.0 | 307.0 | 327.0 | *B6 P1 | * 20 |
|   | 382.0 | 283.0 | 307.0 | 327.0 | *B6 P2 | * 20 |

Barrier No. 7 Description: WING ALL 9 WEST  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |      |
|------|-------|-------|----------------|------------|----------------------------|------|
| 1    | 372.0 | 296.0 | 309.0          | 329.0      | *B7 P1                     | * 20 |
|      | 382.0 | 296.0 | 309.0          | 329.0      | *B7 P2                     | * 20 |

Barrier No. 8 Description: WING ALL 9 EAST/10 WEST  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |      |
|------|-------|-------|----------------|------------|----------------------------|------|
| 1    | 372.0 | 316.0 | 309.0          | 329.0      | *B8 P1                     | * 20 |
|      | 382.0 | 316.0 | 309.0          | 329.0      | *B8 P2                     | * 20 |

Barrier No. 9 Description: WING ALL 10 EAST  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |      |
|------|-------|-------|----------------|------------|----------------------------|------|
| 1    | 372.0 | 336.0 | 311.0          | 331.0      | *B9 P1                     | * 20 |
|      | 382.0 | 336.0 | 311.0          | 323.0      | *B9 P2                     | * 12 |

Barrier No. 10 Description: WING ALL 11 WEST  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |      |
|------|-------|-------|----------------|------------|----------------------------|------|
| 1    | 372.0 | 346.0 | 313.0          | 333.0      | *B10 P1                    | * 20 |
|      | 382.0 | 346.0 | 313.0          | 333.0      | *B10 P2                    | * 20 |

Barrier No. 11 Description: WING ALL 11 EAST/12 WEST  
Type - (2) MASONRY  
Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z) | BARRIER<br>HEIGHTS AT ENDS |      |
|------|-------|-------|----------------|------------|----------------------------|------|
|      | 372.0 | 365.0 | 313.0          | 333.0      | *B11 P1                    | * 20 |
|      | 382.0 | 365.0 | 313.0          | 333.0      | *B11 P2                    | * 20 |

Barrier No. 12 Description: WING ALL 12 EAST  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 387.0 | 315.0          | 335.0 *B12 P1 | * 20                       |
|      | 382.0 | 387.0 | 315.0          | 335.0 *B12 P2 | * 20                       |

Barrier No. 13 Description: WING ALL 13 WEST  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 395.0 | 317.0          | 337.0 *B13 P1 | * 20                       |
|      | 382.0 | 395.0 | 317.0          | 337.0 *B13 P2 | * 20                       |

Barrier No. 14 Description: WING ALL 13 EAST/14 WEST  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 414.0 | 317.0          | 337.0 *B14 P1 | * 20                       |
|      | 382.0 | 414.0 | 317.0          | 337.0 *B14 P2 | * 20                       |

Barrier No. 15 Description: BAL 14 42" WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 382.0 | 414.0 | 319.0          | 332.5 *B15 P1 | * 14                       |
|      | 382.0 | 434.0 | 319.0          | 332.5 *B15 P2 | * 14                       |

Barrier No. 16 Description: BAL 15 60" WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 372.0 | 457.0 | 322.0          | 337.0 *B16 P1 | * 15                       |
|      | 392.0 | 457.0 | 322.0          | 337.0 *B16 P2 | * 15                       |

Barrier No. 17 Description: BAL 16 60" WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

GROUND TOP BARRIER

| SEG. | X     | Y     | (Z0)  | (Z)           | HEIGHTS AT ENDS |
|------|-------|-------|-------|---------------|-----------------|
| 1    | 352.0 | 457.0 | 132.0 | 338.0 *B17 P1 | * %206          |
|      | 372.0 | 457.0 | 323.0 | 338.0 *B17 P2 | * 15            |

Barrier No. 18 Description: BAL 17 60" WALL  
 Type - (2) MASONRY  
 Height Increment (DELZ) = 0.0 No. Height Changes (P) = 0

| SEG. | X     | Y     | GROUND<br>(Z0) | TOP<br>(Z)    | BARRIER<br>HEIGHTS AT ENDS |
|------|-------|-------|----------------|---------------|----------------------------|
| 1    | 322.0 | 457.0 | 323.0          | 338.0 *B18 P1 | * 15                       |
|      | 342.0 | 457.0 | 323.0          | 338.0 *B18 P2 | * 15                       |

#### RECEIVER DATA

| REC.<br>NO. | X     | Y     | Z     | DNL PEOPLE | ID     |
|-------------|-------|-------|-------|------------|--------|
| 1           | 377.0 | 412.0 | 334.1 | 67 500     | 14 BAL |
| 2           | 376.0 | 462.0 | 337.0 | 67 500     | 15 BAL |
| 3           | 356.0 | 462.0 | 337.5 | 67 500     | 16 BAL |
| 4           | 329.0 | 462.0 | 338.0 | 67 500     | 17 BAL |

#### P-OFF RATES

ALL LANE/RECEIVER PAIRS = 3.0 DBA

#### K - CONSTANTS

ALL LANE RECEIVER/PAIRS = -4.7 DBA

SOUND32 - RELEASE 07/30/91

TITLE:

LDN/BALCONIES/BUILTE/NO FW OR SW WALLS/BERMS UNITS 14-17/ 15-17 60"/FW ONLY

EFFECTIVENESS / COST RATIOS

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| BAR<br>ELE | 0 | 1   | 2 | 3 | 4 | 5 | 6 | 7      |
|------------|---|-----|---|---|---|---|---|--------|
| 1          | - | 0.* |   |   |   |   |   | 153    |
| 2          | - | 0.* |   |   |   |   |   | 154+40 |
| 3          | - | 0.* |   |   |   |   |   | 154+50 |
| 4          | - | 0.* |   |   |   |   |   | 155    |
| 5          | - | 0.* |   |   |   |   |   | SITE   |
| 6          | - | 0.* |   |   |   |   |   | 156+40 |
| 7          | - | 0.* |   |   |   |   |   | 157    |
| 8          | - | 0.* |   |   |   |   |   | B3 P1  |
| 9          | - | 0.* |   |   |   |   |   | B4 P1  |
| 10         | - | 0.* |   |   |   |   |   | B5 P1  |
| 11         | - | 0.* |   |   |   |   |   | B6 P1  |
| 12         | - | 0.* |   |   |   |   |   | B7 P1  |
| 13         | - | 0.* |   |   |   |   |   | B8 P1  |
| 14         | - | 0.* |   |   |   |   |   | B9 P1  |
| 15         | - | 0.* |   |   |   |   |   | B10 P1 |
| 16         | - | 0.* |   |   |   |   |   | B11 P1 |
| 17         | - | 0.* |   |   |   |   |   | B12 P1 |
| 18         | - | 0.* |   |   |   |   |   | B13 P1 |
| 19         | - | 0.* |   |   |   |   |   | B14 P1 |
| 20         | - | 0.* |   |   |   |   |   | B15 P1 |
| 21         | - | 0.* |   |   |   |   |   | B16 P1 |
| 22         | - | 0.* |   |   |   |   |   | B17 P1 |
| 23         | - | 0.* |   |   |   |   |   | B18 P1 |

0 1 2 3 4 5 6 7

BARRIER DATA

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BAR

BARRIER HEIGHTS

BAR

| ELE | 0 | 1     | 2 | 3 | 4 | 5 | 6 | 7 | ID     | LENGTH | TYPE    |
|-----|---|-------|---|---|---|---|---|---|--------|--------|---------|
| 1   | - | 6.*   |   |   |   |   |   |   | 153    | 500.0  | MASONRY |
| 2   | - | 6.*   |   |   |   |   |   |   | 154+40 | 36.0   | MASONRY |
|     | - | 6.*   |   |   |   |   |   |   | 154+50 | 133.1  | MASONRY |
|     | - | 6.*   |   |   |   |   |   |   | 155    | 143.0  | MASONRY |
| 5   | - | 6.*   |   |   |   |   |   |   | SITE   | 22.0   | MASONRY |
| 6   | - | 6.*   |   |   |   |   |   |   | 156+40 | 186.2  | MASONRY |
| 7   | - | 6.*   |   |   |   |   |   |   | 157    | 125.0  | MASONRY |
| 8   | - | 20.*  |   |   |   |   |   |   | B3 P1  | 179.4  | MASONRY |
| 9   | - | 20.*  |   |   |   |   |   |   | B4 P1  | 75.0   | MASONRY |
| 10  | - | 20.*  |   |   |   |   |   |   | B5 P1  | 10.0   | MASONRY |
| 11  | - | 20.*  |   |   |   |   |   |   | B6 P1  | 10.0   | MASONRY |
| 12  | - | 20.*  |   |   |   |   |   |   | B7 P1  | 10.0   | MASONRY |
| 13  | - | 20.*  |   |   |   |   |   |   | B8 P1  | 10.0   | MASONRY |
| 14  | - | 16.*  |   |   |   |   |   |   | B9 P1  | 12.8   | MASONRY |
| 15  | - | 20.*  |   |   |   |   |   |   | B10 P1 | 10.0   | MASONRY |
| 16  | - | 20.*  |   |   |   |   |   |   | B11 P1 | 10.0   | MASONRY |
| 17  | - | 20.*  |   |   |   |   |   |   | B12 P1 | 10.0   | MASONRY |
|     | - | 20.*  |   |   |   |   |   |   | B13 P1 | 10.0   | MASONRY |
| 19  | - | 20.*  |   |   |   |   |   |   | B14 P1 | 10.0   | MASONRY |
| 20  | - | 14.*  |   |   |   |   |   |   | B15 P1 | 20.0   | MASONRY |
| 21  | - | 15.*  |   |   |   |   |   |   | B16 P1 | 20.0   | MASONRY |
| 22  | - | 111.* |   |   |   |   |   |   | B17 P1 | 20.0   | MASONRY |
| 23  | - | 15.*  |   |   |   |   |   |   | B18 P1 | 20.0   | MASONRY |

1 0 1 2 3 4 5 6 7

| REC | REC | ID  | DNL | PEOPLE | LEQ (CAL) |
|-----|-----|-----|-----|--------|-----------|
| 1   | 14  | BAL | 67. | 500.   | 66.0      |
| 2   | 15  | BAL | 67. | 500.   | 63.9      |
| 3   | 16  | BAL | 67. | 500.   | 65.6      |
| 4   | 17  | BAL | 67. | 500.   | 64.8      |

BARRIER TYPE COST

|                |         |
|----------------|---------|
| BERM           | 0.      |
| MASONRY        | 142985. |
| MASONRY/JERSEY | 0.      |
| CONCRETE       | 0.      |



## BARRIER DATA

\*\*\*\*\*

| BAR<br>FILE | 0 | 1    | BARRIER HEIGHTS |  |  |  |  | 6 | 7 | BAR<br>ID | LENGTH | TYPE    |
|-------------|---|------|-----------------|--|--|--|--|---|---|-----------|--------|---------|
| 1           | - | 6.*  |                 |  |  |  |  |   |   | 153       | 500.0  | MASONRY |
| 2           | - | 6.*  |                 |  |  |  |  |   |   | 154+40    | 36.0   | MASONRY |
| 3           | - | 6.*  |                 |  |  |  |  |   |   | 154+50    | 133.1  | MASONRY |
| 4           | - | 6.*  |                 |  |  |  |  |   |   | 155       | 143.0  | MASONRY |
| 5           | - | 6.*  |                 |  |  |  |  |   |   | SITE      | 22.0   | MASONRY |
| 6           | - | 6.*  |                 |  |  |  |  |   |   | 156+40    | 186.2  | MASONRY |
| 7           | - | 6.*  |                 |  |  |  |  |   |   | 157       | 125.0  | MASONRY |
| 8           | - | 20.* |                 |  |  |  |  |   |   | B3 P1     | 179.4  | MASONRY |
| 9           | - | 20.* |                 |  |  |  |  |   |   | B4 P1     | 75.0   | MASONRY |
| 10          | - | 20.* |                 |  |  |  |  |   |   | B5 P1     | 10.0   | MASONRY |
| 11          | - | 20.* |                 |  |  |  |  |   |   | B6 P1     | 10.0   | MASONRY |
| 12          | - | 20.* |                 |  |  |  |  |   |   | B7 P1     | 10.0   | MASONRY |
| 13          | - | 20.* |                 |  |  |  |  |   |   | B8 P1     | 10.0   | MASONRY |
| 14          | - | 16.* |                 |  |  |  |  |   |   | B9 P1     | 12.8   | MASONRY |
| 15          | - | 20.* |                 |  |  |  |  |   |   | B10 P1    | 10.0   | MASONRY |
| 16          | - | 20.* |                 |  |  |  |  |   |   | B11 P1    | 10.0   | MASONRY |
| 17          | - | 20.* |                 |  |  |  |  |   |   | B12 P1    | 10.0   | MASONRY |
| 18          | - | 20.* |                 |  |  |  |  |   |   | B13 P1    | 10.0   | MASONRY |
| 19          | - | 20.* |                 |  |  |  |  |   |   | B14 P1    | 10.0   | MASONRY |
| 20          | - | 14.* |                 |  |  |  |  |   |   | B15 P1    | 16.0   | MASONRY |
| 21          | - | 14.* |                 |  |  |  |  |   |   | B16 P1    | 20.0   | MASONRY |
| 22          | - | 14.* |                 |  |  |  |  |   |   | B17 P1    | 20.0   | MASONRY |
| 23          | - | 14.* |                 |  |  |  |  |   |   | B18 P1    | 19.0   | MASONRY |
| 24          | - | 14.* |                 |  |  |  |  |   |   | B19 P1    | 22.0   | MASONRY |
| 25          | - | 14.* |                 |  |  |  |  |   |   | B20 P1    | 19.0   | MASONRY |

1      0      1      2      3      4      5      6      7

REC REC ID      DNL      PEOPLE      LEQ (CAL)

|   |    |     |     |      |      |
|---|----|-----|-----|------|------|
| 1 | 8  | BAL | 67. | 500. | 59.6 |
| 2 | 9  | BAL | 67. | 500. | 58.1 |
| 3 | 10 | BAL | 67. | 500. | 56.0 |
| 4 | 11 | BAL | 67. | 500. | 55.4 |
| 5 | 12 | BAL | 67. | 500. | 59.1 |

6 13 BAL 67. 500. 54.3

BARRIER TYPE COST

BERM 0.  
MASONRY 149337.  
MASONRY/JERSEY 0.  
CONCRETE 0.

TOTAL COST = \$ 149000.

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1  
CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

6. 6. 6. 6. 6. 6. 6. 20. 20. 20. 20. 20. 20. 16. 20. 20. 20. 20. 20. 14. 14. 14. 14. 14. 14.

**CEQA PRELIMINARY HYDROLOGY/DRAINAGE STUDY  
FOR  
TRACT NUMBER 5392**

**SAN DIEGO, CALIFORNIA**

**PREPARED FOR:**

**HOSS, WILLIAM AND ASSOCIATES, INC.  
100 South Anaheim Boulevard, Suite 360  
Anaheim, California 92805**

**PREPARED BY:**

**MV CONSULTING ENGINEERS, INC.  
24772 Greentree Lane  
Lake Forest, California 92630  
Tel: (949) 454-1298  
Fax: (949) 666-5105**

February 2005  
Revised: May 2005

**RECEIVED**  
MAR 28 2006

San Diego County  
DEPT. OF PLANNING & LAND USE

CEQA PRELIMINARY HYDROLOGY/DRAINAGE STUDY

FOR

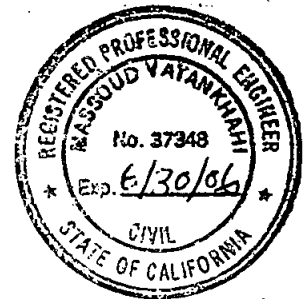
TRACT NUMBER 5392

SAN DIEGO, CALIFORNIA

**ACKNOWLEDGMENT AND SIGNATURE PAGE**

---

This Hydrology Study prepared by MV Consulting Engineers, under the supervision of Massoud Vatankhahi, P.E.



*M. Vatankhahi*

Massoud Vatankhahi, P.E., 37348  
Principal, MV Consulting Engineers

5/9/05

Date

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|            | • Capacity Analysis for Existing 24" RCP Downstream of Project Site   |

## LIST OF EXHIBITS

|           |   |
|-----------|---|
| Exhibit 1 | On-Site Hydrology Map (Existing Condition)                  |
| Exhibit 2 | On-Site Hydrology Map (Proposed Condition)                  |
| Exhibit 3 | 200-Scale Hydrology Map provided by the County of San Diego |

## ***1.0 PURPOSE***

---

The purpose of this report is:

- To satisfy the requirements of the conditions of approval necessary to support the proposed development.

## **2.0 INTRODUCTION**

---

Subject property is in an "L-shaped" and contains of 1.15 Acres of land situated adjacent and on the east side of Sweetwater road, south of Ildica Street, in the vicinity of Spring Valley, County of San Diego.

There is an existing 28 feet wide paved Access Road at northerly part of the subject property which is accessing Sweetwater Road to adjacent apartment complex located at north-easterly side of subject property (2049 Sweetwater Road). Also there is an existing 6-foot high Earth-Berm (Sound Berm) along the westerly side of the subject land and adjacent to westerly property line which has been constructed recently by Caltrans for purpose of sound mitigation and is subject to remain in place.

### **a. Existing Condition**

Subject property sloping down westerly with approximately 10% of slope into an existing temporary drainage ditch located at the toe of the existing sound berm. The drainage ditch carries the storm water from north of the project site by an 18 inch culvert which is under the existing access road. The tributary drainage area to the 18" RCP culvert is approximately 2.9 acres and no flows from the Ildica Street contributes to this off-site drainage area (See Hydrology Map for Existing Condition and also Figure 5). There is also an 8 inch storm drain from the adjacent apartment complex that discharging into subject property over a rip-rap and then sheet flows towards the said drainage ditch. The drainage ditch collects all the on-site and the off-site storm drains, then flows southerly and passes the property line and then drains into a 30" CSP drop inlet which has been built recently by Caltrans. This new drop inlet drains to 24" RCP. The 24" RCP carries the flows to an existing RCB that is constructed under the Sweetwater Road by Caltrans (See Figure 6).

### **b. Proposed Condition by Tentative Tract Map**

Per Tentative Tract map, we are proposing to install the followings:

- Remove existing temporary drainage ditch and replace it with a 24-inch Corrugated Still Pipe (CSP).
- Construct a catch basin with traffic rated grate at the low point of the existing access road.
- Construct a junction structure to collect storm water from the proposed catch basin above and from the 8 inch storm drain run-off from the apartment complex into our property.
- Construct also a catch basin at the low point of the west of the property to collect on-site storm drain and discharge it into proposed 24-inch CSP storm drain.

### **Note:**

The westerly portion of subject property used to be in flood zone, but since the Caltrans has built the SR125 FWY, the area is no longer in flood zone due to the fact that a large reinforced Concrete Box has been constructed under the Sweetwater Rd. by Caltrans to mitigate the drainage problem in the area



### 3.0 METHODOLOGY

---

- The 2003 Year County of San Diego Hydrology Manual Design Criteria Procedure was used to calculate the 100-year peak runoff.
- The 20- and 50-scale Grading Plan prepared by Hoss, William and Associates, Inc. was used as a base map for the hydrology map.
- Soils map was prepared based on the he County of San Diego Hydrology Manual Design (See Figure 2).
- San Diego Hydrology Manual 100-Year Rainfall Event, -6 and -24 Hour Maps was used in the Rational Method Hydrology (See Figures 3 and 4)
- Hydrocalc Hydraulics program by Dodson was used to perform hydraulic analysis.

### ***3.0 REFERENCES***

---

- The County of San Diego Hydrology Manual
- Grading Plan prepared by Hoss, William and Associates, Inc., *dated January 2005*
- *Dodson Hydrocalc Hydraulics, developed by Dodson Company*

## FINDING AND CONCLUSION

Based on performance of this hydrology study (on-site and off-site ) and hydraulic calculations of (on-site and downstream facilities), I conclude that development of this project will not exceed the capacity of existing or planned storm water drainage system.

Sincerely;



M. Vatankhahi

8/29/05

Massoud Vatankhahi, PE 37348  
Principal of MV Consulting

Date

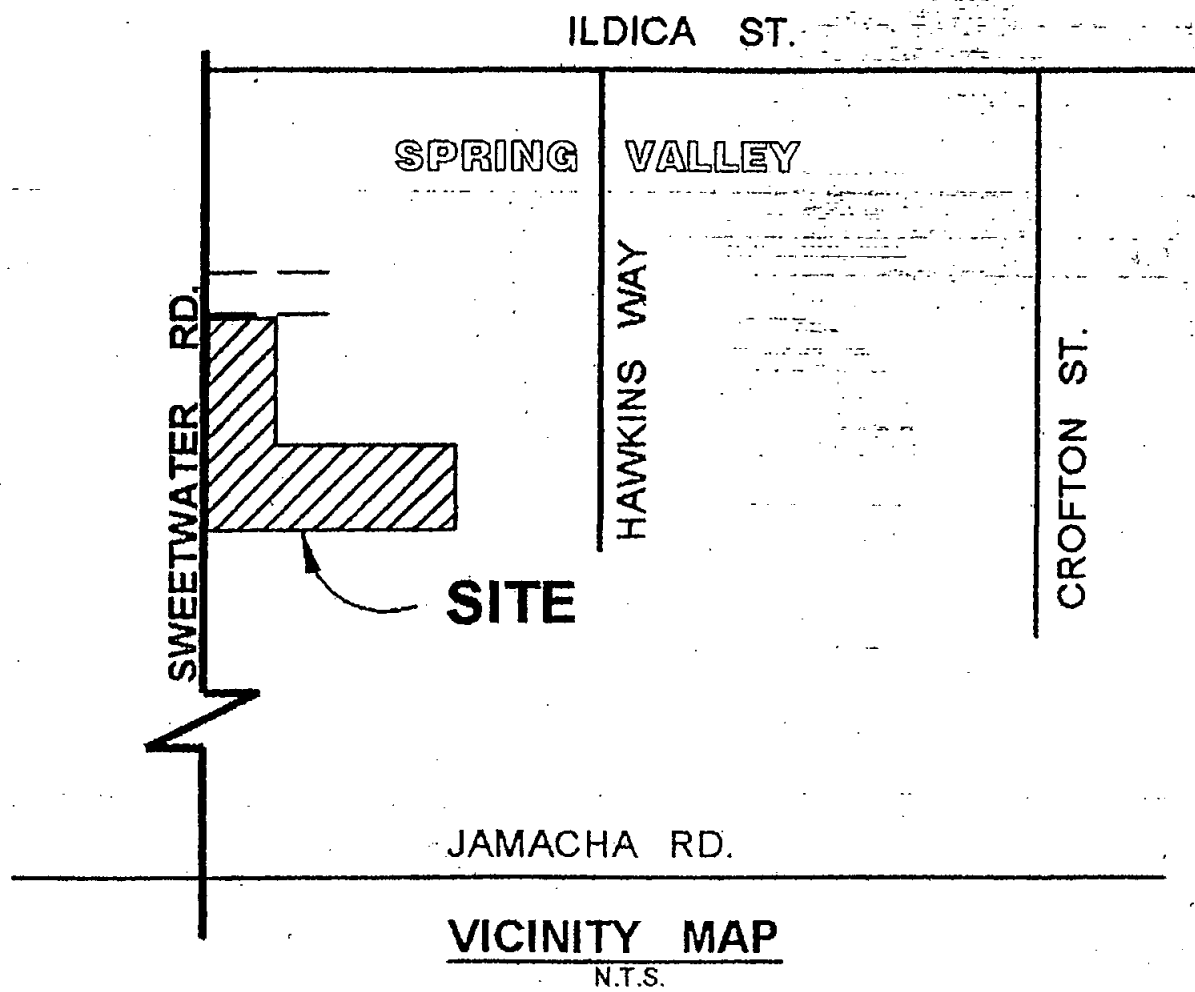
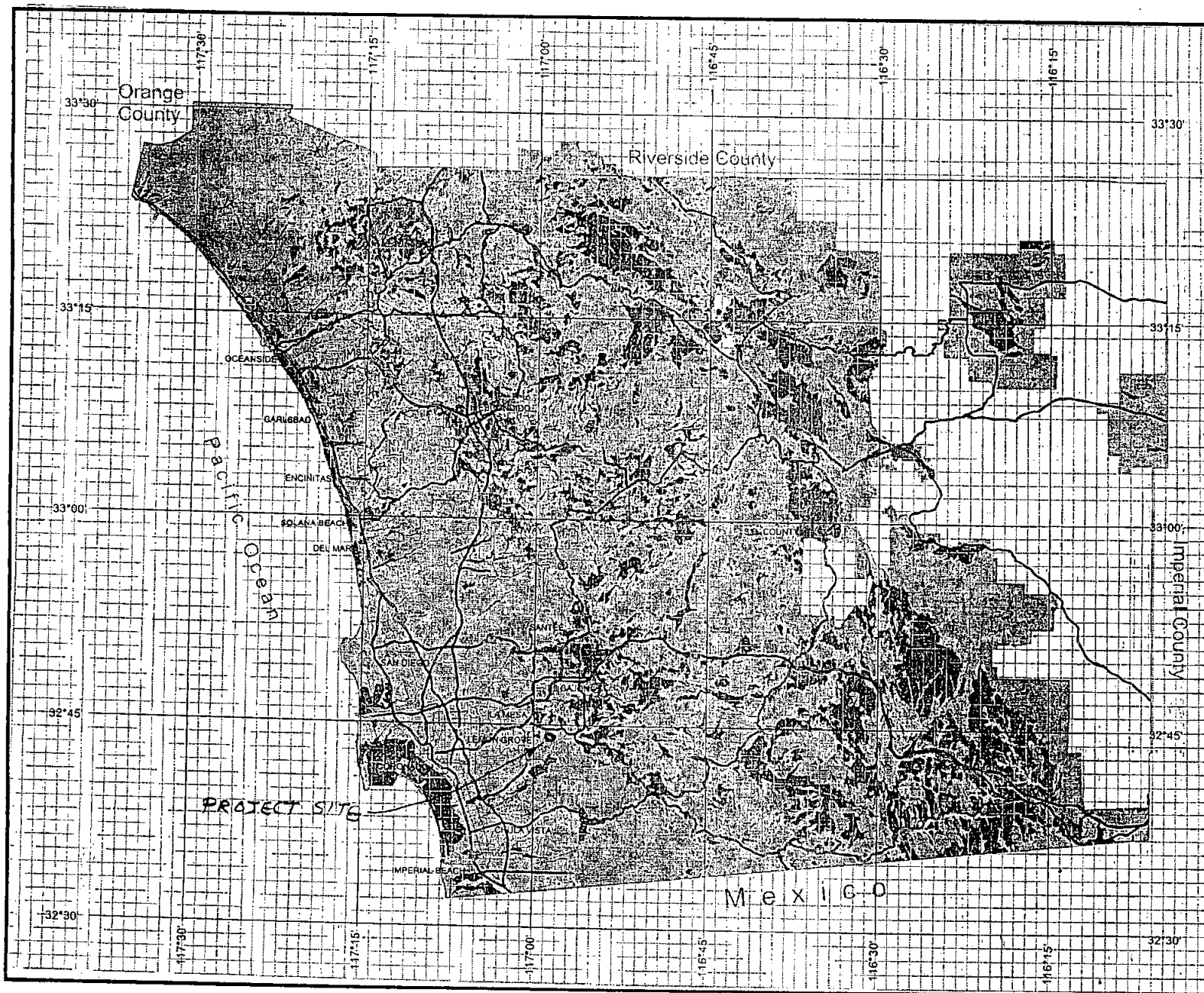


FIG. 1



# County of San Diego Hydrology Manual



## Soil Hydrologic Groups

### Legend

| Soil Groups |                  |
|-------------|------------------|
|             | Group A          |
|             | Group B          |
|             | Group C          |
|             | Group D          |
|             | Undetermined     |
|             | Data Unavailable |

**DPW**  
**GIS**  
Department of Public Works  
Geographic Information Systems

**SanGIS**  
We Have San Diego Covered!



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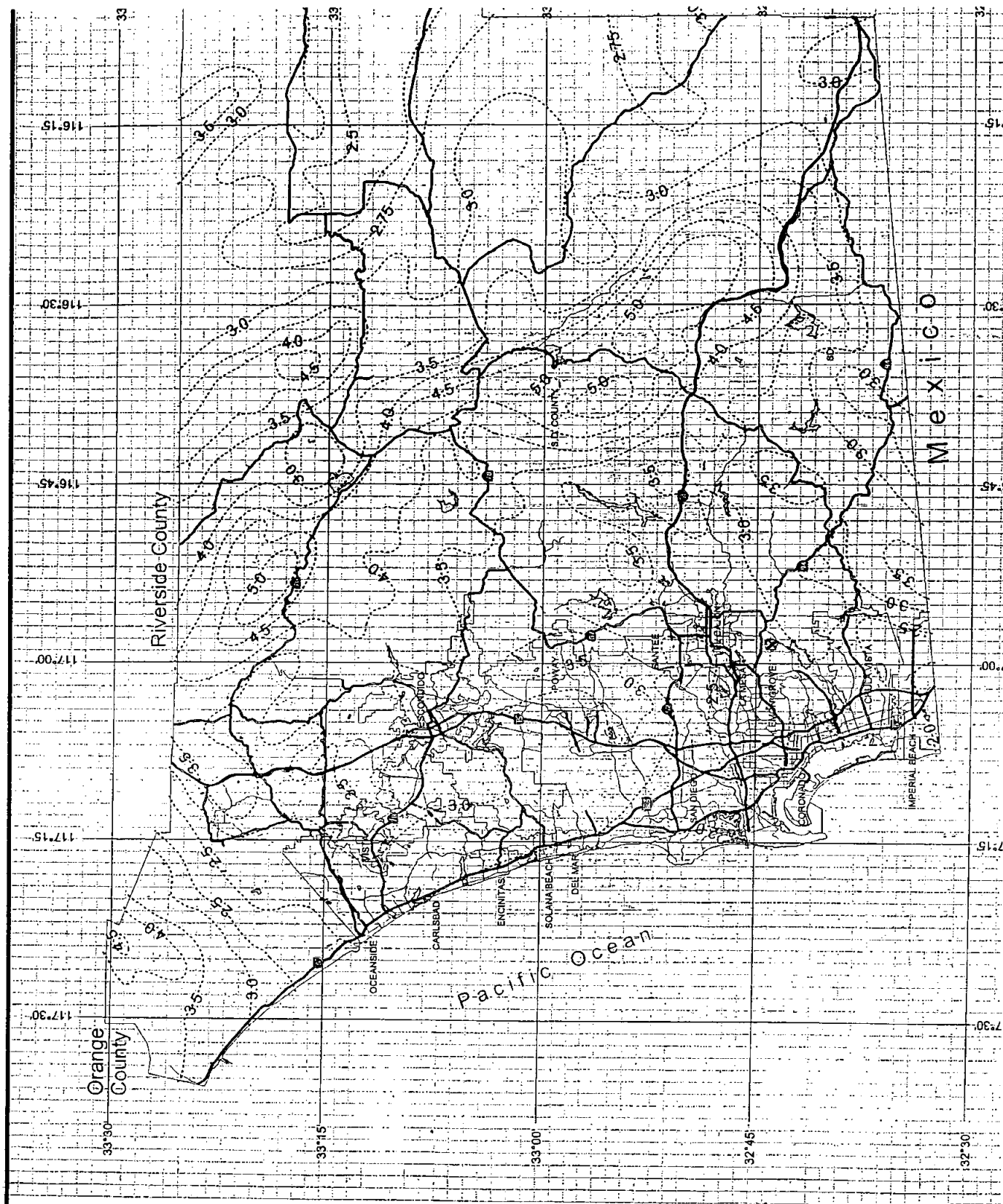
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3 0 3 Miles

FIG. 2

SOIL GROUP "D" WAS USED IN  
HYDROLOG STUDY



295

100-YR RAINFALL EVENT- 6 HR.

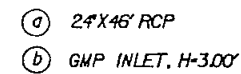
FIG. 3



**D-7**



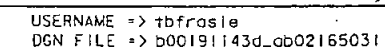
Thomas J. Bouquin  
 REGISTERED CIVIL ENGINEER  
 2-26-96  
 PLANS APPROVAL DATE  
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 shall not be responsible for the accuracy or  
 completeness of electronic copies of this plan sheet



CONTRACT NO. 11-001914  
DATE COMPLETED 11/3/98  
RE: J. LOVE

**D - 43d**

NO SCALE



CU 11287

EA 001911



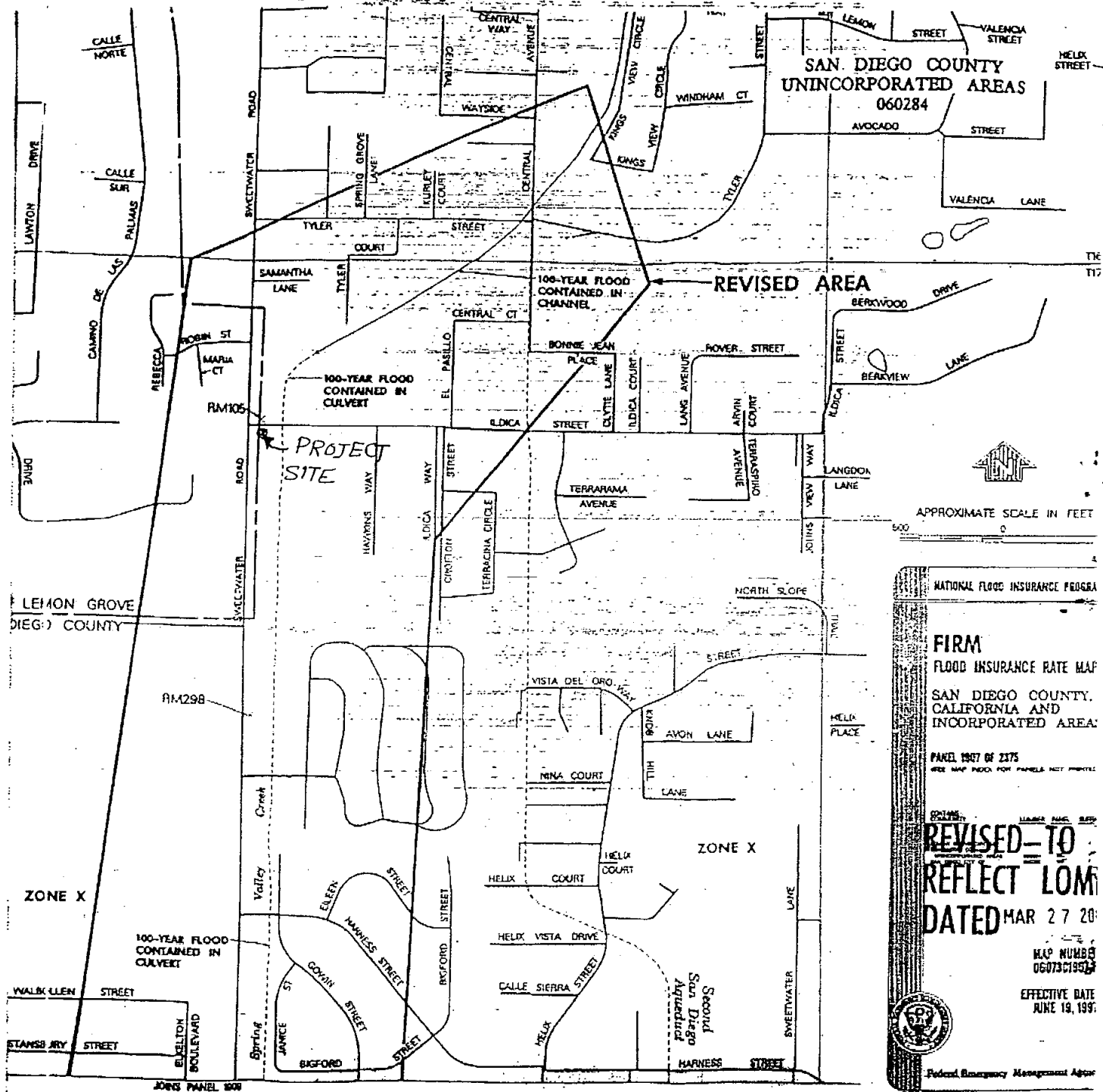


FIG. 8

**APPENDIX A**

**HYDROLOGY STUDY  
FOR EXISTING CONDITION  
(100-YEAR STORM EVENTS)**

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software, (c)1991-2004 Version 7.4

Rational method hydrology program based on  
San Diego County Flood Control Division 2003 hydrology manual  
Rational Hydrology Study Date: 02/01/05

-----  
HYDROLOGY STUDY FOR  
TENTATIVE TRACT NO. 5392  
100-YEAR STORM EVENT  
-----

\*\*\*\*\* Hydrology Study Control Information \*\*\*\*\*  
-----

Program License Serial Number 4000  
-----

Rational hydrology study storm event year is 100.0  
English (in-lb) input data Units used

Map data precipitation entered:

6 hour, precipitation(inches) = 2.900

24 hour precipitation(inches) = 6.500

P6/P24 = 44.6%

Adjusted 6 hour precipitation(inches) = 2.925

Adjusted P6/P24 = 45.0%

San Diego hydrology manual 'C' values used

\*\*\*\*\*  
Process from Point/Station 1.000 to Point/Station 2.000  
\*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 0.000

Decimal fraction soil group C = 0.000

Decimal fraction soil group D = 1.000

[MEDIUM DENSITY RESIDENTIAL ]

(4.3 DU/A or Less )

Impervious value, Ai = 0.300

Sub Area C Value = 0.520

Initial subarea total flow distance = 700.000(Ft.)

Highest elevation = 330.000(Ft.)

Lowest elevation = 303.000(Ft.)

Elevation difference = 27.000(Ft.) Slope = 3.857 %

Top of Initial Area Slope adjusted by User to 6.000 %

Bottom of Initial Area Slope adjusted by User to 1.000 %

INITIAL AREA TIME OF CONCENTRATION CALCULATIONS:

The maximum overland flow distance is 100.00 (Ft)

for the top area slope value of 6.00 %, in a development type of

4.3 DU/A or Less

In Accordance With Table 3-2

Initial Area Time of Concentration = 6.70 minutes

(for slope value of 5.00 %)

The initial area total distance of 700.00 (Ft.) entered leaves a

remaining distance of 600.00(Ft.)

Using Figure 3-4, the travel time for this distance is 6.34 minutes

for a distance of 600.00 (Ft.) and a slope of 1.00 %

with an elevation difference of 6.00(Ft.) from the end of the top area

$Tt = [11.9 * \text{length}(\text{Mi})^3 / (\text{elevation change}(\text{Ft.}))]^{.385} * 60(\text{min/hr})$

= 6.335 Minutes

$Tt = [(11.9 * 0.1136^3) / (6.00)]^{.385} = 6.34$

Total initial area Ti = 6.70 minutes from Table 3-2 plus

6.34 minutes from the Figure 3-4 formula = 13.04 minutes

Rainfall intensity (I) = 4.154(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.520

Subarea runoff = 6.221(CFS)

Total initial stream area = 2.880(Ac.)

\*\*\*\*\*  
Process from Point/Station 2.000 to Point/Station 3.000  
\*\*\*\* PIPEFLOW TRAVEL TIME (User specified size) \*\*\*\*

---

Upstream point/station elevation = 303.000(Ft.)  
Downstream point/station elevation = 302.000(Ft.)  
Pipe length = 50.00(Ft.) Manning's N = 0.013  
No. of pipes = 1 Required pipe flow = 6.221(CFS)  
Given pipe size = 18.00(In.)  
Calculated individual pipe flow = 6.221(CFS)  
Normal flow depth in pipe = 8.12(In.)  
Flow top width inside pipe = 17.91(In.)  
Critical Depth = 11.57(In.)  
Pipe flow velocity = 8.03(Ft/s)  
Travel time through pipe = 0.10 min.  
Time of concentration (TC) = 13.14 min.

\*\*\*\*\*  
Process from Point/Station 3.000 to Point/Station 3.000  
\*\*\*\* SUBAREA FLOW ADDITION \*\*\*\*

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 0.000

Decimal fraction soil group C = 0.000

Decimal fraction soil group D = 1.000

[HIGH DENSITY RESIDENTIAL

(24.0 DU/A or Less )

Impervious value, Ai = 0.650

Sub-Area C Value = 0.710

Time of concentration = 13.14 min.

Rainfall intensity = 4.133(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for total area

(Q=KCIA) is C = 0.562 CA = 2.080

Subarea runoff = 2.374(CFS) for 0.820(Ac.)

Total runoff = 8.595(CFS) Total area = 3.700(Ac.)



\*\*\*\*\*  
Process from Point/Station 3.000 to Point/Station 4.000  
\*\*\*\* IMPROVED CHANNEL TRAVEL TIME \*\*\*\*

Upstream point elevation = 302.000(Ft.)  
Downstream point elevation = 299.000(Ft.)  
Channel length thru subarea = 250.000(Ft.)  
Channel base width = 3.000(Ft.)  
Slope or 'Z' of left channel bank = 1.000  
Slope or 'Z' of right channel bank = 1.000  
Estimated mean flow rate at midpoint of channel = 9.403(CFS)  
Manning's 'N' = 0.015  
Maximum depth of channel = 1.000(Ft.)  
Flow(q) thru subarea = 9.403(CFS)  
Depth of flow = 0.475(Ft.), Average velocity = 5.695(Ft/s)  
Channel flow top width = 3.950(Ft.)  
Flow Velocity = 5.69(Ft/s)  
Travel time = 0.73 min.  
Time of concentration = 13.87 min.  
Critical depth = 0.625(Ft.)  
Adding area flow to channel  
Decimal fraction soil group A = 0.000  
Decimal fraction soil group B = 0.000  
Decimal fraction soil group C = 0.000  
Decimal fraction soil group D = 1.000  
[UNDISTURBED NATURAL TERRAIN ]  
(Permanent Open Space )  
Impervious value, Ai = 0.000  
Sub-Area C Value = 0.350  
Rainfall intensity = 3.991(In/Hr) for a 100.0 year storm  
Effective runoff coefficient used for total area  
(Q=KCIA) is C = 0.507 CA = 2.535  
Subarea runoff = 1.521(CFS) for 1.300(Ac.)  
Total runoff = 10.115(CFS) Total area = 5.000(Ac.)  
Depth of flow = 0.496(Ft.), Average velocity = 5.832(Ft/s)  
Critical depth = 0.656(Ft.)  
End of computations, total study area = 5.000 (Ac.)

## **APPENDIX B**

### **HYDROLOGY STUDY FOR PROPOSED CONDITION (100-YEAR STORM EVENTS)**

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software, (c)1991-2004 Version 7.4

Rational method hydrology program based on  
San Diego County Flood Control Division 2003 hydrology manual  
Rational Hydrology Study Date: 02/01/05

-----  
HYDROLOGY STUDY FOR TRACT 5392  
PROPOSED CONDITION  
100-YEAR PEAK RUNOFF  
-----

-----  
\*\*\*\*\* Hydrology Study Control Information \*\*\*\*\*  
-----

Program License Serial Number 4000

-----  
Rational hydrology study storm event year is 100.0  
English (in-lb) input data Units used

Map data precipitation entered:  
6 hour, precipitation(inches) = 2.900  
24 hour precipitation(inches) = 6.500  
P6/P24 = 44.6%  
Adjusted 6 hour precipitation (inches) = 2.925  
Adjusted P6/P24 = 45.0%  
San Diego hydrology manual 'C' values used

\*\*\*\*\*  
Process from Point/Station 10.000 to Point/Station 11.000  
\*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

Decimal fraction soil group A = 0.000  
Decimal fraction soil group B = 0.000  
Decimal fraction soil group C = 0.000  
Decimal fraction soil group D = 1.000  
[HIGH DENSITY RESIDENTIAL  
(24.0 DU/A or Less )  
Impervious value, Ai = 0.650  
Sub-Area C Value = 0.710  
Initial subarea total flow distance = 265.000(Ft.)  
Highest elevation = 330.000(Ft.)  
Lowest elevation = 322.000(Ft.)  
Elevation difference = 8.000(Ft.) Slope = 3.019 %  
INITIAL AREA TIME OF CONCENTRATION CALCULATIONS:  
The maximum overland flow distance is 90.00 (Ft)  
for the top area slope value of 3.02 %, in a development type of  
24.0 DU/A or Less  
In Accordance With Table 3-2  
Initial Area Time of Concentration = 8.10 minutes  
(for slope value of 3.00 %)  
The initial area total distance of 265.00 (Ft.) entered leaves a  
remaining distance of 175.00 (Ft.)  
Using Figure 3-4, the travel time for this distance is 1.60 minutes  
for a distance of 175.00 (Ft.) and a slope of 3.02 %  
with an elevation difference of 5.28(Ft.) from the end of the top area  
 $T_t = [(11.9 * \text{length}(\text{Mi})^3) / (\text{elevation change}(\text{Ft.}))]^{.385} * 60(\text{min/hr})$   
= 1.603 Minutes  
 $T_t = [(11.9 * 0.0331^3) / (5.28)]^{.385} = 1.60$   
Total initial area  $T_i$  = 8.10 minutes from Table 3-2 plus  
1.60 minutes from the Figure 3-4 formula = 9.70 minutes  
Rainfall intensity (I) = 5.025(In/Hr) for a 100.0 year storm  
Effective runoff coefficient used for area (Q=KCIA) is C = 0.710  
Subarea runoff = 1.927(CFS)  
Total initial stream area = 0.540(Ac.)

\*\*\*\*\*  
Process from Point/Station 11.000 to Point/Station 12.000  
\*\*\*\* PIPEFLOW TRAVEL TIME (User specified size) \*\*\*\*

---

Upstream point/station elevation = 319.000 (Ft.)  
Downstream point/station elevation = 305.000 (Ft.)  
Pipe length = 40.00 (Ft.) Manning's N = 0.013  
No. of pipes = 1 Required pipe flow = 1.927 (CFS)  
Given pipe size = 8.00 (In.)  
Calculated individual pipe flow = 1.927 (CFS)  
Normal flow depth in pipe = 2.84 (In.)  
Flow top width inside pipe = 7.65 (In.)  
Critical Depth = 7.45 (In.)  
Pipe flow velocity = 17.39 (Ft/s)  
Travel time through pipe = 0.04 min.  
Time of concentration (TC) = 9.74 min.



\*\*\*\*\*  
Process from Point/Station 12.000 to Point/Station 13.000  
\*\*\*\* PIPEFLOW TRAVEL TIME (User specified size) \*\*\*\*

---

Upstream point/station elevation = 305.000 (Ft.)  
Downstream point/station elevation = 303.500 (Ft.)  
Pipe length = 38.00 (Ft.) Manning's N = 0.013  
No. of pipes = 1 Required pipe flow = 2.313 (CFS)  
Given pipe size = 8.00 (In.)  
Calculated individual pipe flow = 2.313 (CFS)  
Normal flow depth in pipe = 6.31 (In.)  
Flow top width inside pipe = 6.53 (In.)  
Critical depth could not be calculated.  
Pipe flow velocity = 7.83 (Ft/s)  
Travel time through pipe = 0.08 min.  
Time of concentration (TC) = 9.82 min.





\*\*\*\*\*  
Process from Point/Station 13.000 to Point/Station 14.000  
\*\*\*\* PIPEFLOW TRAVEL TIME (Program estimated size) \*\*\*\*

---

Upstream point/station elevation = 303.500(Ft.)  
Downstream point/station elevation = 301.500(Ft.)  
Pipe length = 38.00(Ft.) Manning's N = 0.013  
No. of pipes = 1 Required pipe flow = 3.080(CFS)  
Nearest computed pipe diameter = 9.00(In.)  
Calculated individual pipe flow = 3.080(CFS)  
Normal flow depth in pipe = 6.15(In.)  
Flow top width inside pipe = 8.37(In.)  
Critical depth could not be calculated.  
Pipe flow velocity = 9.57(Ft/s)  
Travel time through pipe = 0.07 min.  
Time of concentration (TC) = 9.89 min.

\*\*\*\*\*  
Process from Point/Station 14.000 to Point/Station 14.000  
\*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

---

Along Main Stream number: 1 in normal stream number 1

Stream flow area = 0.870 (Ac.)

Runoff from this stream = 3.080 (CFS)

Time of concentration = 9.89 min.

Rainfall intensity = 4.964 (In/Hr)

\*\*\*\*\*  
Process from Point/Station 14.000 to Point/Station 14.000  
\*\*\*\* USER DEFINED FLOW INFORMATION AT A POINT \*\*\*\*

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 0.000

Decimal fraction soil group C = 0.000

Decimal fraction soil group D = 1.000

[MEDIUM DENSITY RESIDENTIAL

(4.3 DU/A or Less )

Impervious value, Ai = 0.300

Sub-Area C Value = 0.520

Rainfall intensity (I) = 4.161(In/Hr) for a 100.0 year storm

User specified values are as follows:

TC = 13.00 min. Rain intensity = 4.16(In/Hr)

Total area = 2.880(Ac.) Total runoff = 6.200(CFS)

\*\*\*\*\*  
 Process from Point/Station 14.000 to Point/Station 14.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

Along Main Stream number: 1 in normal stream number 2

Stream flow area = 2.880 (Ac.)

Runoff from this stream = 6.200 (CFS)

Time of concentration = 13.00 min.

Rainfall intensity = 4.161 (In/Hr)

Summary of stream data:

| Stream No. | Flow rate (CFS) | TC (min) | Rainfall Intensity (In/Hr) |
|------------|-----------------|----------|----------------------------|
|------------|-----------------|----------|----------------------------|

|   |       |      |       |
|---|-------|------|-------|
| 1 | 3.080 | 9.89 | 4.964 |
|---|-------|------|-------|

|   |       |       |       |
|---|-------|-------|-------|
| 2 | 6.200 | 13.00 | 4.161 |
|---|-------|-------|-------|

Qmax(1) =

1.000 \* 1.000 \* 3.080) +

1.000 \* 0.761 \* 6.200) + = 7.796

Qmax(2) =

0.838 \* 1.000 \* 3.080) +

1.000 \* 1.000 \* 6.200) + = 8.781

Total of 2 streams to confluence:

Flow rates before confluence point:

3.080 6.200

Maximum flow rates at confluence using above data:

7.796 8.781

Area of streams before confluence:

0.870 2.880

Results of confluence:

Total flow rate = 8.781 (CFS)

Time of concentration = 13.000 min.

Effective stream area after confluence = 3.750 (Ac.)

\*\*\*\*\*  
Process from Point/Station 14.000 to Point/Station 15.000  
\*\*\*\* PIPEFLOW TRAVEL TIME (Program estimated size) \*\*\*\*

---

Upstream point/station elevation = 301.000(Ft.)  
Downstream point/station elevation = 300.500(Ft.)  
Pipe length = 140.00(Ft.) Manning's N = 0.013  
No. of pipes = 1 Required pipe flow = 8.781(CFS)  
Nearest computed pipe diameter = 21.00(In.)  
Calculated individual pipe flow = 8.781(CFS)  
Normal flow depth in pipe = 15.98(In.)  
Flow top width inside pipe = 17.91(In.)  
Critical Depth = 13.21(In.)  
Pipe flow velocity = 4.47(Ft/s)  
Travel time through pipe = 0.52 min.  
Time of concentration (TC) = 13.52 min.

\*\*\*\*\*  
Process from Point/Station 15.000 to Point/Station 15.000  
\*\*\*\* SUBAREA FLOW ADDITION \*\*\*\*

Decimal fraction soil group A = 0.000  
Decimal fraction soil group B = 0.000  
Decimal fraction soil group C = 0.000  
Decimal fraction soil group D = 1.000  
[HIGH DENSITY RESIDENTIAL ]  
(24.0 DU/A or Less )  
Impervious value, Ai = 0.650  
Sub-Area C Value = 0.710  
Time of concentration = 13.52 min.  
Rainfall intensity = 4.057(In/Hr) for a 100.0 year storm  
Effective runoff coefficient used for total area  
(Q=KCIA) is C = 0.596 CA = 2.854  
Subarea runoff = 2.795(CFS) for 1.040(Ac.)  
Total runoff = 11.577(CFS) Total area = 4.790(Ac.)

\*\*\*\*\*  
Process from Point/Station 15.000 to Point/Station 16.000  
\*\*\*\* PIPEFLOW TRAVEL TIME (Program estimated size) \*\*\*\*

---

Upstream point/station elevation = 300.500 (Ft.)  
Downstream point/station elevation = 299.000 (Ft.)  
Pipe length = 110.00 (Ft.) Manning's N = 0.013  
No. of pipes = 1 Required pipe flow = 11.577 (CFS)  
Nearest computed pipe diameter = 18.00 (In.)  
Calculated individual pipe flow = 11.577 (CFS)  
Normal flow depth in pipe = 13.92 (In.)  
Flow top width inside pipe = 15.07 (In.)  
Critical Depth = 15.55 (In.)  
Pipe flow velocity = 7.90 (Ft/s)  
Travel time through pipe = 0.23 min.  
Time of concentration (TC) = 13.75 min.  
End of computations, total study area = 4.790 (Ac.)

## **APPENDIX C**

### **HYDRAULIC ANALYSES**



CIRCULAR CHANNEL ANALYSIS  
 RATING CURVE COMPUTATION  
 FOR STORM DRAIN NO. 55  
 TR. NO. 5392  
 February 10, 2005

(SEE FIG. 7)

55

=====

PROGRAM INPUT DATA

DESCRIPTION  
 VALUE

=====

|  |       |
|--|-------|
| Channel Bottom Slope (ft/ft).....              | 0.010 |
| Manning's Roughness Coefficient (n-value)..... | 0.013 |
| Channel Diameter (ft).....                     | 2.0   |
| Minimum Flow Depth (ft).....                   | 0.1   |
| Maximum Flow Depth (ft).....                   | 2.1   |
| Incremental Head (ft).....                     | 0.1   |

=====

| COMPUTATION RESULTS   |                       |                           |                  |                          |                        |                         |                      |
|-----------------------|-----------------------|---------------------------|------------------|--------------------------|------------------------|-------------------------|----------------------|
| Flow<br>Depth<br>(ft) | Flow<br>Rate<br>(cfs) | Flow<br>Velocity<br>(fps) | Froude<br>Number | Velocity<br>Head<br>(ft) | Energy<br>Head<br>(ft) | Flow<br>Area<br>(sq ft) | Top<br>Width<br>(ft) |
| 0.1                   | 0.11                  | 1.85                      | 1.256            | 0.053                    | 0.153                  | 0.06                    | 0.87                 |
| 0.2                   | 0.47                  | 2.89                      | 1.38             | 0.13                     | 0.33                   | 0.16                    | 1.2                  |
| 0.3                   | 1.1                   | 3.72                      | 1.442            | 0.215                    | 0.515                  | 0.3                     | 1.43                 |
| 0.4                   | 1.98                  | 4.43                      | 1.477            | 0.305                    | 0.705                  | 0.45                    | 1.6                  |
| 0.5                   | 3.1                   | 5.05                      | 1.494            | 0.396                    | 0.896                  | 0.61                    | 1.73                 |
| 0.6                   | 4.43                  | 5.59                      | 1.498            | 0.485                    | 1.085                  | 0.79                    | 1.83                 |
| 0.7                   | 5.95                  | 6.07                      | 1.493            | 0.573                    | 1.273                  | 0.98                    | 1.91                 |
| 0.8                   | 7.62                  | 6.5                       | 1.48             | 0.656                    | 1.456                  | 1.17                    | 1.96                 |
| 0.9                   | 9.42                  | 6.87                      | 1.46             | 0.734                    | 1.634                  | 1.37                    | 1.99                 |
| 1.0                   | 11.31                 | 7.2                       | 1.432            | 0.806                    | 1.806                  | 1.57                    | 2.0                  |
| 1.1                   | 13.25                 | 7.48                      | 1.399            | 0.87                     | 1.97                   | 1.77                    | 1.99                 |
| 1.2                   | 15.2                  | 7.72                      | 1.358            | 0.927                    | 2.127                  | 1.97                    | 1.96                 |
| 1.3                   | 17.11                 | 7.92                      | 1.311            | 0.974                    | 2.274                  | 2.16                    | 1.91                 |
| 1.4                   | 18.94                 | 8.06                      | 1.256            | 1.01                     | 2.41                   | 2.35                    | 1.83                 |
| 1.5                   | 20.63                 | 8.16                      | 1.191            | 1.035                    | 2.535                  | 2.53                    | 1.73                 |
| 1.6                   | 22.11                 | 8.21                      | 1.115            | 1.047                    | 2.647                  | 2.69                    | 1.6                  |
| 1.7                   | 23.31                 | 8.19                      | 1.023            | 1.042                    | 2.742                  | 2.85                    | 1.43                 |
| 1.8                   | 24.11                 | 8.1                       | 0.906            | 1.018                    | 2.818                  | 2.98                    | 1.2                  |
| 1.9                   | 24.31                 | 7.88                      | 0.739            | 0.966                    | 2.866                  | 3.08                    | 0.87                 |
| 2.0                   | 0.0                   | 0.0                       | 0.0              | 0.0                      | 0.0                    | 0.0                     | 0.0                  |
| 0.0                   | 0.0                   | 0.0                       | 0.0              | 0.0                      | 0.0                    | 0.0                     | 0.0                  |

=====

COMPUTATION NOTES

\*\*\* Rating Curve terminated at flow depth = 2.00  
 Flow depth equals or exceeds channel diameter (2.00)

=====

HYDROCALC Hydraulics for Windows, Version 1.2 Copyright (c) 1996  
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 Phone: (281) 440-3787, Fax: (281) 440-4742, Email: software@dodson-hydro.com  
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CHECK CAPACITY OF 30" DIA DROP INLET (SEE FIG. 6)

USE WEIR FORMULA

$$Q = C \pi D H^{1.5}$$

C = WEIR COEFFICIENT

$$= 3.22 + 0.44 \frac{H}{P}$$

H = HEAD OVER THE INLET = 2.0'

P = HEIGHT OF THE DROP INLET = 3.0'

$$C = 3.22 + 0.44 \frac{2.0}{3.0} = 3.51$$

ASSUME 50% CLOGGING

$$Q = \frac{C \pi D H^{1.5}}{2}$$

$$= \frac{3.51 \times 3.5 \times (2.0)^{1.5}}{2} = 12.4 \text{ CFS} > Q_{100} = 11.6 \text{ CFS} \therefore \text{O.K.}$$

CIRCULAR CHANNEL ANALYSIS  
NORMAL DEPTH COMPUTATION  
FOR TR. NO.5392

February 12, 2005

PROGRAM INPUT DATA

DESCRIPTION  
VALUE

|  |        |
|--|--------|
| Flow Rate (cfs).....                           | 11.6   |
| Channel Bottom Slope (ft/ft).....              | 0.0125 |
| Manning's Roughness Coefficient (n-value)..... | 0.0224 |
| Channel Diameter (ft).....                     | 2.0    |

COMPUTATION RESULTS

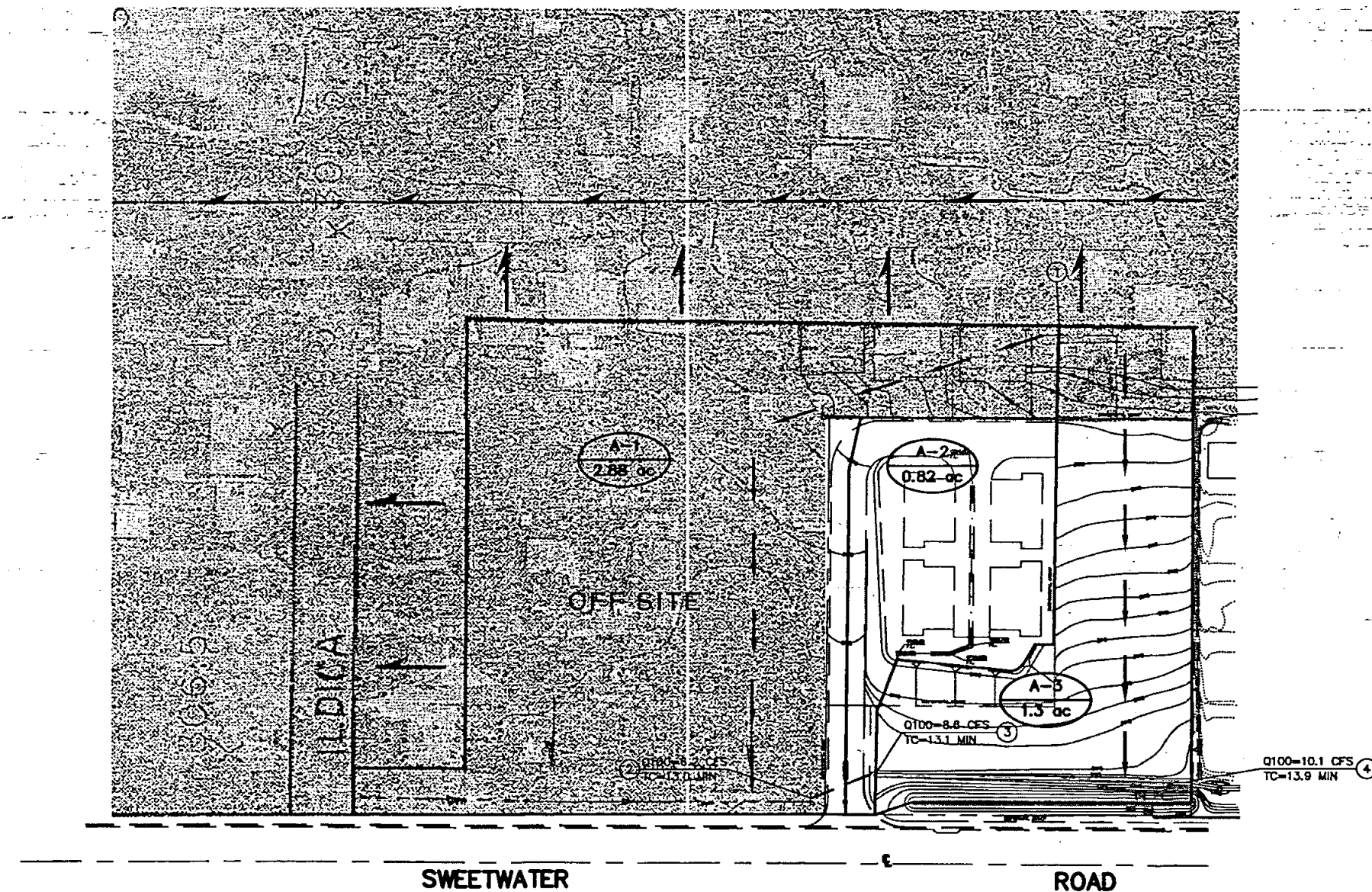
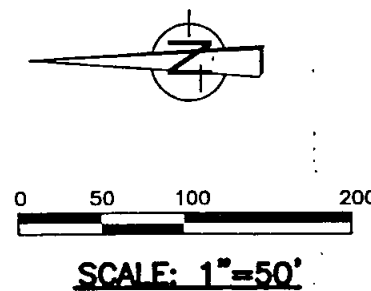
DESCRIPTION  
VALUE

|   |       |
|---|-------|
| Normal Depth (ft).....                    | 1.34  |
| Flow Velocity (fps).....                  | 5.18  |
| Froude Number.....                        | 0.836 |
| Velocity Head (ft).....                   | 0.42  |
| Energy Head (ft).....                     | 1.76  |
| Cross-Sectional Area of Flow (sq ft)..... | 2.24  |
| Top Width of Flow (ft).....               | 1.88  |

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## **EXHIBIT 1**

### **HYDROLOGY MAPS**



# LEGEND

— DRAINAGE AREA BOUNDARY

→ FLOW PATH

A-1 DRAINAGE AREA NUMBER  
2.88 ac DRAINAGE AREA IN ACRES

② Q100=6.2 CFS 100-YR PEAK RUNOFF IN CUBIC FEET PER SECOND  
TC=13.0 MIN TIME OF CONCENTRATION IN MINUTES

## BENCH MARK

2" BRASS DISK CBV2 N. PC ILDICA STREET  
12' W. ILDICA CT. COUNTY ENGR.  
ELEVATION = 425.21  
FT. (USGS)

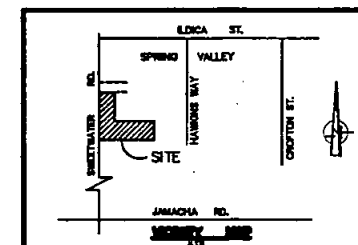
## PREPARED BY:

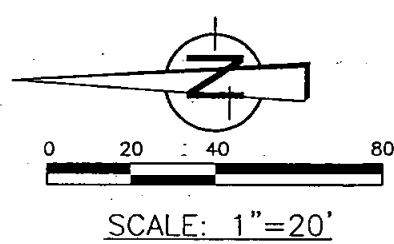
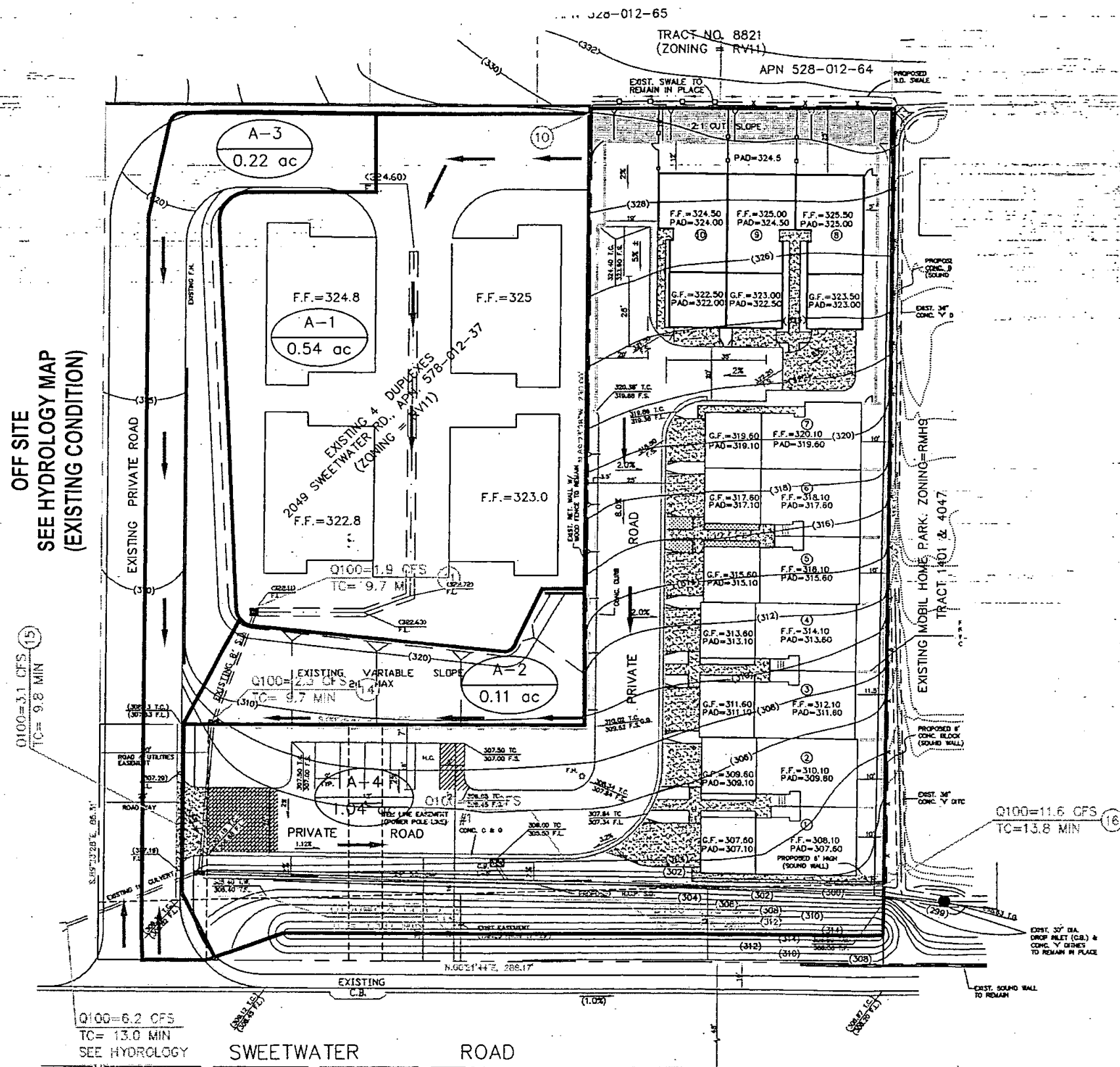
HOSS, WILLIAM & ASSOCIATES INC.  
PLANNERS CONSULTING ENGINEERS SURVEYORS  
100 SOUTH ANAHEIM BLVD. # 360 ANAHEIM, CA 92805  
TEL. (714) 991-4411 FAX (714) 991-4491

COUNTY OF SAN DIEGO  
**HYDROLOGY MAP**  
(EXISTING CONDITION)  
TENTATIVE TR. 5392

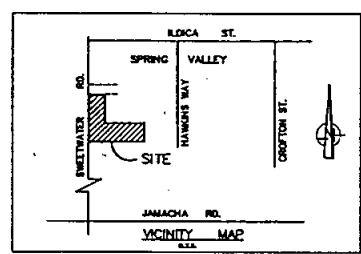
SCALE: 1"=50'

SHEET 1 OF 1





- LEGEND**
- DRAINAGE AREA BOUNDARY
  - FLOW PATH
  - A-1 DRAINAGE AREA NUMBER
  - 0.54 ac DRAINAGE AREA IN ACRES
  - ⑪ Q100=1.9 CFS TC=9.7 MIN 100-YR PEAK RUNOFF IN CUBIC FEET PER SECOND  
TIME OF CONCENTRATION IN MINUTES



Q100=6.2 CFS  
TC= 13.0 MIN  
SEE HYDROLOGY  
STUDY FOR  
EXISTING CONDITION

SWEETWATER ROAD

**BENCH MARK**  
2" BRASS DISK CBV2 N. PC ILICA STREET  
12' W. ILICA CT. COUNTY ENGR.  
ELEVATION = 425.21  
FT. (USGS)

PREPARED BY:  
**HOSS, WILLIAM & ASSOCIATES INC.**  
PLANNERS-CONSULTING ENGINEERS-SURVEYORS  
100 SOUTH ANAHEIM BLVD. #160 ANAHEIM, CA 92805  
TEL. (714) 991-4411 FAX (714) 991-4491

COUNTY OF SAN DIEGO  
**HYDROLOGY MAP**  
(PROPOSED)  
TENTATIVE TR. 5392  
SCALE: 1"=20' SHEET 1 OF 1

**COUNTY OF SAN DIEGO • DEPARTMENT OF PLANNING AND LAND USE**

**DATE:** July 27, 2007

**TO:** Planning Commission

**SUBJECT:** SWEETWATER CONDOMINIUMS; TENTATIVE MAP TM 5392 AND  
SITE PLAN S04-050, SPRING VALLEY COMMUNITY PLAN (District: 2)

**SUMMARY:**

**Overview**

The project proposes the construction of ten new condominium units on a 1.15-acre site in the Spring Valley Community Plan area. The General Plan Regional Category is CUDA and ECA. The General Plan land use is (7) Residential Use (10.9 dwelling units per gross acre) and the Zoning is RV11 (Variable-Family Residential) - 10.9 dwelling units per net acre. The project is located east of Sweetwater Road, south of Ildica Street (adjacent to 2047 Sweetwater Road), in the Spring Valley Community Planning area.

**Recommendation(s)**

**DEPARTMENT OF PLANNING AND LAND USE:**

1. Adopt the Resolution approving TM 5392 that makes the appropriate findings and includes those requirements and conditions necessary to ensure that the project is implemented in a manner consistent with the Subdivision Ordinance and State Law (Attachment B).
2. Grant Site Plan Review S04-050 that makes the appropriate findings and includes those requirements and conditions necessary to ensure that the project is implemented in a manner consistent with the Zoning Ordinance (Attachment C).

**Fiscal Impact**

NA

**Business Impact Statement**

NA

## 3 - 2

**SUBJECT:** SWEETWATER CONDOMINIUMS; TENTATIVE MAP TM 5392 AND  
SITE PLAN S04-050, SPRING VALLEY COMMUNITY PLAN (District: 2)

### **Advisory Board Statement**

NA

### **Involved Parties**

Owner: A&E Sweet Homes, LLC; Representative: Hossein Eftekhari, A&E Sweet Homes, LLC

See Ownership Disclosure in Attachment F

### **BACKGROUND:**

The proposal is for the construction of ten new condominium units on a 1.15-acre site in the Spring Valley Community Planning area. The project will consist of two 2-story buildings, one with seven attached units and the other with three attached units. Each unit will have three bedrooms and an attached two-car garage. Eight guest parking spaces including one handicapped space will be provided on-site. Access will be provided by a private driveway easement connecting to Sweetwater Road via an existing private road easement. The site is currently vacant. A six-foot high berm is located along the western site boundary adjacent to Sweetwater Road. The berm will be landscaped and retained as a noise barrier. Additionally, a six-foot high sound wall will be built on the south property line. Sewer service will be provided by the Spring Valley Sanitation District and water will be provided by the Helix Water District. Lands surrounding the project site are characterized by a mix of multi-family and single-family residential uses including manufactured homes.

A Site Plan Review Permit is required because of three special area zoning designators: 1) the B designator for compliance with the Spring Valley Design Guidelines, 2) the D1 designator, for development within the 100-year floodplain of Spring Valley Creek, and 3) the D2 designator which provides neighborhood noise standards within Spring Valley.

The Spring Valley Planning Group/Design Review Board met on March 8, 2005 and found the Site Plan to be consistent with the Spring Valley Design Review Guidelines. The building features a contemporary architectural theme that provides a sloping roof and an articulated building elevation. Building materials include stucco siding and flat roof tiles. The maximum building height will be 24 feet 8 inches. Group usable open will consist of a 620 square-foot children's play area along the east property line and a 1,160 square-foot multi-purpose common recreation area near the entrance driveway. The project complies with all usable open space, landscaping, parking, vehicular access, and fire access requirements. Landscaping conditions have been incorporated into the Site Plan. The Site Plan complies with the 100-year floodplain requirement because specific conditions have been added to require the buildings to be sited outside the 100-year flood way. The project is subject to potential noise impacts from Sweetwater Road and SR-125. As discussed in the Mitigated Negative Declaration, noise mitigation conditions include retention of the six-foot high berm along Sweetwater Road, construction of a six-foot high sound wall along the southern property boundary, and construction of balcony sound attenuation barriers. Additionally, a noise protection easement will be granted for the entire site so that an interior noise analysis of the final building design will be required prior to the issuance of the building permit to demonstrate future compliance with the



**SUBJECT:** SWEETWATER CONDOMINIUMS; TENTATIVE MAP TM 5392 AND SITE PLAN S04-050, SPRING VALLEY COMMUNITY PLAN (District: 2)

County's 45-decibel CNEL interior criterion. The required findings for the Site Plan Review Permit are provided in Attachment C, Site Plan Review Decision.

**PROJECT ISSUES:**

No project issues have been identified. For a complete discussion of the project, see the Land Use Analysis, Attachment G.

**ENVIRONMENTAL STATUS:**

A Mitigated Negative Declaration (MND) for this project (ER 04-18-008) has been prepared and is on file with the Department of Planning and Land Use (Attachment D). Mitigation measures are included as part of the MND and have been incorporated in the Resolution approving TM 5392.

**PREVIOUS ACTIONS:**

N/A

**ACTIVITIES UNDERTAKEN WITHOUT APPROPRIATE PERMITS:**

N/A

**PUBLIC INPUT:**

On March 8, 2005, the Spring Valley Planning Group voted 9-2-0 to recommend approval of the project. See Attachment E for the Planning Group Minutes.

**DEPARTMENT REASONS FOR RECOMMENDATION:**

1. The project, as proposed, is consistent with the (7) Residential Land Use Designation of the General Plan because it proposes residential uses with a density that does not exceed 10.9 dwelling units per acre. The project is compatible with the character of adjacent properties.
2. The project, as proposed, is consistent with the Spring Valley Community Plan because it proposes residential uses in area designated for residential uses.
3. The project, as proposed, is consistent with the RV11 Use Regulation because it proposes a multi-family attached residential use which is a permitted use.
4. The Tentative Map as proposed complies with all the required findings of the Subdivision Map Act and County Subdivision Ordinance as described and incorporated in the attached Resolution, Attachment B.
5. The Site Plan as proposed complies with all of the requirements pursuant to Sections 5750, 5900 and 7150 of the Zoning Ordinance.

**SUBJECT:** SWEETWATER CONDOMINIUMS; TENTATIVE MAP TM 5392 AND  
SITE PLAN S04-050, SPRING VALLEY COMMUNITY PLAN (District: 2)

6. The project complies with the California Environmental Quality Act (CEQA) and State and County CEQA Guidelines because the project has completed a Mitigated Negative Declaration dated March 22, 2007 and on file with the Department of Planning and Land Use as Environmental Review No. ER 04-18-008.

cc: Hossein Eftekhari, A&E Sweet Homes, LLC, 100 S. Anaheim Blvd. #360, Anaheim, CA 92805  
William T. Duke, 100 S. Anaheim Blvd. #360, Anaheim, CA  
Barry Beech, DPW Project Manager, Department of Public Works, M.S. O336  
Jeff Murphy, Chief, Department of Planning and Land Use, M.S. O650  
Joe Farace, Planning Manager, Department of Planning and Land Use, M.S. O650  
Lisa Robles, Case Closure, Department of Planning and Land Use, M.S. O650  
Carl Hebert, Case Tracking System, Department of Planning and Land Use, M.S. O650

**ATTACHMENTS:**

Attachment A – Planning Documentation  
Attachment B – Resolution or Form of Decision Approving TM 5392RPL<sup>3</sup>  
Attachment C – Site Decision Approving S04-050  
Attachment D – Environmental Documentation  
Attachment E – Public Documentation  
Attachment F – Ownership Disclosure  
Attachment G – Land Use Analysis

**CONTACT PERSON:**

Greg Konar

Name

858-495-5873

Phone

858-694-3373

Fax

O650

Mail Station

Greg.Konar@sdcounty.ca.gov

E-mail

**AUTHORIZED REPRESENTATIVE:**

  
ERIC GIBSON, INTERIM DIRECTOR

PC07\07-27\TM5392-LTR;jcr

# ATTACHMENT A

## Planning Documentation