

Subject: Fwd: Site "C" Hotel and Restaurant Acoustical Study
From: Greg Blodgett <greg1@ci.garden-grove.ca.us>
Date: Wed, 6 Jul 2011 15:44:58 -0700 (PDT)
To: Matthew Reid <matt.reid@landanddesign.com>
CC: Paul Guerrero <paulg@ci.garden-grove.ca.us>

Greg Blodgett
SR Project Manager
City of Garden Grove
Economic Development

----- Forwarded Message -----

From: "Jayna Morgan" <Jayna.Morgan@aecom.com>
To: "Karl Hill" <karlh@garden-grove.org>
Cc: "greg1" <greg1@garden-grove.org>
Sent: Thursday, June 23, 2011 11:06:49 AM
Subject: FW: Site "C" Hotel and Restaurant Acoustical Study

Here is the noise study.

Jayna Morgan

AECOM

T. 949.660.8044

From: Nancy Quach [mailto:nq@rkengineer.com]
Sent: Tuesday, June 21, 2011 3:05 PM
To: Morgan, Jayna
Cc: Rogier Goedecke
Subject: FW: Site "C" Hotel and Restaurant Acoustical Study, City of Garden Grove (JN:0762-2011-02/RK9010)

From: Nancy Quach
Sent: Thursday, May 19, 2011 11:00 AM
To: 'greg1@ci.garden-grove.ca.us'
Cc: 'Jayna.Morgan@aecom.com'; Bob Kahn; Michael Dickerson
Subject: Site "C" Hotel and Restaurant Acoustical Study, City of Garden Grove (JN:0762-2011-02/RK9010)

Dear Mr. Blodgett:

Please find the attached PDF of the Site "C" Hotel and Restaurant Acoustical Study, City of Garden Grove (JN:0762-2011-02/RK9010). If you would like hardcopies of the report, please feel free to contact us at (949) 474-0809 or via e-mail. We would be happy to send them out to you.

If you have any questions, please do not hesitate to call Mike Dickerson at (949) 474-0809, ext. 208.

We have enjoyed teaming with you on this project and look forward to partnering with you on future projects.

Kind regards,

Nancy Quach
Administrative Assistant

transportation planning / traffic engineering & design
acoustical engineering / community traffic calming
4000 Westerly Place, Suite 280
Newport Beach, CA 92660
tel. 949.474.0809
fax. 949.474.0902
www.rkengineer.com

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LETTER OF TRANSMITTAL

TO: CITY OF GARDEN GROVE
11222 Acacia Parkway
Garden Grove, CA 92840

DATE: May 16, 2011

JOB NO.: 0762-2011-02

SUBJECT: Site "C" Hotel and Restaurant Acoustical
Study, City of Garden Grove

ATTN: Mr. Greg Blodgett

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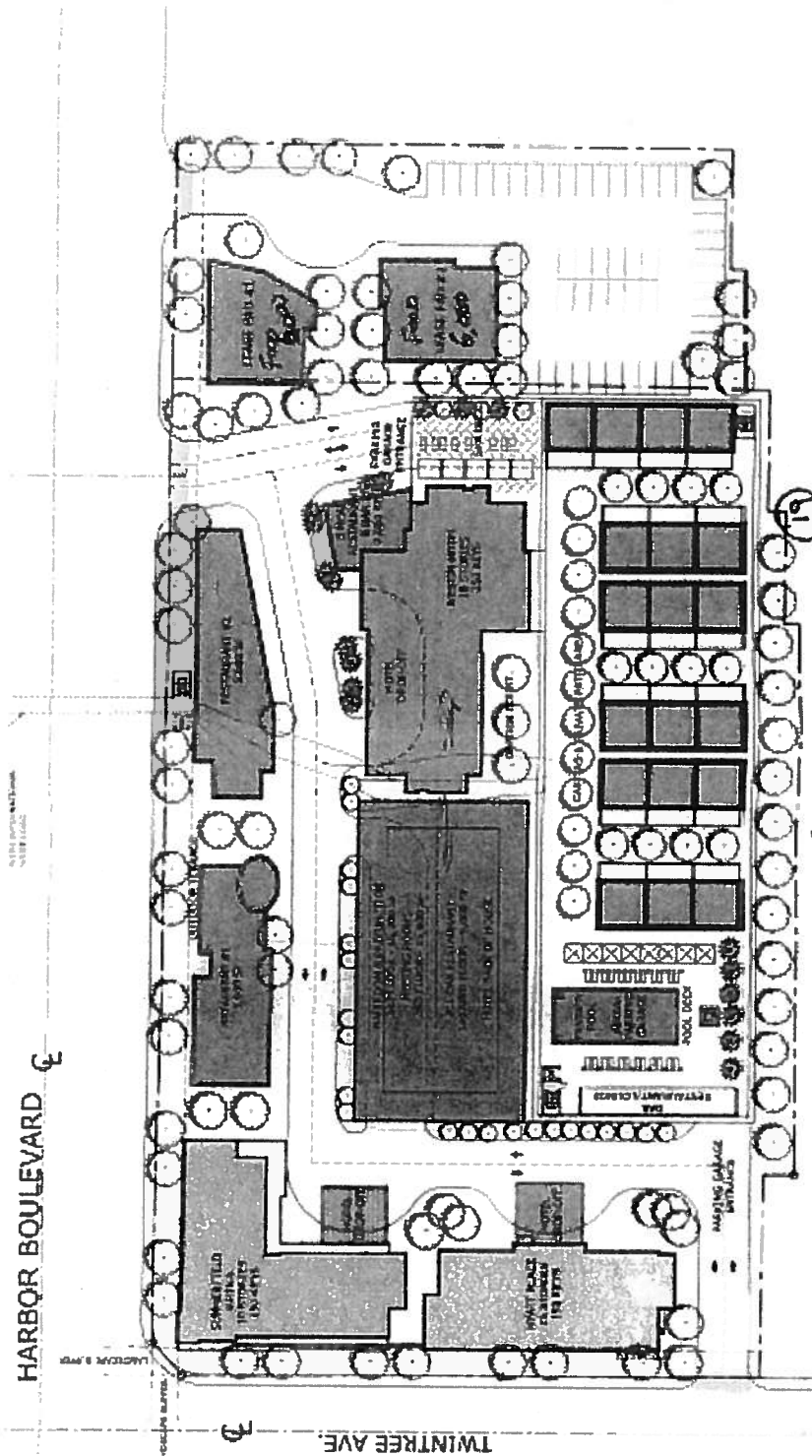
REMARKS:
Attached please find the Site "C" Hotel and Restaurant Acoustical Study, City of Garden Grove. Please call Mike Dickerson at (949) 474-0809, extension 208, if you have any questions.

BY: *Mike Dickerson*
Mike Dickerson
Acoustical Engineer, INCE

COPIES TO:

SITE 'C' HOTEL AND RESTAURANT ACOUSTICAL STUDY

City of Garden Grove, California



May 16, 2011

Mr. Greg Blodgett
CITY OF GARDEN GROVE
11222 Acacia Parkway
Garden Grove, CA 92840

Subject: Site "C" Hotel and Restaurant Acoustical Study, City of Garden Grove

Dear Mr. Blodgett:

RK ENGINEERING GROUP, INC. (RK) has completed an acoustical analysis of the proposed Site "C" Hotel and Restaurant project. The proposed project is located at the northeast corner of Harbor Boulevard and Twintree Lane in the City of Garden Grove, as indicated in Exhibit A. The proposed project's site plan is shown in Exhibit B.

The project was assessed with respect to both on and off-site generated noise impacts to the project site and surrounding residential communities. The primary sources of on-site noise impacts would include short-term construction noise and long-term operational noise (i.e. trash compactor, truck deliveries loading/unloading and noise from parking structure). The primary source of off-site generated noise impacts would include roadway noise propagating from Harbor Boulevard and Twintree Lane. The expected change in average daily traffic (ADT) was assessed and compared to the City's roadway noise standard, as defined in the Noise Element. Roadway noise impacts should be below the 65 decibel A-weighted (dBA) Community Noise Equivalent Level (CNEL) exterior and 45 dBA CNEL interior standards for commercial land use. The acoustical parameters, including the City Noise Standards from the Noise Element, are included in Appendix A.

In order to assess the potential noise impacts, RK conducted a site visit to the project site to obtain ambient noise measurements. The noise levels represent the ambient noise associated in the area during the times of the measurements as indicated in Table 1 and Exhibit C. In addition to the ambient noise measurements, RK obtained noise data for the hotel operations by assessing existing facilities with similar parameters.

With the implementation of the required and recommended mitigation measures in this report, the Site "C" Hotel and Restaurant project is expected to meet the required noise standards, as specified by the City of Garden Grove.

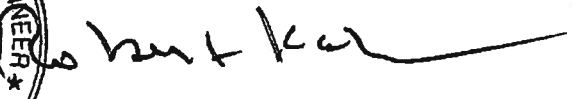
Mr. Greg Blodgett
CITY OF GARDEN GROVE
May 16, 2011
Page 2

RK is pleased to provide CITY OF GARDEN GROVE with the acoustical analysis for the Site "C" Hotel and Restaurant project. If you have any questions regarding this study or need further review, please call us at (949) 474-0809.

Sincerely,
RK ENGINEERING GROUP, INC.



Michael Dickerson, INCE
Noise/Air Specialist



Robert Kahn, P.E.
Principal

Attachments

**SITE "C" HOTEL AND RESTAURANT
ACOUSTICAL STUDY
City of Garden Grove, California**

Prepared for:

CITY OF GARDEN GROVE
11222 Acacia Parkway
Garden Grove, CA 92840

Prepared by:

RK ENGINEERING GROUP, INC.
4000 Westerly Place, Suite 280
Newport Beach, CA 92660

**Michael Dickerson
Robert Kahn, P.E.**



May 16, 2011

Table of Contents

Section	Page
1.0 Executive Summary	1-1
1.1 Roadway Noise Analysis	1-1
1.2 Interior Noise Analysis	1-2
1.3 Stationary Noise Analysis	1-2
1.4 Construction Noise Analysis	1-4
2.0 Summary of Mitigation Requirements	2-1
2.1 Roadway Noise Reduction Measures	2-1
2.2 Stationary Noise Reduction Measures	2-2
2.3 Construction Noise Reduction Measures	2-2
3.0 Fundamentals of Noise.....	3-1
3.1 Sound, Noise and Acoustics	3-1
3.2 Frequency and Hertz	3-1
3.3 Sound Pressure Levels and Decibels	3-1
3.4 Addition of Decibels	3-2
3.5 Human Responses to Changes in Noise Levels	3-2
3.6 Noise Descriptors	3-2
3.7 Traffic Noise Prediction	3-3
3.8 Sound Propagation	3-3
4.0 Introduction	4-1
4.1 Noise Standards	4-1
4.1.1. Roadway Noise Regulations	4-1
4.1.2 Stationary Noise Regulations	4-2
4.1.3 Construction Noise Regulations	4-2
5.0 Study Method and Procedure	5-1
5.1 CNEL Noise Modeling	5-1
5.1.1 Exterior Noise Level	5-2
5.1.2 Interior Noise Level	5-2
5.2 Stationary Source Noise Modeling	5-3
5.3 Construction Noise Modeling	5-4
5.4 Noise Measurements	5-5
6.0 Existing Noise Environment.....	6-1
6.1 Ambient Noise Measurements	6-1
6.2 Project Site	6-2

7.0	Future Noise Environment and Impacts	7-1
7.1	Future Exterior Noise	7-1
7.1.1	Traffic Noise Data	7-1
7.1.2	Stationary Noise Data	7-2
7.1.3	East Property Line Stationary Noise Impact	7-2
7.1.4	South Property Line Stationary Noise Impact	7-3
7.2	Future Interior Noise	7-7
8.0	Construction Noise Impacts	8-1
9.0	Conclusions	9-1

List of Attachments

Exhibits

Location Map	A
Site Map.....	B
Noise Monitoring Locations	C
Noise Sources	D
Recommendations.....	E

Tables

Noise Level Measurements	1
Existing Exterior Noise Levels Along Roadways.....	2
2014 Without Project Exterior Noise Levels Along Roadways.....	3
2014 With Project Exterior Noise Levels Along Roadways.....	4
2014 Project Noise Contribution Noise Levels	5
Future Interior Noise Impacts (dBA CNEL)	6
Roadway Parameters and Vehicle Distribution	7
Reference and Adjusted Stationary Noise Level Measurements.....	8
Projected Exterior East Property Line Stationary Noise Levels (dBA)	9
Projected Exterior South Property Line Stationary Noise Levels (dBA)	10
Typical Construction Noise Levels	11
Project Construction Related Noise Levels	12

Appendices

City of Garden Grove Acoustical Parameters	A
Acoustical Terms.....	B
Photographs and Field Measurements.....	C
Traffic Noise Impact Computer Printouts	D
Traffic Data.....	E
Stationary Noise Calculations	F
Construction Noise Calculations	G

1.0 Executive Summary

This acoustical analysis and design evaluates the potential noise impacts and necessary mitigation measures for the Site "C" Hotel and Restaurant project. The project is located at the northeast corner of Harbor Boulevard and Twintree Lane in the City of Garden Grove, as indicated in Exhibit A. The site plan used for this analysis, provided by AECOM, is presented in Exhibit B. The 5 acre project site will consist of 769 room (10 to 18 story) full-service resort hotels with approximately 30,000 square feet of meeting space and 34,000 square feet of restaurant space included on-site via detached PADs, and an approximate 5-story parking structure. The noise regulations for the project site are listed in the *Noise Standard* section of the study.

A detailed list of required and recommended noise control measures is presented in the Summary of Mitigation Requirements section of this study (also graphically illustrated on Exhibits C). The noise control analysis and recommendations in this study are intended to satisfy the City of Garden Grove Conditions of Approval, with respect to this project.

1.1 Roadway Noise Analysis

A roadway noise analysis was performed based on current and future average daily traffic (ADT) volumes along subject roadways. Typically a significant impact is considered to be a noise level exceeding the normally acceptable 65 dBA CNEL exterior standard for residential/commercial land uses.

RK utilized the traffic impact study performed by RK Engineering Group, Inc. (Site "C" Hotel and Restaurant Traffic Impact Study) and the short-term noise measurements to calculate the roadway noise levels. The project was assessed as follows: The existing roadway noise levels, 2014 without project roadway noise levels, 2014 with project noise levels, as indicated in Tables 2 through 5.

The results of the roadway analysis indicates that the roadway network currently experiences noise levels of 49.1 to 68.1 dBA CNEL at a distance of 100 feet from the centerline of the analyzed road. The 2014 without project noise levels will range from 49.3 to 68.3 dBA CNEL at a distance of 100 feet from the centerline as indicated in Table 3. The 2014 with project noise levels will range from 59.6 to 68.3 at a distance of 100 feet from the centerline, as indicated in Table 4. Table 5 indicates the project's projected roadway noise level contribution to the surrounding area. The proposed project will further increase noise levels along the subject roadways by approximately 0.0 to 2.5 dBA CNEL. **The project's contribution to the adjacent roadway noise environment is insignificant.**

The project site has one exterior area (outdoor swim area) which would be considered an exterior sensitive receiver location. The outdoor swim area will be located on top of the parking structure and will be shielded by the hotel building facade. The architectural shielding from the building facades will mitigate noise levels at the exterior pool area to approximately 58.1 dBA CNEL, therefore no significant exterior impact from the roadway noise is expected.

1.2 Interior Noise Analysis

An interior noise analysis was performed to calculate the projected interior noise levels. The City has a retail interior noise standard of 45 dBA CNEL. The interior noise projection is the difference between the exterior noise levels and the attenuating effects of the building construction shell. The City's interior noise standard of 45 dBA CNEL will be met with a "windows closed" condition and commercially glazed glass with an STC value of at least 25 as indicated in Table 6.

1.3 Stationary Noise Analysis

The stationary noise impacts associated with the proposed project would include loading/unloading area noise, parking structure noise, and outdoor pool equipment.

Two sensitive noise areas (single family dwelling units) are located directly east and south of the project site. The stationary noise impacts were projected to these residential homes.

To approximate the noise levels associated with the stationary noise sources located throughout the project site (demonstrated on Exhibit D), noise level data with similar parameters were collected and are presented in Table 8 and Appendix F. Table 8 indicates the reference noise levels associated with trash compactor, loading/unloading areas, parking structures, and the outdoor pool area (monitored by RK Engineering Group, Inc.).

Existing Noise Environment

To help assess the potential noise impacts of the proposed project, four (4) short-term noise measurements were taken at or near the project site during daytime and nighttime hours. Short-term noise monitoring location 1 (ST-1) was taken approximately 50 feet from the centerline of Twintree Lane, (front yard of residential unit 12531 Twintree Lane). ST-1 describes the noise environment associated with the residential units south of the project site. ST-2 was taken in the cul-de-sac (near residential unit 12233 Choisser Road). ST-2 noise levels describe the existing noise environment associated with the residential units east of the project site. ST-3 was taken at the southeast corner of Choisser Road and Greentree Lane (45 feet from the centerline). ST-3 describes the existing noise levels associated with the residential units east of the project site. ST-4 was taken at the existing RV Park (approximately 10 feet west of the existing 6 foot high property line wall). ST-4 describes the existing noise levels associated with backyards of the residential units east of the project site. All short-term noise measurements indicate that the existing traffic along the subject roadways is the main source of noise impacting the existing environment.

Future Noise Environment

By imputing the referenced and measured noise levels associated with the ambient noise conditions near and around the project site, future noise levels were calculated. The projected exterior combined Noise Equivalency Level (Leq) for the nearest adjacent properties will range between 51.3 to 56.9 dBA Leq during daytime hours (7AM – 10PM) and 49.2 to 51.1 dBA Leq during nighttime hours (10PM – 7AM). The hotel and restaurant hours of operation are expected to occur during daytime hours; however this analysis includes nighttime operations as well, for comparison purposes. Noise levels associated with the hotel and restaurant operations are not expected to significantly impact the adjacent residential units. Additional noise level reduction measures are outlined to further reduce potential noise levels.

The results of the stationary acoustical analysis indicate that noise levels associated with the project site will be below the City's standard at the east and southern property lines during the day and nighttime hours. Furthermore, the architectural building design of the hotel structure and the parking structure will provide sufficient shielding from the traffic noise along Harbor Boulevard.

1.4 Construction Noise Analysis

Construction noise represents a short-term impact on the ambient noise levels. The degree of construction may vary for different areas of the project site; as a result, noise levels associated with construction will vary. Construction noise levels will also vary during construction phases. The project site is expected to be under construction for approximately two years. Noise generated by construction equipment includes trucks, graders, bull dozers, concrete mixers and portable generators. The peak noise level for most of the equipment that will be utilized during the construction phase will be approximately 70 to 90 decibel A-weighted (dBA) at a distance of 50 feet from the noise source.

Currently there are two noise sensitive receiver areas (residential homes) located east and south of the project site. Table 13 indicates the approximate noise levels near the property lines of the project site. The noise levels will fluctuate depending on the distance and number of equipment operating at the same time. This analysis assumes a worst-case scenario. The noise level will range from 74.0 to 77.9 dBA equivalent noise level (Leq) during the different phases of construction.

The City has adopted the Noise Performance Standards from the City's Noise Ordinance. Construction activities must follow the Noise Ordinance regulations. Refer to Section 2.0 *Summary of Mitigation Requirements* for noise reduction measures or noise regulations that would potentially reduce construction impacts to a less than significant level.

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2.0 Summary of Mitigation Requirements

Roadway noise impacts propagating from Harbor Boulevard and Twintree Lane to the project site and to the surrounding area were assessed and compared to the City's guidelines for residential/ commercial land use. The results of the roadway CNEL analysis include existing, future without and with project buildout average daily traffic (ADT) volumes along the analyzed roadways, as detailed in Tables 2 through 5. The result of the project's contribution to the existing environment is indicated in Table 5.

The predicted future interior noise levels at the project site were estimated as indicated in Table 6.

Stationary noise levels propagating from the project site to the adjacent properties were assessed and compared to the City's Stationary noise ordinance. Exhibit D illustrates the locations of these stationary noise sources. Tables 9 and 10 indicate the estimated future noise levels as a result of the proposed project.

The project's construction noise levels were calculated and are highlighted in Table 13. A summary of all noise requirements, recommendations and locations is shown on Exhibit E.

The proposed project is not expected to impact the adjacent land uses from a noise standpoint. However, to ensure noise levels remain low there are several required and recommended noise reduction measures to reduce noise impacts.

2.1 Roadway Noise Reduction Measures

Roadway noise impact standards from the City of Garden Grove's Noise Standards are listed within the Noise Standards section of the report and in Appendix A. The project site's architectural layout design will further reduce potential roadway noise

impacts from Harbor Boulevard and Twintree Lane to the proposed residential units, located adjacent to the project site

2.2 Stationary Noise Reduction Measures

1. An 8 foot shielding wall is recommended along the east property line.
2. Delivery truck operations and loading and unloading activities should be limited to daytime hours between the hours of 7:00 AM to 10:00 PM.
3. Idling trucks should be limited to five minutes in length.
4. Any trash compactor/pool equipment should be shielded by a parapet wall, or fully enclosed. The mechanical equipment should be placed at a distances furthest from the nearest residential dwelling units. The height of the walls should be at least as high as or higher than the mechanical equipment.
5. It is recommended that the parking structure have 4 foot shielding walls for each floor that faces the residential units to the east.
6. Once project site is in operation, it is recommended that noise monitoring occur to ensure the project site is operating within the City's criteria.

2.3 Construction Noise Reduction Measures

Construction operations must follow the City's General Plan and the noise ordinance which states that operations cannot exceed the stipulations set-forth in Section 8.47.050 and 8.47.060. A number of noise reduction measures are recommended to minimize noise impacts.

1. Construction operations must not occur during the hours of 10:00 PM – 7:00 AM.
2. During construction, the contractor should ensure all construction equipment is equipped with appropriate noise attenuating devices.
3. Idling equipment should be turned off when not in use.

4. Equipment will be maintained so that parts of vehicles and their loads are secured from rattling and banging.

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3.0 Fundamentals of Noise

This section of the report provides basic information about noise and presents some of the terms used within the report.

3.1 Sound, Noise and Acoustics

Sound is a disturbance created by a moving or vibrating source and is capable of being detected by the hearing organs. Sound may be thought of as mechanical energy of a moving object transmitted by pressure waves through a medium to a human ear. For traffic, or stationary noise, the medium of concern is air. *Noise* is defined as sound that is loud, unpleasant, unexpected, or unwanted.

3.2 Frequency and Hertz

A continuous sound is described by its *frequency* (pitch) and its *amplitude* (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch (bass sounding) and high-frequency sounds are high in pitch (squeak). These oscillations per second (cycles) are commonly referred to as Hertz (Hz). The human ear can hear from the bass pitch starting out at 20 Hz all the way to the high pitch of 20,000 Hz.

3.3 Sound Pressure Levels and Decibels

The *amplitude* of a sound determines its loudness. The loudness of sound increases or decreases as the amplitude increases or decreases. Sound pressure amplitude is measured in units of micro-Newton per square meter (N/m^2), also called micro-Pascal (μPa). One μPa is approximately one hundred billionths (0.0000000001) of normal atmospheric pressure. Sound pressure level (SPL or L_p)

is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called decibels abbreviated dB.

3.4 Addition of Decibels

Because decibels are on a logarithmic scale, sound pressure levels cannot be added or subtracted by simple plus or minus addition. When two sounds of equal SPL are combined, they will produce an SPL 3 dB greater than the original single SPL. In other words, sound energy must be doubled to produce a 3 dB increase. If two sounds differ by approximately 10 dB, the higher sound level is the predominant sound.

3.5 Human Response to Changes in Noise Levels

In general the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, (A-weighted scale) and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. For purposes of this report as well as with most environmental documents, the A-scale weighting is typically reported in terms of A-weighted decibel (dBA). Typically the human ear can barely perceive the change in noise level of 3 dB. A change in 5 dB is readily perceptible, and a change in 10 dB is perceived as being twice or half as loud. As previously discussed, a doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g. doubling the volume of traffic on a highway) would result in a barely perceptible change in sound level.

3.6 Noise Descriptors

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns other are random. Some noise levels are constant while others are sporadic. Noise descriptors were created to describe the different time-varying noise

levels. Appendix B indicates the most commonly used noise descriptors and gives a brief definition.

3.7 Traffic Noise Prediction

Noise levels associated with traffic depends on a variety of factors: (1) volume of traffic, (2) speed of traffic, (3) auto, medium truck (2 – 6 wheels) and heavy truck percentage (3 axle and greater), and sound propagation. The greater the volume of traffic, higher speeds and truck percentages equate to a louder volume in noise. A doubling of the Average Daily Traffic (ADT) along a roadway will increase noise levels by approximately 3 dB; reasons for this are discussed in the sections above.

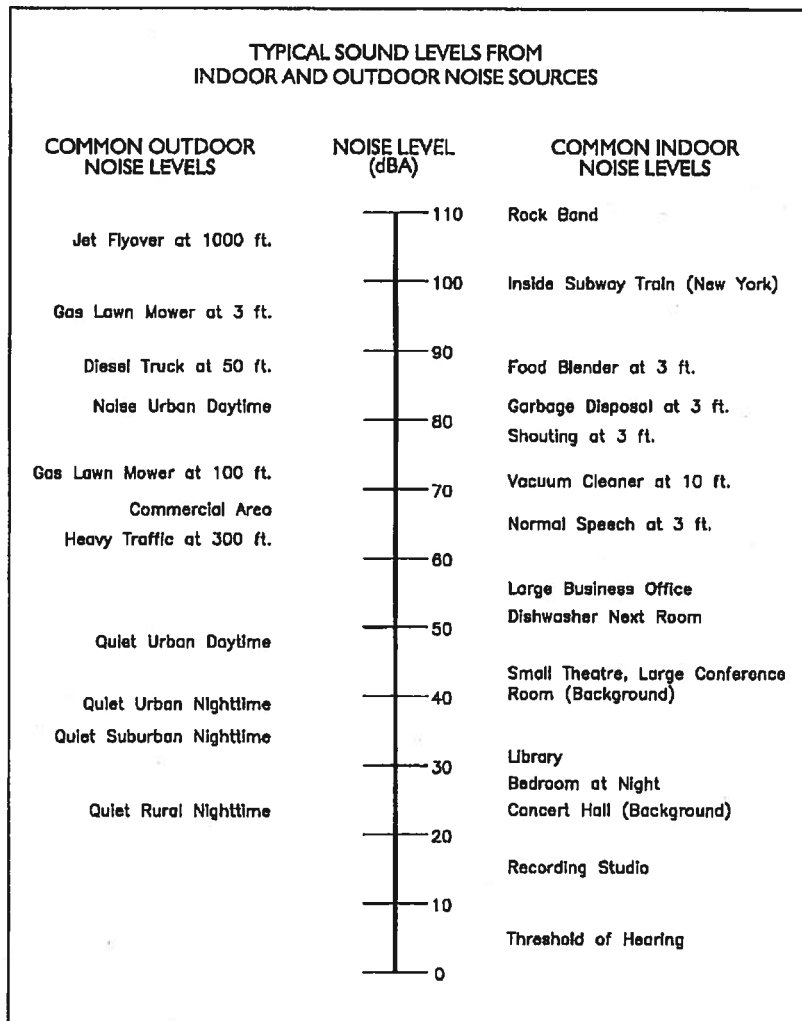
3.8 Sound Propagation

As sound propagates from a source it spreads geometrically. Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates at a rate of 6 dB per doubling of distance. The movement of vehicles down a roadway makes the source of the sound appear to propagate from a line (i.e., line source) rather than a point source. This line source results in the noise propagating from a roadway in a cylindrical spreading versus a spherical spreading that results from a point source. The sound level attenuates for a line source at a rate of 3 dB per doubling of distance.

As noise propagates from the source, it is affected by the ground and atmosphere. Noise models use hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground absorption between the noise source and the receiver. Soft site conditions such as grass, soft dirt or landscaping attenuate noise at an additional rate of 1.5 dB per doubling of distance. When added to the geometric spreading, the excess ground attenuation results in an overall noise attenuation of 4.5 dB per

doubling of distance for a line source and 6.0 dB per doubling of distance for a point source.

Research has demonstrated that atmospheric conditions can have a significant effect on noise levels when noise receivers are located 200 feet from a noise source. Wind, temperature, air humidity and turbulence can further impact have far sound can travel.



4.0 Introduction

This acoustical study evaluates the potential on/off-site noise impacts to and from the proposed Site "C" Hotel and Restaurant project by assessing the projected noise impacts generated by the local roadway network, investigating the existing ambient noise conditions, identifying noise sensitive locations, and predicting the future noise level impacts. The Site "C" Hotel and Restaurant project is located at the northeast corner of Harbor Boulevard and Twintree Lane in the City of Garden Grove.

The general location of the project is shown in the Location Map, Exhibit A. The site plan used for this analysis, provided by CITY OF GARDEN GROVE, is presented on Exhibit B.

The following sections outline the expected noise levels surrounding the planned site and compare these noise levels to the applicable noise standards. The design requirements and recommendations, as outlined in the *Summary of Mitigation Requirements* section of this study, are intended to satisfy the City of Garden Grove noise standards.

4.1 Noise Standards

The acoustical parameters including the City Noise Standards from the Noise Element and Noise Ordinance are included in Appendix A. The noise regulations include parameters for roadway and stationary noise impacts.

4.1.1 Roadway Noise Regulations

Roadway noise impacts, specified within the Noise Element, should be below the 65 dBA CNEL exterior and 45 dBA CNEL interior residential/commercial land use threshold.

4.1.2 Stationary Noise Regulations

The stationary noise impacts, as defined by the City Noise Ordinance, should not exceed exterior residential noise intrusion standard during the daytime (7 AM to 10 PM) and nighttime (10 PM to 7 AM) shown below in Figure 1.

Figure 1

Noise Ordinance Stationary Noise Standards

		Noise Criteria Level (dBA)					
		Cumulative Time Period	0 Minutes	1 Minute	5 Minutes	15 Minutes	30 minutes
		Symbol	L_{max}	L_2	L_5	L_{25}	L_{50}
	Time						
Exterior	Daytime (7 AM to 10 PM)		75.0	70.0	65.0	60.0	55.0
	Nighttime (10 PM to 7 AM)		70.0	65.0	60.0	55.0	50.0

A common way of describing noise levels from stationary sources is with the percent noise level ($L_{\%}$). The percent noise level indicates the noise level which is exceeded during a certain percentage of time and represents the average noise level. Appendix B contains more definitions and examples.

4.1.3 Construction Noise Regulations

Construction noise is defined as noise which is disturbing, excessive or offensive and constitutes a nuisance involving discomfort or annoyance to persons of normal sensitivity residing in the area, which is generated by the use of any tools, machinery or equipment used in connection with construction operations. The following describes the regulations with regard to construction activities (Section 8.47.060d):

d.) Construction of Buildings and Projects: It shall be unlawful for any person within a residential area, or within a radius of 500 feet there from, to operate equipment or perform any outside construction or repair work on buildings, structures, or projects, or to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist, or any other construction type device between the hours of 10:00 p.m. of one day and 7:00 a.m. of the next day in such a manner that a person of normal sensitiveness, as determined utilizing the criteria established in Section 8.47.050(a), is caused discomfort or annoyance unless such operations are of an emergency nature.

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5.0 Study Method and Procedure

A glossary of acoustical terms is included in Appendix B.

5.1 CNEL Noise Modeling

The CNEL noise analysis uses a version of the Federal Highway Administration (FHWA) Traffic Noise Prediction Model (FHWA-RD-77-108), together with several key roadway and site parameters. Key inputs include roadway classification (e.g. Principal Arterial Highway, Major Arterial Highway, Primary Arterial Highway, Secondary Highway and Collector), roadway active width (the distance between the center of the outer most travel lanes on each side of the roadway), Buildout Average Daily Traffic (ADT), travel speed, percentages of automobiles, medium trucks and heavy trucks in the roadway volume, roadway grade, angle of view, site conditions ("hard" or "soft"), and percent of total ADT which flows each hour throughout a 24-hour period.

The key input data for these barrier performance equations include; performance equations including relative source-barrier-receiver horizontal separations, relative source-barrier-receiver vertical separations, typical noise source spectra, and barrier transmission loss. Some of the general assumptions used in determining the source and receiver geometry are listed below:

Receiver Geometry

Horizontal Geometry: Distance behind top-of-slope barrier: 10 feet

Vertical Geometry: Height above pad for ground level receivers:
Exterior: 5 feet above ground
1st Floor Interior: 5 feet above finished floor
2nd Floor Interior: 15 feet above finished floor

Source Assumptions

Horizontal Geometry: For roadways with grades no greater than 2%, all vehicles are located at the single-lane equivalent acoustical center of the full roadway. For roadways with over 2% grade, vehicle count is divided in half and is located at the single-lane acoustical equivalent for each side of the roadway.

Vertical Geometry: Height above road grade:
Autos: 2.0 feet
Medium Trucks: 4.0 feet
Heavy Trucks: 8.0 feet

5.1.1 Exterior Noise Level

The CNEL model calculates the noise impacts produced by the adjacent roadway. The output of the model was compared to the Residential Land Use Noise Standard found in the Noise Element. The City has a 65 dBA CNEL exterior noise standard for residential land use (i.e. back and side yards). The predicted worst-case exterior noise levels along Harbor Boulevard will range from 67.0 to 68.3 dBA CNEL at 100 feet by the Year 2014. It is important to note that noise levels at the back yards of the residential land uses are not anticipated to be above the noise standard. Furthermore, the architectural layout of the project site will provide further shielding to the residential units (to the east) from traffic noise levels propagating from Harbor Boulevard.

5.1.2 Interior Noise Level

The CNEL model calculates the noise impacts produced by the adjacent roadway. The output of the model was compared to the Residential Land Use Noise Standard

found in the Noise Element. The City has a 45 dBA CNEL interior residential land use threshold. The interior noise levels will be below the City's standard with a "windows closed" condition and commercially glazed glass. No impact is expected.

5.2 Stationary Source Noise Modeling

The stationary source noise analysis uses a version of the Federal Highway Administration (FHWA) Traffic Noise Prediction Model (FHWA-RD-77-108), together with several key site parameters, to project the expected impacts on the existing adjacent land uses as a result of the proposed development. Key inputs include noise attributed to the stationary noise sources (i.e. mechanical equipment, loading/unloading area, parking structure, outdoor pool area noise, along with specific distances.

Using the Noise Barrier Calculations and the key parameters, a barrier analysis was performed to determine noise computations. The key input data for these barrier performance equations include relative source-barrier-receiver horizontal separations, relative source-barrier-receiver vertical separations, typical noise source spectra, and barrier transmission loss. Some of the general assumptions used in determining the source and receiver geometry are listed below:

Receiver Geometry

Horizontal Geometry: Distance behind top-of-slope barrier: 10 feet

Vertical Geometry: Height above pad for ground level receivers:
Exterior: 5 feet above ground
1st Floor: 5 feet above finished floor
2nd Floor: 15 feet above finished floor

Source Assumptions

Horizontal Geometry: Stationary noise source distance based upon building locations and adjacent residential receivers.

Vertical Geometry: Height above pad grade for each stationary source.

These assumptions and the site plan (Exhibit B) were used to fix the horizontal and vertical geometry used in the barrier analysis.

The stationary source model incorporates the City of Garden Grove's Noise Ordinance Standards and is defined in the *Noise Standard* section of the report.

5.3 Construction Noise Modeling

The construction noise analysis utilizes the Federal Highway Administration (FHWA) Roadway Construction Noise Model, together with several key construction parameters. Key inputs include distance to the sensitive receiver, equipment usage, and baseline parameters for the project site. This study evaluates the potential exterior noise impacts. For purposes of the project, the project was analyzed based on worst-case construction noise during the loudest phase. The following assumptions relevant to short-term construction noise impacts were used:

- Project construction will occur in a single phase and last approximately two years. The project site currently is partially developed but will be razed to accommodate the proposed project. Construction noise is expected to be the loudest during the grading, building and concrete phases.
- Grading is expected to last approximately 1 to 3 months. The use of two (2) dozers, six (6) scrapers, one (1) front-end loader, two (2) graders, and one (1) water truck were estimated to be utilized during grading.

- Building is expected to last approximately 20 to 26 months in which heavy concrete operations will occur. The use of four (4) backhoes, two (2) loaders, three (3) generators, 1 to 15 delivery trucks per day, and 1 to 20 concrete trucks deliveries per day will occur during the building phase.

The analysis indicates that the conservative exterior noise levels generated by the construction to the various property lines will approximately range from 70.3 to 85.0 dBA Leq with a maximum noise level ranging from 71.4 to 83.6 dBA Lmax. The noise levels will vary depending on multiple factors, therefore these noise levels reflect a worst-case scenario. These noise levels are assumed over a one-hour time period.

The project is not expected to generate any vibration impact during the construction phase. The estimated construction equipment for the development does not utilize any heavy pile driving or other vibration impacting equipment.

5.4 Noise Measurements

Noise measurements are taken to determine the existing noise levels. A noise receiver or receptor is any location in the noise analysis in which noise might produce an impact. The following criteria are used to select measurement locations and receptors:

- Locations expected to receive the highest noise impacts.
- Locations that are acoustically representative and equivalent of the area of concern
- Human land usage
- Sites clear of major obstruction and contamination

Noise measurements were conducted on April 27, 2011 using a Larson Davis 712 sound level meter. Noise monitoring locations are indicated in Table 1 and Exhibit C. The following gives a brief description of the Caltrans Technical Noise Supplement procedures:

- Microphones for sound level meters were placed 5-feet above the ground for all measurements
- Sound level meters were calibrated before and after each measurement
- Following the calibration of equipment, a wind screen was placed over the microphone
- Frequency weighting was set on "A" and slow response
- Results of the short-term noise measurements were recorded on field data sheets
- During short-term noise measurements any noise contaminations such as barking dogs, local traffic, lawn mowers, or aircraft fly-overs were noted
- Temperature and sky conditions were observed and documented

6.0 Existing Noise Environment

RK visited the project site on April 27, 2011 to obtain ambient noise data during the day/night hours. Noise monitoring occurred along the northern, eastern (backyard/side yard of the residential units), and southern property lines. Currently, the project site has a RV Park, an existing restaurant and vacant land uses. The existing structures will be razed for new construction.

6.1 Ambient Noise Measurements

A total of 4 short-term noise (ST) measurements were performed at or near the project site. The location of the noise measurements are representative of a noise sensitive area. As previously describe, ST-1 represents the residential units south of the southern property line, ST-2 represents the commercial/residential units located at the north eastern corner of the project site. ST-3 and ST-4 represent the backyards of the residential units east of the project site. Table 1 and Exhibit C illustrate the results of the noise measurements. Photographs of the measurement sites are shown in Appendix C.

Noise levels during daytime (7:00 AM -10:00 PM) hours range from 49.4 to 58.2 dBA Leq over a 10 minute interval, at the various noise monitoring locations. The noise levels fluctuate based on distance, elevation, existing walls, and time of day. The noise level measurements are utilized to establish an existing noise condition. Future noise conditions are calculated based on the existing conditions, plus the projected future noise environment created by the project site.

6.2 Project Site

The 5 acre project site will consist of 769 room (10 to 18 story) full-service resort hotels with approximately 30,000 square feet of meeting space and 34,000 square

feet of restaurant space included on-site via detached PADs, and an approximate (5) story parking structure. The short-term noise data at the project site indicates that the existing traffic noise levels and ambient noise levels are below the City's exterior noise standard. The relative distances of the noise meter locations are described in Appendix C.

Site "C" Hotel and Restaurant project site is zoned for international mixed use according to the City of Garden Grove General Plan within the General Plan Land Use Element (Appendix A). The noise standards for the project site are listed in the Noise Standard section of the study. The proposed land uses surrounding the project site consist of residential units and therefore the noise study utilizes the residential noise standards.

7.0 Future Noise Environment and Impacts

7.1 Future Exterior Noise

The future exterior noise levels analyze the potential roadway noise impacts to and from the project site and stationary noise (loading/unloading area, trash compactor, and parking structure) from the project site to the surrounding area.

7.1.1 Traffic Noise Data

The City has a normally acceptable exterior standard of 65 dBA CNEL for residential/mixed land use. It is expected that roadway traffic along Harbor Boulevard will be the main source of off-site noise impacting the project site. According to the Traffic Impact Study performed by RK Engineering Group, Inc. (Site "C" Hotel and Restaurant TIS), the project will generate approximately 4,352 ADT along Harbor Boulevard (s/o Chapman Ave) and approximately 388 ADT along Twintree Lane (e/o Harbor). Tables 2 through 5 indicate the exterior roadway noise levels along the local roadway network. Each table indicates a different scenario. Table 5 indicates the projected worst-case exterior noise levels will range from 51.8 to 68.3 dBA CNEL at a distance of 100 feet from the centerline of the roadway by the Year 2014. No mitigation is required since this is considered a less than significant impact. Appendix D demonstrates the roadway calculations.

7.1.2 Stationary Noise Data

The stationary noise impact thresholds, as defined by the City's Municipal Code are shown in Figure 1 (Section 4.1.2). The noise code establishes exterior allowable noise levels during certain times of the day. This analysis reviews the permissible noise levels during daytime (7AM – 10PM) and nighttime (10PM – 7AM) hours. The noise code

states that stationary noise levels from a project site must not exceed the exterior noise level during day/nighttime hours at the measured property line, where there are noise sensitive receivers.

To project an exterior noise level to the adjacent property lines, reference stationary noise levels were measured and then extrapolated to the nearest sensitive noise land use area near the project site. Tables 9 and 10 indicate the projected exterior stationary noise levels to the nearest property lines and noise sensitive areas. The exterior noise levels at or near the property lines are expected to increase approximately 0.0 to 3.8 dBA (depending on the L(%) noise criteria). Typically it takes a change of 3 dB or more to hear a noticeable change in the noise environment, therefore the change in noise level would be considered minimal. The architectural layout of the project site further reduces potential noise impacts.

7.1.3 East Property Line Stationary Noise Impact

Table 9 indicates the projected stationary noise impact to the residential units east of the project site. The residential units to the east will experience a reduction in traffic noise (from Harbor Boulevard) and an increase in noise from the parking structure. The overall noise level is expected to increase by approximately 0.2 to 3.6 dBA during daytime (7AM -10PM) hours over the existing condition (depending on the L(%) noise criteria examined). The impact would be considered not significant because it is not exceeding the City's noise criteria. It is possible that intermittent noise from horns, cars, and engine idling could be heard at these residential units. Therefore, it is recommended that properly designed and placed parapet walls be applied to the exposed areas of the parking structure where noise sensitive areas exist. It takes a change of 3 dB to hear a noticeable difference.

7.1.4 South Property Line Stationary Noise Impact

Table 10 indicates the projected stationary noise impact to the southern property line. The land use to the south is zoned residential/commercial. The noise levels were projected to the south property line for reference purposes. An increase in noise from the parking structure will occur along the eastern and southern area of the project site. The hotel towers and parking structure will provide shielding from traffic and other stationary noise sources located on the project site. The overall noise level is expected to increase by approximately 0.9 to 2.5 dBA during daytime (7AM -10PM) hours over the existing condition (depending on the L(%) noise criteria examined. As previously noted it takes a change of 3 dB to hear a noticeable difference.

Loading/Unloading Area Noise

Noise associated with the loading/unloading of trucks is expected to occur near the southern property line. The five-story parking structure and the hotel towers will partially shield noise levels propagating from the area to the adjacent residential areas. An 8 foot shielding wall is recommended along the eastern property line where the noise levels are not obstructed by a structure, as indicated in Exhibit E. It is recommended that loading/unloading activities be limited to the hours of 7:00 AM – 10:00 PM.

Condenser Unit Noise

Noise associated with condenser equipment is expected to be enclosed or on top of the hotel towers. It is recommended that any condenser units not enclosed be shielded by parapet walls with a height equal or greater than the height of the unit itself. Condenser unit noise is not expected to impact the adjacent residential areas.

Parking Structure Noise

Noise levels associated with the parking structure includes will vary depending on the time of year, the time of day, and the number of parking stalls and number of vehicles. Noise levels will be highest during AM/PM peak hours. The noise level from the parking structure was projected to the adjacent properties. The final result demonstrates that noise levels will not exceed the City's noise criteria.

7.2 Future Interior Noise

Using typical commercial building construction reduction levels, the future interior noise level were calculated. Table 6 indicates the projected interior noise level for hotel and the restaurant. The hotel will require a CNEL noise reduction of approximately 19.1 dBA CNEL, requiring a "windows closed" condition, and commercially glazed glass with an STC value of 25 or greater. The restaurant pad will require a CNEL noise reduction of 19.1 dBA with an STC value of 25 or greater. A "windows closed" condition requires a means of mechanical ventilation per the Unified Building Code. The windows closed condition will be sufficient to meet the 45 dBA CNEL interior noise standard set-forth by the City.

8.0 Construction Noise Impacts

The degree of construction noise may vary for different areas of the project site and also vary depending on the construction activities. It is estimated that construction will take approximately two (2) years. Grading is expected to last approximately 1-3 months; building will take approximately 20 to 26 months. Noise levels associated with the construction will vary with the different phases of construction.

Construction noise is expected to be the worse during the grading and concrete phases of construction.

The following is a list of heavy construction equipment which will be utilized during grading: two (2) dozers, six (6) scrapers, one (1) front-end loader, two (2) graders, and one (1) water truck.

The following is a list of heavy construction equipment which will be utilized during building (concrete phase): four (4) backhoes, two (2) loaders, three (3) generators, 1 to 15 delivery trucks per day, and 1 to 20 concrete trucks deliveries per day.

The Environmental Protection Agency (EPA) has compiled data regarding the noise generated characteristics of typical construction activities. The data is presented in Table 13. These noise levels would diminish rapidly with distance from the construction site at a rate of 6 dBA per doubling of distance. For example a noise level of 86 dBA measured 50 feet from the noise source would reduce to 80 dBA at 100 feet. At 200 feet from the noise source the noise level would reduce to 74 dBA. At 400 feet the noise source would reduce by another 6 dBA to 68 dBA. During the construction period, the contractors would be required to comply with the Municipal Code of the City of Garden Grove as described in Appendix A.

There are two noise sensitive areas adjacent to the project site. According to the City's Municipal Code, construction activities must occur during (7AM – 10PM). Construction noise will be audible at the adjacent residential areas however noise reduction measures have been recommended to reduce the construction noise impacts. These include, but are not limited to equipment be equipped with appropriate noise attenuating devices, idling equipment kept to a minimum of five minutes or less and should be turned off when not in use, and ensure equipment is well maintained to reduce banging and rattling.

The project is not expected to generate a vibration impact to the surrounding area. Per the estimated construction equipment usage list, there is no heavy pile driving or other vibration impacting equipment being used.

9.0 Conclusions

RK has completed an acoustical analysis of the Site "C" Hotel and Restaurant project, located in the City of Garden Grove. The project was assessed with respect to on and off-site generated noise impacts. The noise study indicates that stationary noise (truck deliveries loading/unloading and the parking structure) would be the main source of on-site noise impacting the adjacent properties. The noise study indicates that traffic noise from Harbor Boulevard and Twintree Lane will be the main source of off-site noise impacting the project. Refer to *Summary of Mitigation Requirements* and Exhibits E.

The following conclusions for the Site "C" Hotel and Restaurant project are listed below:

- The measured short-term ambient noise levels near the project site are indicated in Table 1.
- The roadway noise impacts to the project site are indicated in Table 2 through 5. The site plan layout of the structures, building design and specific height/distances will provide additional shielding from roadway noise. The projected interior noise levels for the project site are indicated in Table 6.
- The stationary noise impacts to the surrounding area are indicated in Tables 9 and 10.
- Construction noise impacts are indicated in Table 12. The noise levels associated with construction are expected to be short-term and temporary. Construction noise levels are not expected to be significant.

The project is consistent with the analysis and designed presented in the subject study and will comply with applicable City of Garden Grove requirements for control of community impacts to residential uses.

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Exhibits

Exhibit A Location Map

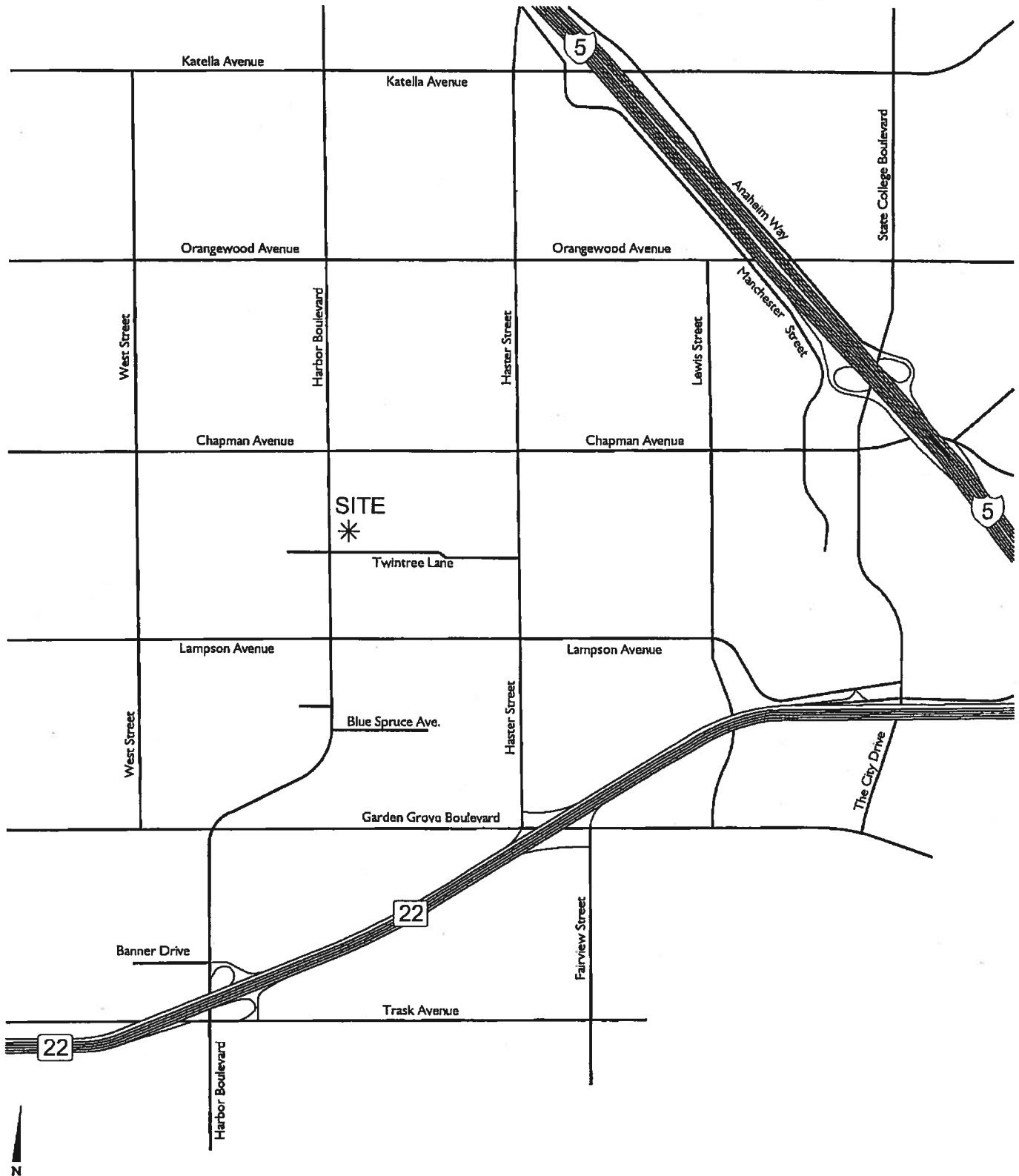


Exhibit B
Site Plan

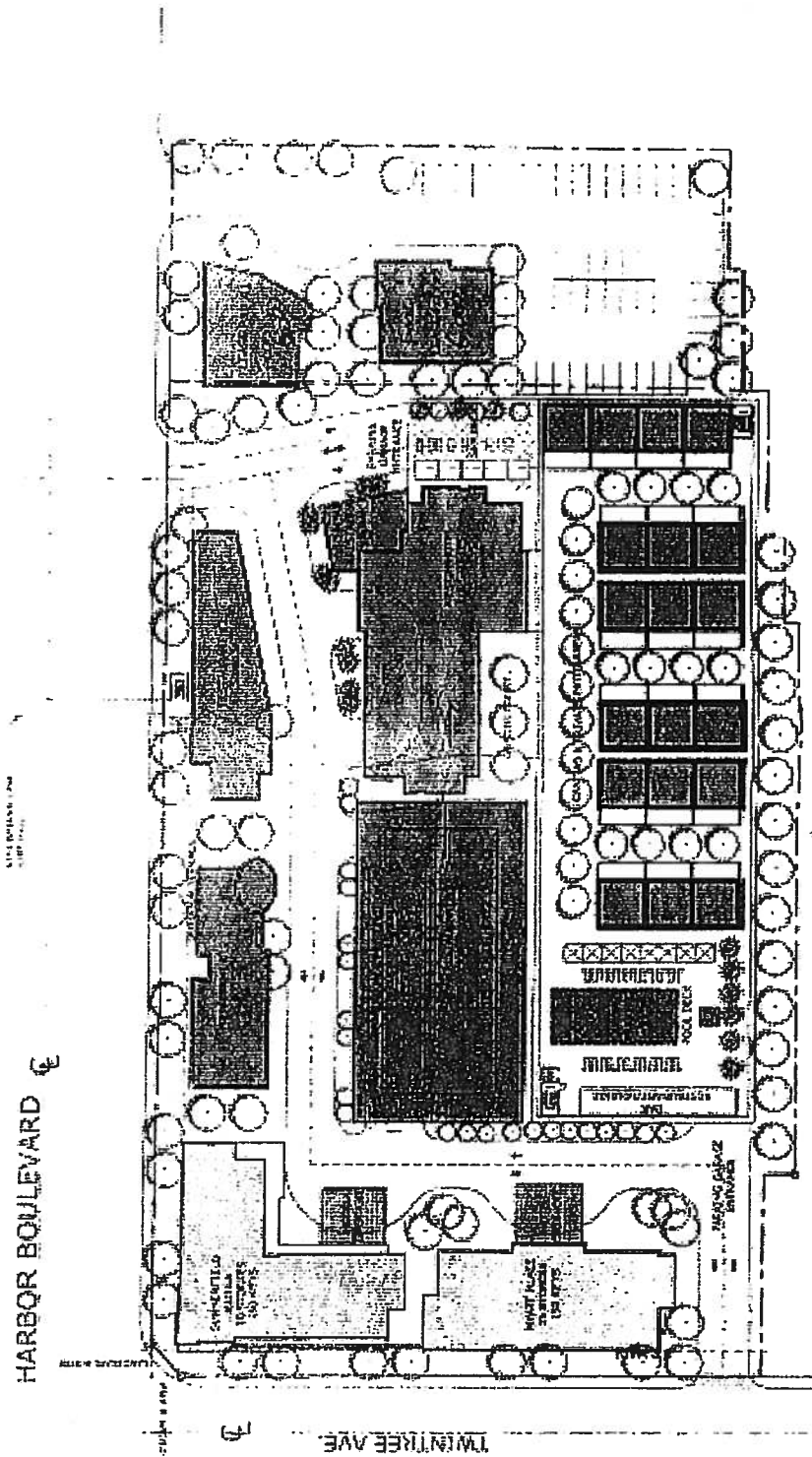


Exhibit C Noise Monitoring Locations



Legend:

① = Noise Monitoring Location



Exhibit D Recommendations

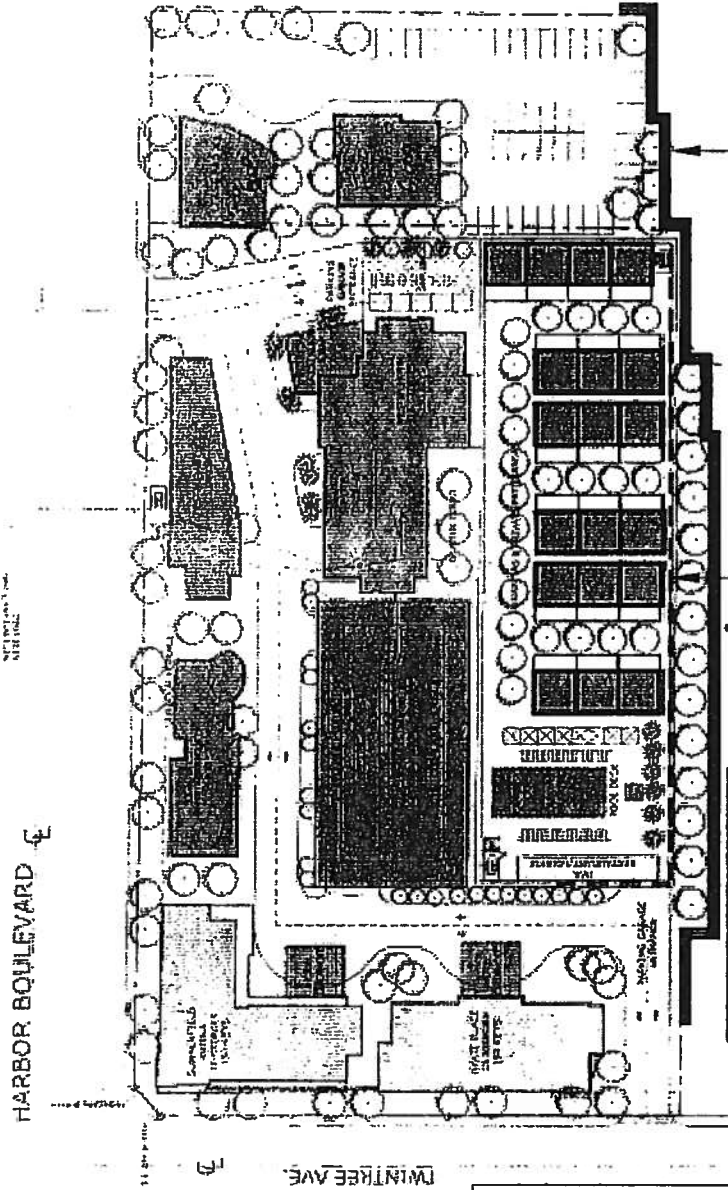
Delivery Truck operations and loading dock activities should be limited to daytime hours between 7:00 AM to 10:00 PM.

Idling trucks should be limited to five minutes in length.

An 8 foot shielding wall is recommended along the east property lines.

It is recommended that the parking structure have 4 foot shielding walls for each floor that faces the residential units to the east.

Any trash compactor or pool equipment should be shielded by a parapet wall, or fully enclosed. The mechanical equipment should be placed at distance furthest from the nearest residential dwelling units. The height of the walls should be at least as high or higher than the mechanical equipment.



Legend:

- = 8 foot Shielding Wall
- - - = 4 foot Shielding Wall
- = 5 foot Shielding wall for Outdoor Seating Area

Construction Noise Reduction Measures

1. Construction operations must not occur during the hours of 10 PM to 7 AM.
2. During construction, the contractor should ensure all construction equipment is equipped with appropriate noise attenuating devices.
3. Idling equipment should be kept to a minimum of 5 minutes or less and should be turned off when not in use.
4. Equipment will be maintained so that parts of vehicles and their loads are secured from rattling and banging.

Tables

TABLE 1
Noise Level Measurements

		Measured Noise Level (dBA)								
	Site No.	Time Started ¹	Leq	L _{max}	L _{min}	L ₂	L ₈	L ₂₅	L ₅₀	Comments
Daytime	1	10:16 AM	56.7	70.0	42.0	64.8	61.3	57.2	53.0	Measurement taken 40ft from centerline of Twintree, at 12531 Twintree Ln. ambient noise = local traffic
	2	10:31 AM	58.2	75.0	40.0	66.6	63.6	59.2	49.7	Measurement taken at the end of the culdesac, 12233 Choisser Rd. - ambient noise = local traffic and typical residential noise
	3	10:45 AM	54.7	80.1	41.9	60.2	50.7	47.3	45.6	Measurement taken in front yard of 12292 Choisser Rd. ambient noise = local traffic and typical residential noise
	4	11:08 AM	49.4	74.9	42.0	54.8	53.0	49.6	47.6	Measurement taken in KV park (project site), 10ft from existing 6ft property line wall. Ambient noise = typical residential noise and local traffic
Nighttime	1	10:42 PM	50.2	64.0	42.8	63.0	56.7	52.3	49.2	Measurement taken 40ft from centerline of Twintree, at 12531 Twintree Ln. ambient noise = local traffic
	2	10:55 PM	47.9	63.4	43.1	55.4	51.0	47.7	46.2	Measurement taken at the end of the culdesac, 12233 Choisser Rd. - ambient noise = local traffic and typical residential noise
	3	11:08 PM	52.4	67.2	44.9	58.1	54.7	52.2	48.9	Measurement taken in front yard of 12292 Choisser Rd. ambient noise = local traffic and typical residential noise
	4	11:20 PM	45.4	62.8	41.1	52.4	49.6	48.1	44.5	Measurement taken in KV park (project site), 10ft from existing 6ft property line wall. Ambient noise = typical residential noise and local traffic

¹ Noise measurements were taken for ten minutes.

² Noise measurements were taken on April 27, 2011.

TABLE 2
Existing Exterior Noise Levels Along Roadways (dBA CNEL)¹

Roadway ²	Segment	CNEL at 100 Ft (dBA)	Distance to Contour (Ft) ³			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Harbor Boulevard	n/o S.R. 22 Freeway	68.1	61	131	282	608
Harbor Boulevard	n/o Garden Grove Blvd.	67.2	55	118	254	547
Harbor Boulevard	n/o Lampson Ave	66.7	50	107	230	495
Harbor Boulevard	n/o Twintree Ln	67.1	53	113	244	526
Harbor Boulevard	n/o Chapman Ave	67.3	54	116	249	537
Twintree Lane	e/o Harbor Blvd	49.1	3	7	16	34

¹ Exterior noise levels calculated at 5 feet above ground level.

² Noise levels calculated from centerline of subject roadway.

³ Refer to Appendix D for projected noise level calculations.

TABLE 3
2014 Without Project Exterior Noise Levels Along Roadways (dBA CNEL)¹

Roadway ²	Segment	CNEL at 100 Ft (dBA)	Distance to Contour (Ft) ³			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Harbor Boulevard	n/o S.R. 22 Freeway	68.3	63	136	292	630
Harbor Boulevard	n/o Garden Grove Blvd.	67.6	57	123	265	572
Harbor Boulevard	n/o Lampson Ave	67.1	52	112	242	522
Harbor Boulevard	n/o Twintree Ln	67.4	55	119	256	553
Harbor Boulevard	n/o Chapman Ave	67.5	56	121	260	560
Twintree Lane	e/o Harbor Blvd	49.3	4	8	16	35

¹ Exterior noise levels calculated at 5 feet above ground level.

² Noise levels calculated from centerline of subject roadway.

³ Refer to Appendix D for projected noise level calculations.

TABLE 4
2014 With Project Exterior Noise Levels Along Roadways (dBA CNEL)¹

Roadway ²	Segment	CNEL at 100 Ft (dBA)	Distance to Contour (Ft) ³			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Harbor Boulevard	n/o S.R. 22 Freeway	68.6	66	141	304	656
Harbor Boulevard	n/o Garden Grove Blvd.	67.9	60	130	281	605
Harbor Boulevard	n/o Lampson Ave	67.6	56	121	262	563
Harbor Boulevard	n/o Twintree Ln	67.8	59	127	274	591
Harbor Boulevard	n/o Chapman Ave	67.9	59	128	275	593
Twintree Lane	e/o Harbor Blvd	51.8	5	11	24	51

¹ Exterior noise levels calculated at 5 feet above ground level.

² Noise levels calculated from centerline of subject roadway.

³ Refer to Appendix D for projected noise level calculations.

TABLE 5
2014 Project Noise Contribution Noise Levels (dBA CNEL)

Roadway	Segment	CNEL at 100 Feet dBA			Potential Significant Impact ¹
		Without Project	With Project	Project Contribution	
Harbor Boulevard	n/o S.R. 22 Freeway	68.3	68.6	0.3	NO
Harbor Boulevard	n/o Garden Grove Blvd.	67.6	67.9	0.3	NO
Harbor Boulevard	n/o Lampson Ave	67.1	67.6	0.5	NO
Harbor Boulevard	n/o Twintree Ln	67.4	67.8	0.4	NO
Harbor Boulevard	n/o Chapman Ave	67.5	67.9	0.4	NO
Twintree Lane	e/o Harbor Blvd	49.3	51.8	2.5	NO

¹ A potential significant impact occurs when the noise levels from the project causes an increase in noise of 5 dBA or more.

² Impact is not considered significant because Roadway CNEL remains below 65 dBA in backyards of residential units

TABLE 6
Future Interior Noise Impacts (dBA CNEL)

Receiver Location	Noise Impacts at First Floor Building Façade	Interior Noise Reduction Required to Meet Interior Noise Standard of 45 dBA CNEL ¹	First Floor Interior Noise Level w/Standard California Construction Windows (STC ≥ 25) ²		STC Rating for Windows Facing Subject Roadway ³
			"Windows Open" ³	"Windows Closed" ⁴	
First Floor	64.9	19.9	52.9	42.9	25
Second Floor	68.4	23.4	56.4	46.4	25
Third Floor	68.4	23.4	56.4	46.4	25
Fourth Floor	68.4	23.4	56.4	46.4	25
Fifth Floor	68.3	23.3	56.3	46.3	25
Sixth Floor	68.2	23.2	56.2	46.2	25
Seventh Floor	68.1	23.1	56.1	46.1	25
Eighth Floor	68.0	23.0	56.0	46.0	25
Ninth Floor	67.9	22.9	55.9	45.9	25
Tenth Floor	67.7	22.7	55.7	45.7	25

¹ Indicated noise level includes noise attenuation provided by noise barrier, if applicable.

² Room with the least calculated noise attenuation shown (worst-case), since multiple rooms were analyzed.

³ A minimum of 12 dBA noise reduction is assumed with the "windows open" condition.

⁴ A minimum of 20 dBA noise reduction is assumed with the "windows closed" condition.

TABLE 7
Roadway Parameters and Vehicle Distribution

Roadway	Classification	Lanes	Buildout (ADT)	Speed (MPH)	Site Conditions
Harbor Boulevard	Major Arterial	6	39,300	45	Soft/Hard
Twintree Lane	Collector	2	3,700	25	Soft

Vehicle Distribution (Truck Mix)²

Motor-Vehicle Type	Daytime % (7 AM to 7 PM)	Evening % (7 PM to 10 PM)	Night % (10 PM to 7 AM)	Total % of Traffic Flow
Automobiles	75.5	12.9	9.6	97.42
Medium Trucks	84.8	4.9	10.3	1.84
Heavy Trucks	86.5	2.7	10.8	0.74

¹ Vehicle percentages utilized from Orange County Traffic Data

TABLE 8

Reference and Adjusted Stationary Noise Level Measurements

Source	Referenced Measured Noise Levels (dBA)						
	Distance from Reference Source (feet)	L _{eq}	L _{max}	L ₂	L ₈	L ₂₅	L ₅₀
Loading Dock ¹	6.0	66.3	84.0	78.5	68.0	61.5	58.5
Parking Structure ¹	10.0	59.0	70.9	64.4	61.9	59.8	57.6
Outdoor Pool Area ¹	10.0	62.1	71.7	66.6	64.8	62.6	61.4

Source ²	Adjusted Noise Levels (dBA) ¹							
	Distance from Reference Source (feet)	L _{eq}	L _{max}	L ₂	L ₈	L ₂₅	L ₅₀	
East Property Line	Loading Dock	51	37.6	55.3	49.8	39.3	32.8	29.8
	Parking Structure	185	46.3	58.2	51.7	49.2	47.1	44.9
	Outdoor Pool Area	87	23.3	32.9	27.8	26.0	23.8	22.6

Source ²	Adjusted Noise Levels (dBA) ¹							
	Distance from Reference Source (feet)	L _{eq}	L _{max}	L ₂	L ₈	L ₂₅	L ₅₀	
South Property Line	Loading Dock	150	38.3	56.0	50.5	40.0	33.5	30.5
	Parking Structure	200	42.7	54.6	48.1	45.6	43.5	41.3
	Outdoor Pool Area	32	16.1	25.7	20.6	18.8	16.6	15.4

¹ Reference noise levels as measured by RK Engineering Group

² Adjusted Noise Levels (dBA) were calculated based on distance and barrier location of site design (Appendix F).

TABLE 9

Projected Exterior East Property Line Stationary Noise Levels (dBA)^{1,2}

	Source	Distance from Reference Source (feet)	Adjusted Noise Levels (dBA)					L ₅₀ (30 min)
			L _{eq}	L _{max} (max)	L ₂ (1 min)	L ₅ (5 min)	L ₂₅ (15 min)	
DAYTIME (7AM - 10PM)	Loading Docks ³	51	37.6	55.3	49.8	39.3	32.8	29.8
	Parking Structure ³	185	46.3	58.2	51.7	49.2	47.1	44.9
	Outdoor Pool Area ³	87	23.3	32.9	27.8	26.0	23.8	22.6
	Existing Ambient Measurement ⁴	--	49.4	74.9	54.8	53.0	49.6	47.6
	Total Combined Exterior Noise Impact ⁵	--	51.3	75.0	57.4	54.6	51.6	49.5
	City of Garden Grove Not to Exceed Noise Criteria	--	N/A	75.0	70.0	65.0	60.0	55.0
	Noise Level Exceeds Standard (?)	--	N/A	NO	NO	NO	NO	NO
	Change in Noise Level as a Result of Project	--	1.9	0.1	2.6	1.6	2.0	1.9

	Source	Distance from Reference Source (feet)	Adjusted Noise Levels (dBA)					L ₅₀ (30 min)
			L _{eq}	L _{max} (max)	L ₂ (1 min)	L ₅ (5 min)	L ₂₅ (15 min)	
NIGHTTIME (10PM - 7AM)	Loading Docks ³	51	37.6	55.3	49.8	39.3	32.8	29.8
	Parking Structure ³	185	46.3	58.2	51.7	49.2	47.1	44.9
	Outdoor Pool Area ³	87	23.3	32.9	27.8	26	23.8	22.6
	Existing Ambient Measurement ⁴	--	45.4	62.8	52.4	49.6	48.1	44.5
	Total Combined Exterior Noise Impact ⁵	--	49.2	64.6	56.2	52.6	50.7	47.8
	City of Garden Grove Not to Exceed Noise Criteria	--	N/A	70.0	65.0	60.0	55.0	50.0
	Noise Level Exceeds Standard (?)	--	N/A	NO	NO	NO	NO	YES
	Change in Noise Level as a Result of Project	--	3.8	1.8	3.8	3.0	2.6	3.1

¹ Exterior noise levels calculated 10 feet in from property line, perpendicular to subject roadway

² Noise level calculations represent projected exterior

³ See Appendix F for reference level to adjusted level conversion calculation printout

⁴ Ambient measurement taken from Table 1

⁵ See Appendix F for dBA calculations

TABLE 10

Projected Exterior South Property Line Stationary Noise Levels (dBA)^{1,2}

	Source	Adjusted Noise Levels (dBA)						
		Distance from Reference Source (feet)	L _{eq}	L _{max} (max)	L ₂ (1 min)	L _B (5 min)	L ₂₅ (15 min)	L ₅₀ (30 min)
DAYTIME (7AM - 10PM)	Loading Docks ³	150	38.3	56.0	50.5	40.0	33.5	30.5
	Parking Structure ³	200	42.7	54.6	48.1	45.6	43.5	41.3
	Outdoor Pool Area ³	32	16.1	25.7	20.6	18.8	16.6	15.4
	Existing Ambient Measurement ⁴	--	56.7	70.0	64.8	61.3	57.2	53.0
	Total Combined Exterior Noise Impact ⁵	--	56.9	70.3	65.0	61.4	57.4	53.3
	City of Garden Grove Not to Exceed Noise Criteria	--	N/A	75.0	70.0	65.0	60.0	55.0
	Noise Level Exceeds Standard (?)	--	N/A	NO	NO	NO	NO	NO
	Change in Noise Level as a Result of Project	--	0.2	0.3	0.2	0.1	0.2	2

	Source	Adjusted Noise Levels (dBA)						
		Distance from Reference Source (feet)	L _{eq}	L _{max} (max)	L ₂ (1 min)	L _B (5 min)	L ₂₅ (15 min)	L ₅₀ (30 min)
NIGHTTIME (10PM - 7AM)	Loading Docks ³	150	38.3	56.0	50.5	40.0	33.5	30.5
	Parking Structure ³	200	42.7	54.6	48.1	45.6	43.5	41.3
	Outdoor Pool Area ³	32	16.1	25.7	20.6	18.8	16.6	15.4
	Existing Ambient Measurement ⁴	--	50.2	64.0	63.0	56.7	52.3	49.2
	Total Combined Exterior Noise Impact ⁵	--	51.1	65.0	63.4	57.1	52.9	49.9
	City of Garden Grove Not to Exceed Noise Criteria	--	N/A	70.0	65.0	60.0	55.0	50.0
	Noise Level Exceeds Standard (?)	--	N/A	NO	NO	NO	NO	NO
	Change in Noise Level as a Result of Project	--	0.9	1.0	0.4	0.4	0.6	0.7

¹ Exterior noise levels calculated 10 feet in from property line, perpendicular to subject roadway

² Noise level calculations represent projected exterior

³ See Appendix F for reference level to adjusted level conversion calculation printout

⁴ Ambient measurement taken from Table 1

⁵ See Appendix F for dBA calculations

TABLE 11
Typical Construction Noise Levels¹

EQUIPMENT POWERED BY INTERNAL COMBUSTION ENGINES	
Type	Noise Levels (dBA) at 50 Feet
Earth Moving	
Compactors (Rollers)	73 - 76
Front Loaders	73 - 84
Backhoes	73 - 92
Tractors	75 - 95
Scrapers, Graders	78 - 92
Pavers	85 - 87
Trucks	81 - 94
Materials Handling	
Concrete Mixers	72 - 87
Concrete Pumps	81 - 83
Cranes (Movable)	72 - 86
Cranes (Derrick)	85 - 87
Stationary	
Pumps	68 - 71
Generators	71 - 83
Compressors	75 - 86

IMPACT EQUIPMENT	
Type	Noise Levels (dBA) at 50 Feet
Pneumatic Wrenches	82 - 87
Jack Hammers, Rock Drills	80 - 99
Pile Drivers (Peak)	95-105

OTHER	
Type	Noise Levels (dBA) at 50 Feet
Vibrators	68 - 82
Saws	71 - 82

¹ Referenced Noise Levels from the Environmental Protection Agency (EPA)

**TABLE 12
Project Construction Related Noise Levels (dBA)**

Receiver	Equipment	Distance to Property Line	Leq	Lmax ¹
South Property Line	Dozer	50	71.7	75.7
	Dozer	50	71.7	75.7
	Excavator	50	70.7	74.7
	Scraper	50	73.6	77.6
	Tractor	50	80.0	84.0
Total Combined Noise Level		--	82.2	84.0

Receiver	Equipment	Distance to Property Line	Leq	Lmax ¹
East Property Line	Dozer	40	71.6	75.6
	Dozer	40	71.6	75.6
	Excavator	40	70.7	74.6
	Scraper	40	73.5	77.5
	Tractor	40	74.0	77.9
Total Combined Noise Level		--	77.9	79.5

¹ Lmax maximum noise level only reviews loudest piece of equipment

Appendices

Appendix A

City of Garden Grove
Acoustical Parameters

CHAPTER 47: NOISE CONTROL*

* Prior history: Ord. 1949, 1950, 2258.

SECTION 8.47.020: Definitions

The following words, phrases, and terms as used in this chapter shall have the meaning as indicated below:

"Actual Measured Ambient Noise Level" shall mean that noise level existing in the general area of the noise problem excluding the noise generated by the noise source being evaluated.

"Ambient Base Noise Level" shall mean the maximum loudness level normally found to be acceptable for given land uses and which serves as the basis for determining loudness noise violations pursuant to the provisions of Section 8.48.040 of this Chapter.

"Ambient Noise Level" shall mean the all-encompassing background noise associated with a given environment, being usually a composite of sounds from many sources near and far.

"Commercial Use" shall mean any enterprise whose principal endeavor is the sale of goods and/or services.

"Decibel (dB)" shall mean a unit which denotes the ratio between two (2) quantities which are proportional to power: the number of decibels corresponding to the ratio of two (2) amounts of power is ten (10) times the logarithm to the base ten (10) of this ratio. The commonly used unit for measuring sound pressure levels.

"Emergency" means operations made necessary to restore property to a safe condition following a public calamity or work required to protect persons or property from an imminent exposure to danger or work by private or public utilities when restoring utility service.

"Industrial Use" means any facility or operations involved in the manufacturing, repairing, testing processing, warehousing, wholesaling, researching and treatment of products.

"Institutional Use" means an establishment maintained and operated by a society, church, corporation, individual, foundation or public agency for the purpose of providing religious, charitable, social, educational, fraternal or similar services.

"Noise" means any sound which exceeds the appropriate actual or presumed ambient noise level or which annoys or tends to disturb humans or which causes or tends to cause an adverse psychological or physiological effect on humans of normal sensitiveness.

"Office-Professional Use" means any enterprise engaged in providing business or professional services.

"Residential Use" means any structure utilized principally for human habitation; excluding hotels, motels, and recreational vehicle parks.

"Sound Amplifying Equipment" means any device for the amplification of the human voice, music, or any other sound and does not include standard automobile radios when used and heard only by the occupants of the vehicle in which the automobile radio is installed or devices on authorized emergency vehicles or horns or other warning devices on any vehicle used only for traffic safety purposes.

"Sound Level" in decibels (dB)" means the sound measured utilizing the A-weighting scale and the slow needle response by a sound level meter.

"Sound level meter" means an instrument meeting American National Standard Institutes Standard S1.4-1971 for Type 1 or Type 2 sound level meters or an equivalent standard.

(Ord. 2660 § 2, 2005).

SECTION 8.47.030: Noise level measurement

All noise level measurements made pursuant to the provisions of this Chapter shall be performed using a sound level meter as defined in Section 2; using a fast needle response; utilizing the dB(A) scale.

(Ord. 2660 § 2, 2005).

SECTION 8.47.040: Ambient base noise levels

The ambient base noise levels contained in the following chart shall be utilized as the basis for determining noise levels in excess of those allowed by this Chapter unless the actual measured ambient noise level occurring at the same time as the noise under review is being investigated exceeds the ambient base noise level contained in the chart. When the actual measured ambient noise level exceeds the ambient base noise level, the actual measured ambient noise level shall be utilized as the basis for determining whether or not the subject noise exceeds the level allowed by this Section. In situations where two adjoining properties exist within two different use designations, the most restrictive ambient base noise level will apply. This Section permits any noise level which does not exceed either the ambient base noise level or the actual measured ambient noise level by 5 dB(A), as measured at the property line of the noise generation property.

Use Category	Use Designation	Ambient Base Noise Level	Time of Day
Sensitive	Residential Use	55 dB(A)	7:00 a.m.- 10:00 p.m.

		50 dB(A)	10:00 p.m.- 7:00 a.m.
Conditionally Sensitive	Institutional Use	65 dB(A)	Any Time
	Office-Professional Use	65 dB(A)	Any Time
	Hotels and Motels	65 dB(A)	Any Time
Non-Sensitive	Commercial Uses	70 dB(A)	Any Time
	Commercial/ Industrial Uses w/in 150 feet of Residential	65 dB(A)	7:00 a.m.- 10:00 p.m.
		50 dB(A)	10:00 p.m.- 7:00 a.m.
	Industrial Use	70 dB(A)	Any Time

(Ord. 2660 § 2, 2005).

SECTION 8.47.050: General noise regulation

- a. Noise Disturbance Criteria. It shall be unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary, or unusual noise, which disturbs the peace, or quiet of any neighborhood or which causes discomfort or annoyance to any person of normal sensitiveness.

The criteria, which shall be utilized in determining whether a violation of the provisions of this section exists, shall include, but not be limited to, the following:

1. The level of the noise;
 2. The frequency of occurrence of the noise;
 3. Whether the nature of the noise is usual or unusual;
 4. The level and intensity of the background noise, if any;
 5. The proximity of the noise to residential sleeping facilities;
 6. The nature and zoning of the area within which the noise emanates;
 7. The density of the inhabitation of the area within which the noise is received;
 8. The time of day or night the noise occurs;
 9. The duration of the noise.
- b. Duration of noise. The following criteria shall be used whenever the noise level exceeds:
1. The noise standard for a cumulative period of more than thirty (30) minutes in any hour; or
 2. The noise standard plus five (5) dB(A) for a cumulative period of more than fifteen (15) minutes in any hour; or
 3. The noise standard plus ten (10) dB(A) for a cumulative period of more than five (5) minutes in any hour; or
 4. The noise standard plus fifteen (15) dB(A) for a cumulative period of more than one (1) minute in any hour; or

5. The noise standard plus twenty (20) dB(A) for any period of time
- c. In the event the ambient noise level exceeds any of the first four (4) noise limit categories above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the fifth (5th) noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

(Ord. 2660 § 2, 2005).

SECTION 8.47.060: Special noise sources

- a. Radios, Television Sets, and Similar Devices.
 1. Use Restricted. It shall be unlawful for any person within any residential area of the city to use or operate any radio receiving set, musical instrument, stereo equipment, television set, or other machine or device for the producing or reproducing of sound between the hours of 10:00 p.m. of one day and 7:00 a.m. of the following day in such a manner as to disturb the peace, quiet, and comfort of any person of normal sensitiveness residing in the area, as determined utilizing the criteria established in Section 8.04.050(a).
 2. Prima Facie Violation. Any noise level exceeding the ambient base level at the property line of any property (or, if a condominium or apartment house, within any adjoining apartment) by more than five (5) decibels shall be deemed to be prima facie evidence of a violation of the provisions of this section.
- b. Musical Instruments. Use Restricted. It shall be unlawful for any person to use any drum or other instrument or device of any kind for the purpose of attracting attention by the creation of noise within the city. This section shall not apply to any person who is a participant in a duly licensed parade or who has been otherwise duly authorized to engage in such conduct.
- c. Machinery, Equipment, Fans, and Air Conditioning. It shall be unlawful for any person to operate any machinery, equipment, pump, fan, air conditioning apparatus, or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed either the ambient base noise level or the actual measured ambient noise level by more than five decibels.
- d. Construction of Buildings and Projects. It shall be unlawful for any person within a residential area, or within a radius of 500 feet there from, to operate equipment or perform any outside construction or repair work on buildings, structures, or projects, or to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist, or any other construction type device between the hours of 10:00 p.m. of one day and 7:00 a.m. of the next day in such a manner that a person of normal sensitiveness, as determined utilizing the criteria established in Section 8.47.050(a), is caused discomfort or annoyance unless such operations are of an emergency nature.

- e. **Vehicle Repairs.** It shall be unlawful for any person within any residential area of the City to repair, rebuild, or test any motor vehicle in such a manner that a person of normal sensitiveness residing in the area is caused discomfort or annoyance, as determined utilizing the criteria established in Section 8.47.050(a), unless such operations are of an emergency nature.
- f. **Motor Driven Vehicles.** It shall be unlawful for any person to operate any motor driven vehicle within the City in such a manner that a person of normal sensitiveness residing in the area is caused discomfort or annoyance, as determined utilizing the criteria established in Section 8.47.050(a), unless such operations are of an emergency nature; provided, however, any such vehicle which is operated upon any public highway, street, or right-of-way shall be excluded from the provisions of this Section.
- g. **Amplified Sound.**
 - 1. **Purpose.** While recognizing the constitutional rights of freedom of speech and assembly, the City nevertheless feels obligated to reasonably regulate the use of sound amplifying equipment in order to protect the citizens of the City to privacy and freedom from excessively loud and unnecessary noise.
 - 2. **Registration.** It Shall be unlawful for any person, other than personnel of law enforcement or governmental agencies, to install, use or operate within the City a loudspeaker or sound amplifying equipment mounted upon any vehicle for the purposes of warnings, giving instructions, directions, talks, addresses, lectures, or transmitting music to any persons or assemblages of persons, without first filing a registration statement at least seven (7) days prior to the date on which the sound amplifying equipment is intended to be used and obtaining approval.
 - 3. **Approval.** The Zoning Administrator shall return to the applicant an approved copy of the registration statement unless he/she finds that:
 - a. The conditions of the motor vehicle movement are such that use of the equipment would constitute a detriment to traffic safety; or
 - b. The conditions of pedestrian movement are such that use of the equipment would constitute a detriment to traffic safety.
 - 4. **Disapproval.** In the event the registration statement is disapproved, the Zoning Administrator shall endorse upon the statement his reason for disapproval and return it to the applicant.
 - 5. **Appeals.** Any decision by the Zoning Administrator may be appealed to the City Council within seven (7) days of action of the Zoning Administrator by filing a notice of appeal with the City Clerk.
- h. **Waste Haulers/Commercial Sweepers and Leaf Blowers**

It shall be unlawful for any person within any commercial, industrial or office complex area of the City to operate any refuse compacting, processing or collection vehicle, parking lot sweeper or leaf blower within 150 feet of residential property between the hours of 10:00 p.m. and 7:00 a.m. of the following day.

i. Loading/Unloading

It shall be unlawful for any person in any commercial or industrial area of the City that abuts or is located adjacent to any residential property between the hours of 10:00 p.m. and 7:00 a.m. of the following day to load or unload any vehicle, or operate any dollies, carts, forklifts or other wheeled equipment which causes any noise which disturbs the peace or quiet of the residential neighborhood.

(Ord. 2660 § 2, 2005).

SECTION 8.47.070: Exemptions

- a. Emergency Activities. The provisions of this Chapter shall not preclude the operation, maintenance and repair of equipment, apparatus, or facilities of essential public services, including those of governmental agencies and public utilities, providing those activities are of an emergency nature or are necessary to maintain the health, safety and welfare of the citizenry.
- b. Community Activities. Community Events, as describe in Section 9215.18 of the Municipal Code, outdoor gatherings, school bands, dances, shows and athletic events, are hereby exempted from the provisions of this Chapter provided such activities are conducted pursuant to a duly authorized license or permit.
- c. State and Federal Preemptions. Motor vehicle and aircraft operations and any other activity whose regulation has been preempted by State or Federal lay is hereby exempted from the provisions of this Chapter.

(Ord. 2660 § 2, 2005).

SECTION 8.47.080: Abatement

The Director of Community Development and his/her duly authorized representatives are hereby directed to enforce the provisions of this Chapter by requiring that the alleged offender correct violations and achieve compliance with the provisions of this Chapter within a reasonable period of time.

- a. The Department of Community Development Code Enforcement Officers, shall have the power and duty to enforce the following noise control provisions of this Code: Section 8.47.050, Section 8.47.060 (a)(2), (c), (h), and (i).
- b. The Police Department shall have the power and duty to enforce the following noise control provisions of this Code: Section 8.47.060 (a)(1), (b), (e), (f), (g)(1)(2).
- c. The Department of Community Development Building Services Division shall have the power and duty to enforce the following noise control provisions of this Code: Section 8.47.060(d).

(Ord. 2660 § 2, 2005).

Appendix B

Acoustical Terms

Appendix B

Glossary of Acoustical Terms

A-Weighted Sound Level

The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

Ambient Noise Level

The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Community Noise Equivalent Level (CNEL)

The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after addition of ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.

Decibel (dB)

A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

dB(A)

A-weighted sound level (see definition above).

Equivalent Sound Level (LEQ)

The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time varying noise level. The energy average noise level during the sample period.

Habitable Room

Any room meeting the requirements of the Uniform Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms and similar spaces.

L(n)

The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 in the sound level exceeded 10 percent of the sample time. Similarly L50, L90 and L99, etc.

Noise

Any unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound...".

Outdoor Living Area

Outdoor spaces that are associated with residential land uses typically used for passive recreational activities or other noise-sensitive uses. Such spaces include patio areas, barbecue areas, jacuzzi areas, etc. associated with residential uses; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes; outdoor areas associated with places of worship which have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for educational purposes which may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas and storage areas associated with residential land uses; exterior areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term social gatherings; and, outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas).

Percent Noise Levels

See L(n).

Sound Level (Noise Level)

The weighted sound pressure level obtained by use of a sound level meter having a standard frequency-filter for attenuating part of the sound spectrum.

Sound Level Meter

An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

Single Event Noise Exposure Level (SENEL)

The dB(A) level which, if it lasted for one second, would produce the same A-weighted sound energy as the actual event.

Appendix C

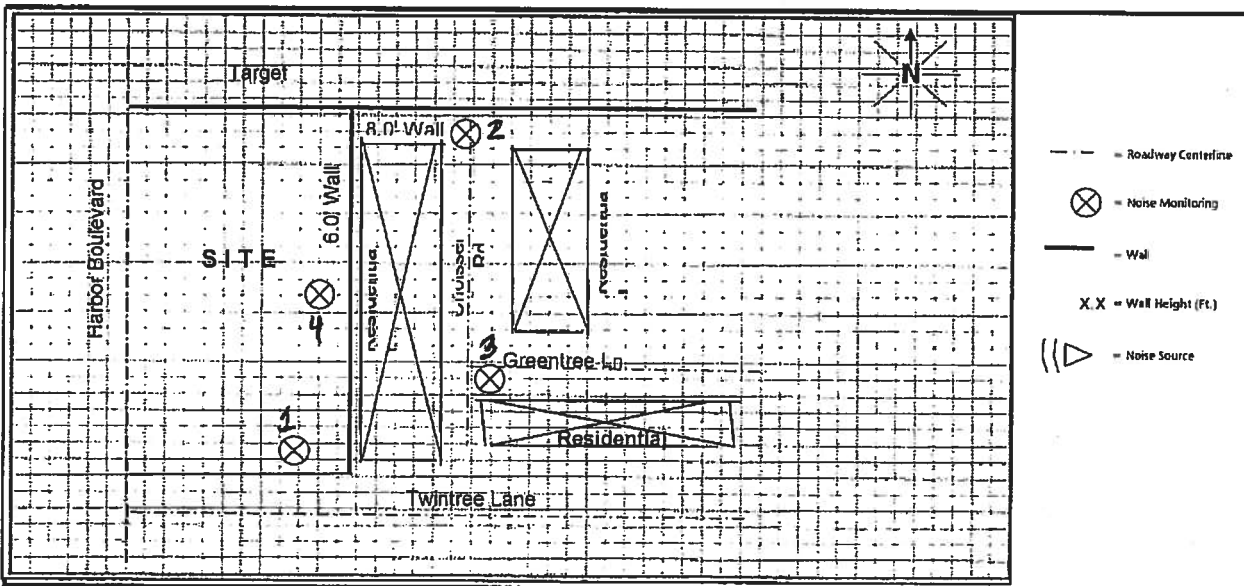
Photographs and
Field Measurements

Field Sheet

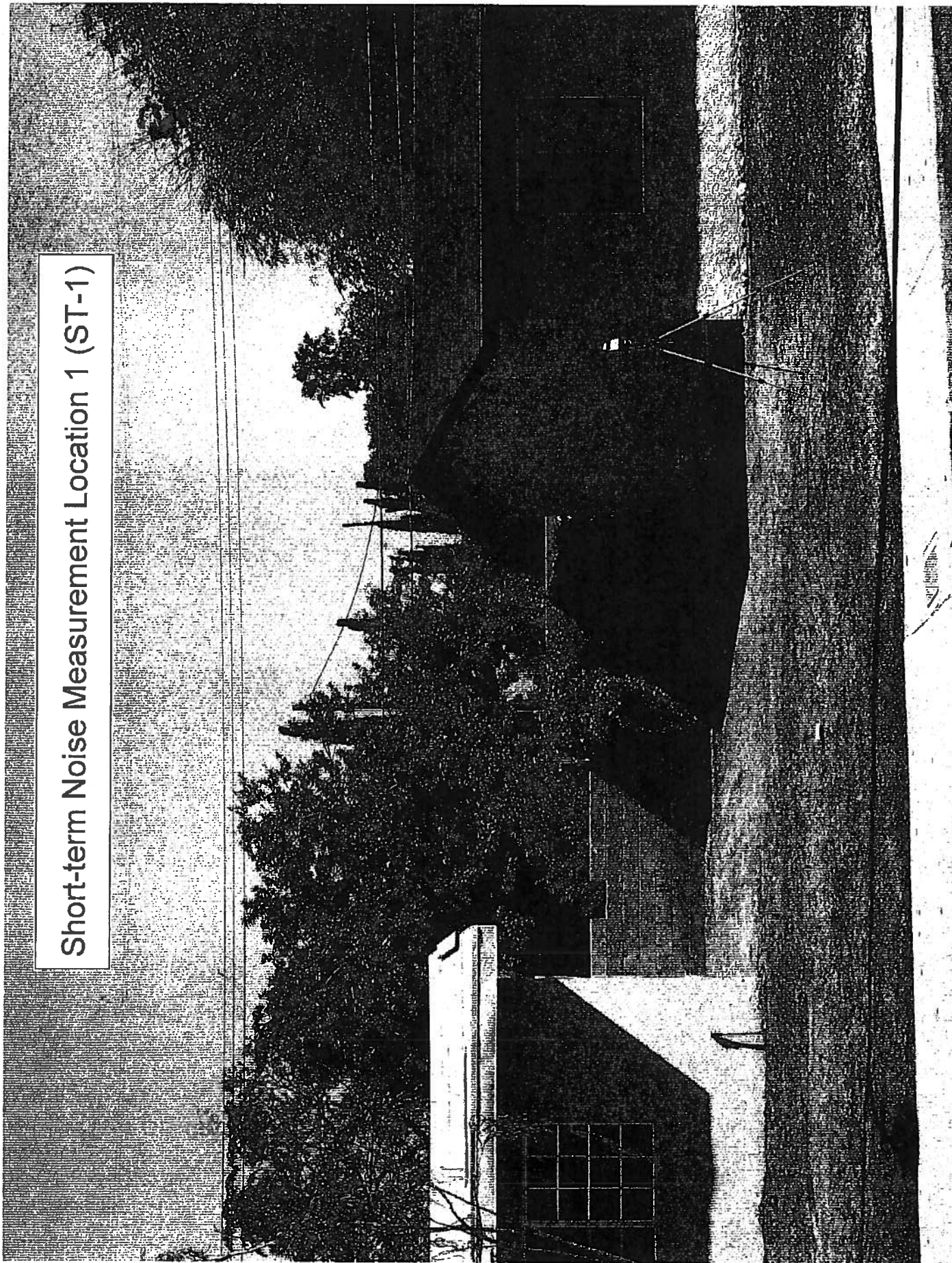
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Measurement Address:		City: Garden Grove		JN: 0762-2011-02													
				Site No.: 1-5													
Sound Level Meter: LD-712 Serial # A0520		Calibration Record:		Notes: Temp: 55 Windspeed: -- Direction: -- Skies: Clear Camera: Photo Nos.													
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Input, dB/	Reading, dB/	Offset, dB/	Time														
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After 114.0/	114.0/	26.3/															
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After	/	/	/														
Meter Settings:																	
<input checked="" type="checkbox"/> A-WTD <input type="checkbox"/> LINEAR <input checked="" type="checkbox"/> SLOW <input type="checkbox"/> 1/1 OCT <input checked="" type="checkbox"/> INTERVALS <u>10</u> - MINUTE <input type="checkbox"/> C-WTD <input type="checkbox"/> IMPULSE <input type="checkbox"/> FAST <input type="checkbox"/> 1/3 OCT <input checked="" type="checkbox"/> L _N PERCENTILE VALUES																	

Notes:	Measurement Type:
	Long-term _____
	Short-term <u> X </u>

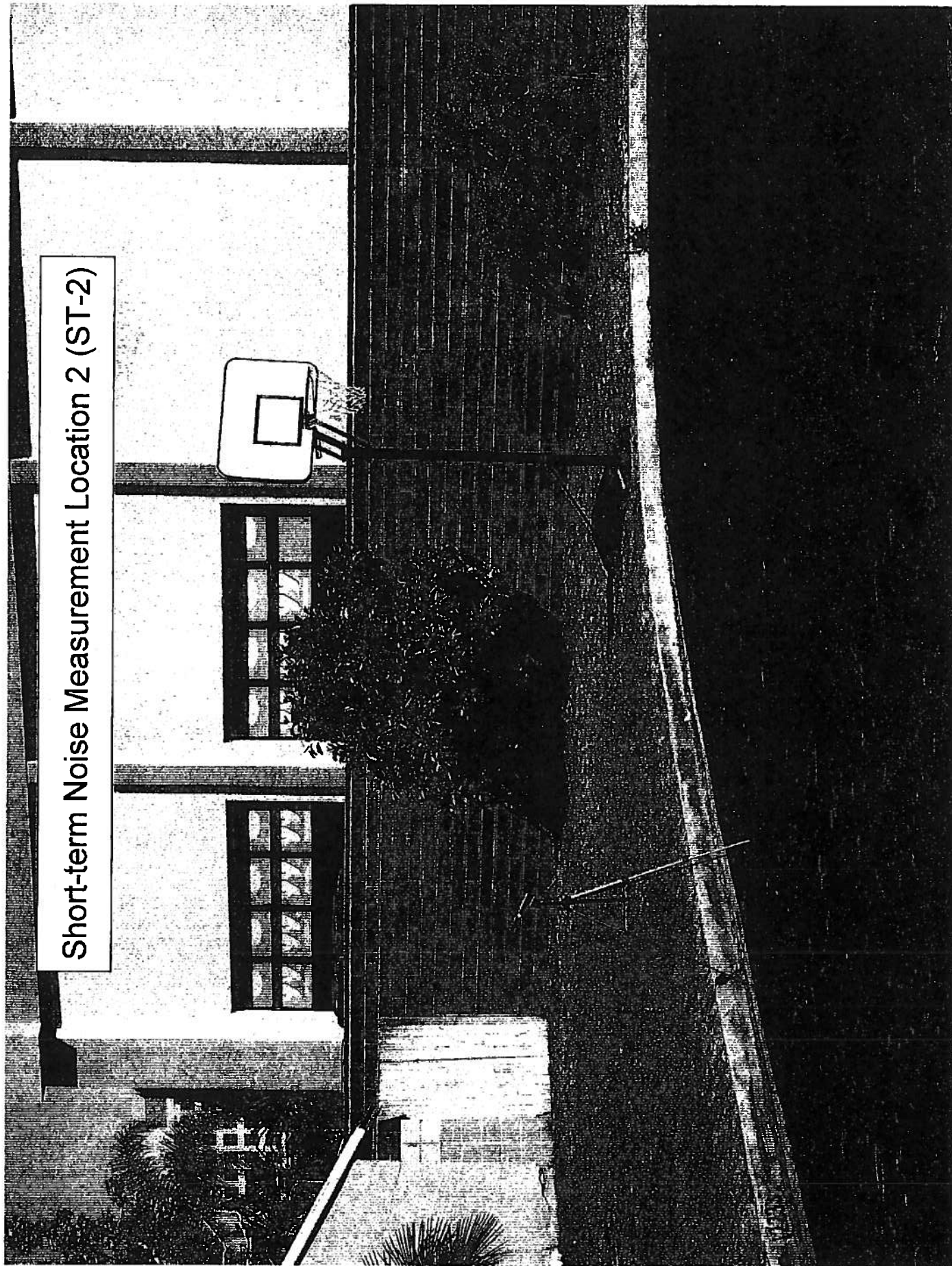
		Start Time	Stop Time	Leq	Lmin	Lmax	L2	L8	L25	L50	
Locations	1	10:16 AM	10:26 AM	56.7	42.0	70.0	64.8	61.3	57.2	53.0	
	Comments: 12531 Twintree 40ft from centerline of twintree, ambient noise local traffic										
	2	10:31 AM	10:41 AM	58.2	40.0	75.0	66.6	63.6	59.2	49.7	
	Comments: 12233 Choisser Rd, end of cul-d-sac, ambient noise - local traffic and typical residential noise										
	3	10:45 AM	10:55 AM	54.7	41.9	80.1	60.2	50.7	47.3	45.6	
Comments: 12292 Choisser Rd, front yard @ corner of Choisser Rd and Greentree Ln, ambient noise - local traffic and typical residential noise											
4	10:58 AM	11:08 AM	49.4	42.0	74.9	54.8	53.0	49.6	47.6		
Comments: RV Park, noise meter placed 10 ft from existing 6 foot wall, ambient noise - typical residential noise and local traffic noise											
5											
Comments:											



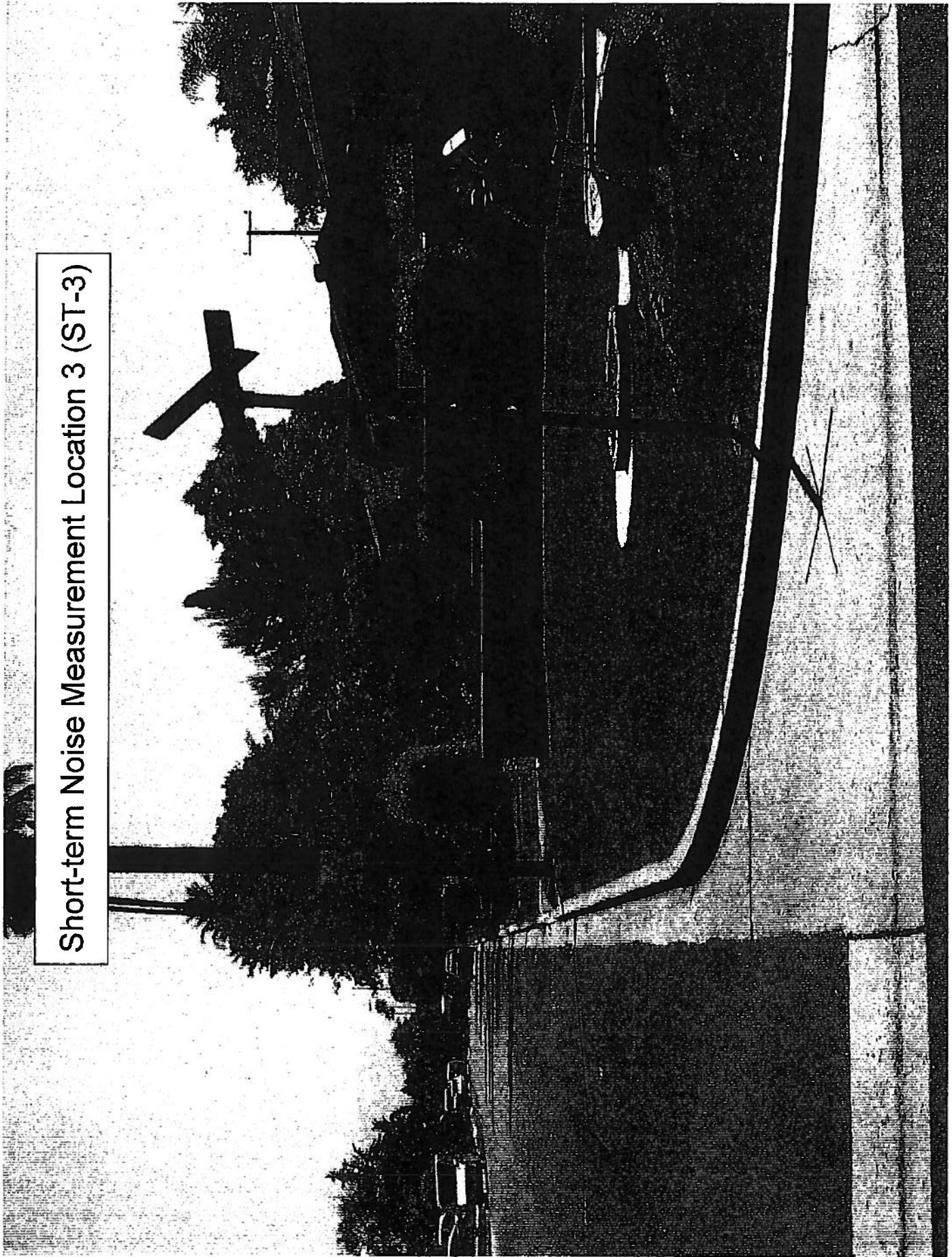
Short-term Noise Measurement Location 1 (ST-1)



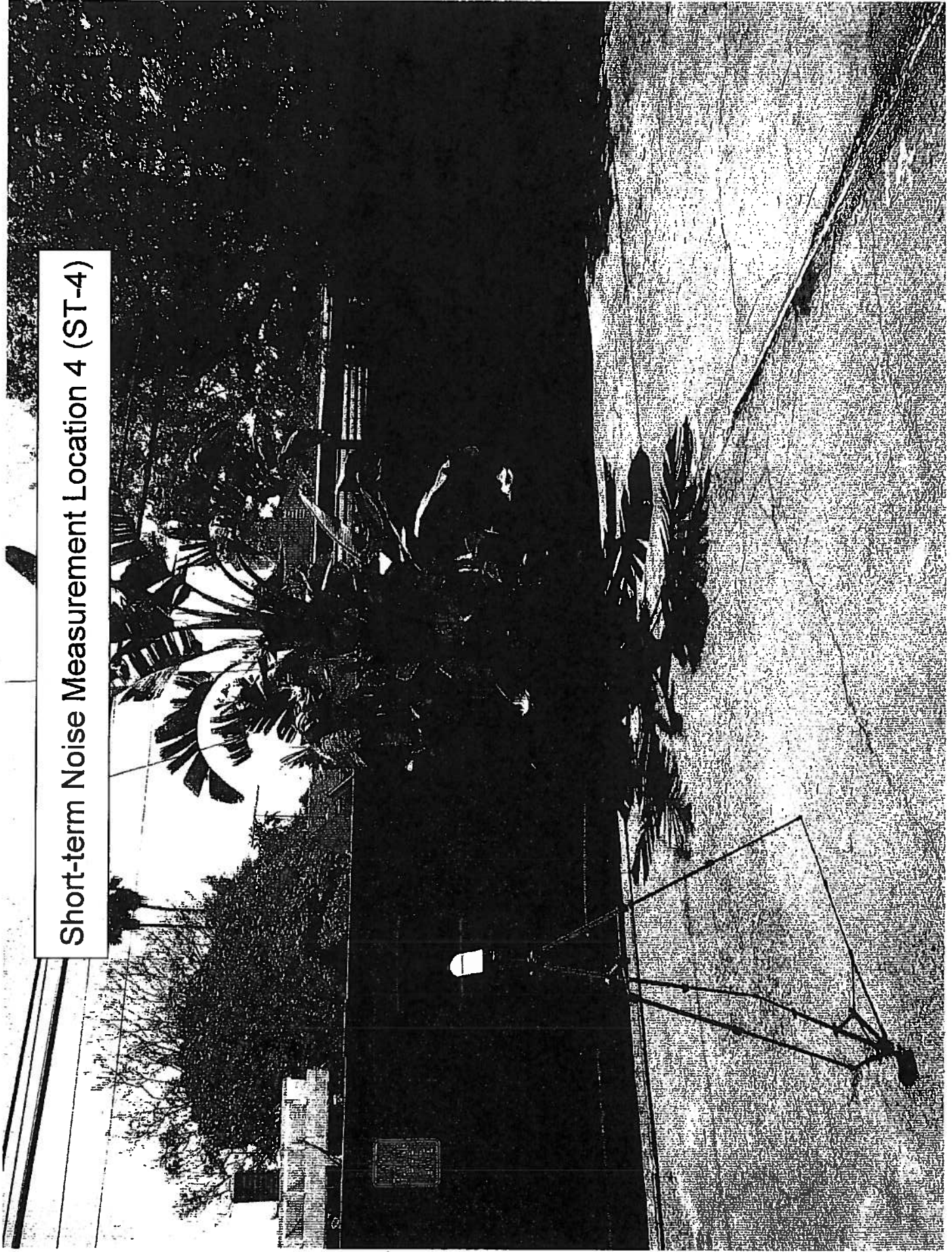
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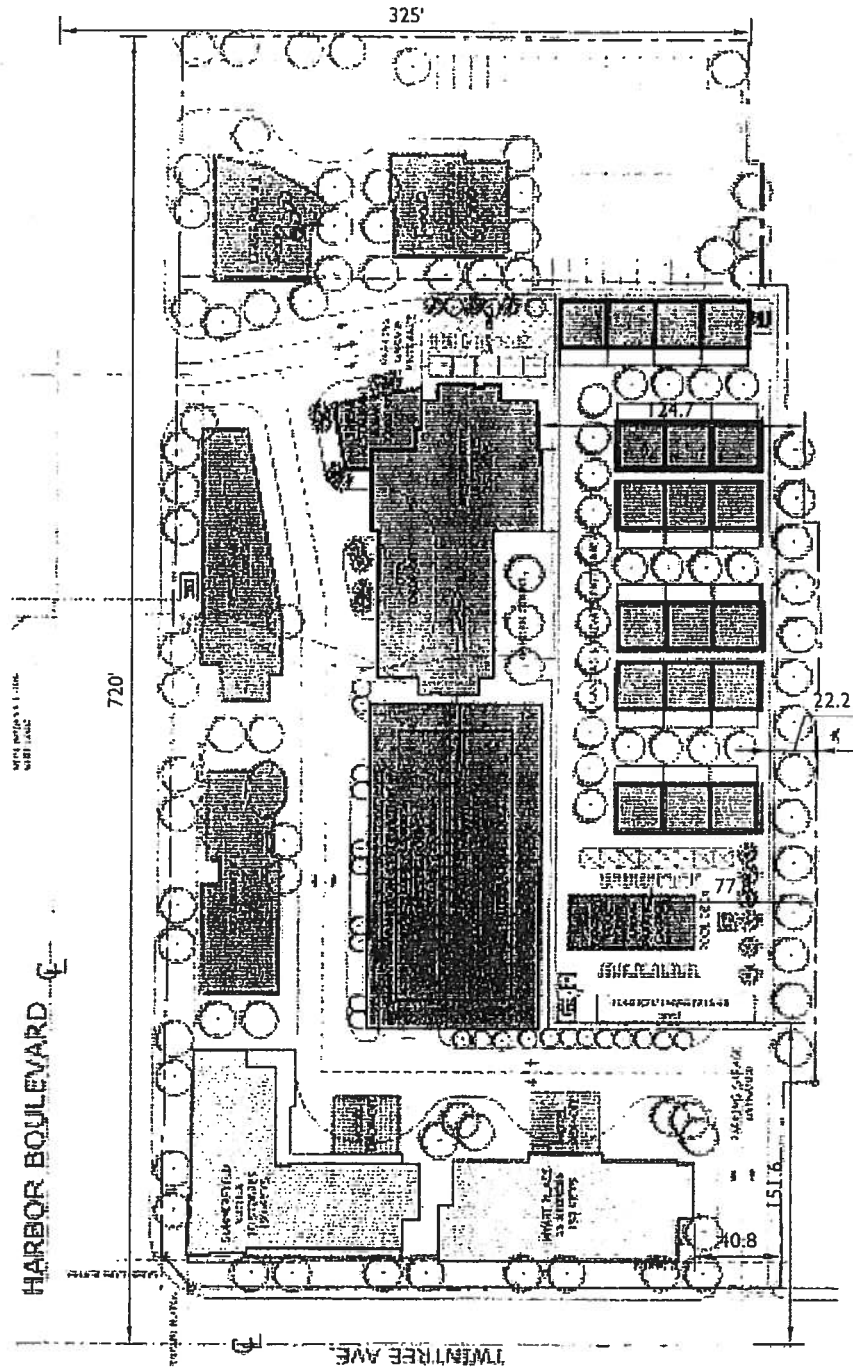
Short-term Noise Measurement Location 3 (ST-3)



Short-term Noise Measurement Location 4 (ST-4)



Appendix C Stationary Noise Distances



Appendix D

Traffic Noise Impact
Computer Printouts

Harbor Boulevard

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GARDEN GROVE JOB #: 0762-11-02
 ROADWAY: HARBOR BLVD DATE: 18-May-11
 LOCATION: n/o S.R. 22 FREEWAY (EXISTING) BY: M. DICKERSON

NOISE INPUT DATA

ADT =	35,500	PK HR VOL =	3,550
SPEED =	45		
PK HR % =	10		
CTL DIST =	100		
DIST N/F =	75	AUTO SLE DISTANCE =	92.75
DT WALL =	100	MED TRUCK SLE DIST =	92.71
DT W/OB =	0	HVY TRUCK SLE DIST =	92.75
HTH WALL =	0.0	*****	
OBS HTH =	5.0		
AMBIENT =	0.0		
ROADWAY VIEW:	LF ANGLE =	-90	
	RT ANGLE =	90	
	DF ANGLE =	180	
SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)			
AUTOMOBILES =	15		
MEDIUM TRUCKS =	15	GRADE ADJUSTMENT =	0.00
HEAVY TRUCKS =	15	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	0 (0=WALL, 1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS =	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	67.6	65.7	63.9	57.8	66.5	67.1
MEDIUM TRUCKS LEQ	58.6	57.1	50.7	49.2	57.7	57.9
HEAVY TRUCKS LEQ	59.2	57.7	48.7	50.0	58.3	58.4
VEHICULAR NOISE	68.6	66.8	64.2	59.0	67.6	68.1

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	68.6	66.8	64.2	59.0	67.6	68.1

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	61	132	284	613

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.6	68.6
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.6	68.6
CNEL WITHOUT TOPO AND BARRIER =	68.1	68.1
MIT CNEL WITH TOPO AND BARRIER =	68.1	68.1
LDN WITHOUT TOPO AND BARRIER =	67.6	67.6
MIT LDN WITH TOPO AND BARRIER =	67.6	67.6

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GARDEN GROVE JOB #: 0762-11-02
 ROADWAY: HARBOR BLVD DATE: 18-May-11
 LOCATION: n/o GARDEN GROVE BLVD (EXISTING) BY: M. DICKERSON

NOISE INPUT DATA

ADT =	28,900	PK HR VOL =	2,890
SPEED =	45		
PK HR % =	10		
CTL DIST=	100		
DIST N/F=	75	AUTO SLE DISTANCE =	92.75
DT WALL=	100	MED TRUCK SLE DIST=	92.71
DT W/OB=	0	HVY TRUCK SLE DIST=	92.75
HTH WALL=	0.0	*****	
OBS HTH=	5.0		
AMBIENT=	0.0		
ROADWAY VIEW:	LF ANGLE=	-90	
	RT ANGLE=	90	
	DF ANGLE=	180	
SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)			
AUTOMOBILES =	15	GRADE ADJUSTMENT=	0.00
MEDIUM TRUCKS =	15	(ADJUSTMENT TO HEAVY TRUCKS)	
HEAVY TRUCKS =	15		
BARRIER =	0 (0=WALL,1=BERM)		
PAD EL =	100.0	BL AUTOMOBILES =	102.0
ROAD EL =	100.0	BL MEDIUM TRUCKS=	104.0
GRADE =	0.1 %	BL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	66.7	64.8	63.0	57.0	65.6	66.2
MEDIUM TRUCKS LEQ	57.7	56.2	49.8	48.3	56.8	57.0
HEAVY TRUCKS LEQ	58.3	56.9	47.8	49.1	57.4	57.6
VEHICULAR NOISE	67.7	65.9	63.3	58.1	66.7	67.2

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	67.7	65.9	63.3	58.1	66.7	67.2

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	53	115	248	534

	N/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	67.7	67.7
MIT PK HR LEQ WITH TOPO AND BARRIER =	67.7	*****
CNEL WITHOUT TOPO AND BARRIER =	67.2	67.2
MIT CNEL WITH TOPO AND BARRIER =	67.2	*****
LDN WITHOUT TOPO AND BARRIER =	66.7	66.7
MIT LDN WITH TOPO AND BARRIER =	66.7	*****

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GARDEN GROVE JOB #: 0762-11-02
 ROADWAY: HARBOR BLVD DATE: 10-May-11
 LOCATION: n/o LAMPSON AVENUE (EXISTING) BY: M. DICKERSON

NOISE INPUT DATA

ADT = 25,800 PK HR VOL = 2,580
 SPEED = 45
 PK HR % = 10
 CTL DIST = 100
 DIST N/F = 75 AUTO SLE DISTANCE = 92.75
 DT WALL = 100 MED TRUCK SLE DIST = 92.71
 DT W/OB = 0 HVY TRUCK SLE DIST = 92.75
 HTH WALL = 0.0 *****
 OBS HTH = 5.0
 AMBIENT = 0.0

ROADWAY VIEW: LF ANGLE = -90
 RT ANGLE = 90
 DF ANGLE = 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES = 15
 MEDIUM TRUCKS = 15 GRADE ADJUSTMENT = 0.00
 HEAVY TRUCKS = 15 (ADJUSTMENT TO HEAVY TRUCKS)
 BARRIER = 0 (0=WALL, 1=BERM)
 PAD EL = 100.0 EL AUTOMOBILES = 102.0
 ROAD EL = 100.0 EL MEDIUM TRUCKS = 104.0
 GRADE = 0.1 % EL HEAVY TRUCKS = 108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LKQ	DAY LKQ	EVEN LKQ	NIGHT LKQ	LDN	CNEL
AUTOMOBILES LEQ	66.2	64.3	62.5	56.5	65.1	65.7
MEDIUM TRUCKS LEQ	57.2	55.7	49.4	47.8	56.3	56.5
HEAVY TRUCKS LEQ	57.8	56.4	47.3	48.6	56.9	57.1
VEHICULAR NOISE	67.2	65.4	62.8	57.6	66.2	66.7

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	67.2	65.4	62.8	57.6	66.2	66.7

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	50	107	230	495

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	67.2	67.2
MIT PK HR LEQ WITH TOPO AND BARRIER =	67.2	67.2
CNEL WITHOUT TOPO AND BARRIER =	66.7	66.7
MIT CNEL WITH TOPO AND BARRIER =	66.7	66.7
LDN WITHOUT TOPO AND BARRIER =	66.2	66.2
MIT LDN WITH TOPO AND BARRIER =	66.2	66.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GARDEN GROVE JOB #: 0762-11-02
 ROADWAY: HARBOR BLVD DATE: 10-May-11
 LOCATION: n/o TWINTREE LANE (EXISTING) BY: M. DICKERSON

NOISE INPUT DATA

ADT =	28,200	PK HR VOL =	2,820
SPEED =	45		
PK HR % =	10		
CTL DIST=	100		
DIST N/F=	75	AUTO SLE DISTANCE =	92.75
DT WALL=	100	MED TRUCK SLE DIST=	92.71
DT W/OB=	0	HVY TRUCK SLE DIST=	92.75
HTH WALL=	0.0	*****	
OBS HTH=	5.0		
AMBIENT=	0.0		
ROADWAY VIEW:	LF ANGLE=	-90	
	RT ANGLE=	90	
	DF ANGLE=	180	

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	15	GRADE ADJUSTMENT=	0.00
MEDIUM TRUCKS =	15	(ADJUSTMENT TO HEAVY TRUCKS)	
HEAVY TRUCKS =	15		
BARRIER =	0 (0=WALL,1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS=	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	66.6	64.7	62.9	56.8	65.5	66.1
MEDIUM TRUCKS LEQ	57.6	56.1	49.7	48.2	56.7	56.9
HEAVY TRUCKS LEQ	58.2	56.7	47.7	49.0	57.3	57.4
VEHICULAR NOISE	67.6	65.8	63.2	58.0	66.6	67.1

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	67.6	65.8	63.2	58.0	66.6	67.1

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	53	113	244	526

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	67.6	67.6
MIT PK HR LEQ WITH TOPO AND BARRIER =	67.6	67.6
CNEL WITHOUT TOPO AND BARRIER =	67.1	67.1
MIT CNEL WITH TOPO AND BARRIER =	67.1	67.1
LDN WITHOUT TOPO AND BARRIER =	66.6	66.6
MIT LDN WITH TOPO AND BARRIER =	66.6	66.6

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GARDEN GROVE JOB #: 0762-11-02
 ROADWAY: HARBOR BLVD DATE: 18-May-11
 LOCATION: n/o CHAPMAN AVENUE (EXISTING) BY: M. DICKERSON

NOISE INPUT DATA

ADT =	29,400	PK HR VOL =	2,940
SPEED =	45		
PK HR % =	10		
CTL DIST=	100		
DIST N/F=	75	AUTO SLE DISTANCE =	92.75
DT WALL=	100	MED TRUCK SLE DIST=	92.71
DT W/OB=	0	HVY TRUCK SLE DIST=	92.75
MTH WALL=	0.0	*****	
OBS HTH=	5.0		
AMBIENT=	0.0		
ROADWAY VIEW:	LF ANGLE=	-90	
	RT ANGLE=	90	
	DF ANGLE=	180	

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	15	GRADE ADJUSTMENT=	0.00
MEDIUM TRUCKS =	15	(ADJUSTMENT TO HEAVY TRUCKS)	
HEAVY TRUCKS =	15		
BARRIER =	0 (0=WALL,1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS=	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	66.7	64.8	63.1	57.0	65.7	66.3
MEDIUM TRUCKS LEQ	57.8	56.3	49.9	48.4	56.8	57.1
HEAVY TRUCKS LEQ	58.4	56.9	47.9	49.1	57.5	57.6
VEHICULAR NOISE	67.8	66.0	63.4	58.2	66.7	67.3

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	67.8	66.0	63.4	58.2	66.7	67.3

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	54	116	251	540

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	67.8	67.8
MIT PK HR LEQ WITH TOPO AND BARRIER =	67.8	*****
CNEL WITHOUT TOPO AND BARRIER =	67.3	67.3
MIT CNEL WITH TOPO AND BARRIER =	67.3	*****
LDN WITHOUT TOPO AND BARRIER =	66.7	66.7
MIT LDN WITH TOPO AND BARRIER =	66.7	*****

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GARDEN GROVE JOB #: 0762-11-02
 ROADWAY: HARBOR BLVD DATE: 18-May-11
 LOCATION: n/o S.R. 22 FREEWAY (2014 W/OUT PROJECT) BY: M. DICKERSON

NOISE INPUT DATA

ADT = 37,400 PK HR VOL = 3,740
 SPEED = 45
 PK HR % = 10
 CTL DIST = 100
 DIST N/F = 75 AUTO SLE DISTANCE = 92.75
 DT WALL = 100 MED TRUCK SLE DIST = 92.71
 DT W/OB = 0 HVY TRUCK SLE DIST = 92.75
 HTH WALL = 0.0 *****
 OBS HTH = 5.0
 AMBIENT = 0.0
 ROADWAY VIEW: LF ANGLE = -90
 RT ANGLE = 90
 DF ANGLE = 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES = 15
 MEDIUM TRUCKS = 15 GRADE ADJUSTMENT = 0.00
 HEAVY TRUCKS = 15 (ADJUSTMENT TO HEAVY TRUCKS)
 BARRIER = 0 (0=WALL, 1=BERM)
 PAD EL = 100.0 EL AUTOMOBILES = 102.0
 ROAD EL = 100.0 EL MEDIUM TRUCKS = 104.0
 GRADE = 0.1 % EL HEAVY TRUCKS = 108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	67.8	65.9	64.1	58.1	66.7	67.3
MEDIUM TRUCKS LEQ	58.8	57.3	51.0	49.4	57.9	58.1
HEAVY TRUCKS LEQ	59.4	58.0	48.9	50.2	58.5	58.7
VEHICULAR NOISE	68.8	67.0	64.5	59.2	67.8	68.3

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	68.8	67.0	64.5	59.2	67.8	68.3

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	63	137	294	634

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.8	68.8
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.8	68.8
CNEL WITHOUT TOPO AND BARRIER =	68.3	68.3
MIT CNEL WITH TOPO AND BARRIER =	68.3	68.3
LDN WITHOUT TOPO AND BARRIER =	67.8	67.8
MIT LDN WITH TOPO AND BARRIER =	67.8	67.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GARDEN GROVE JOB #: 0762-11-02
 ROADWAY: HARBOR BLVD DATE: 18-May-11
 LOCATION: n/o GARDEN GROVE BLVD (2014 W/OUT PROJECT) BY: M. DICKERSON

NOISE INPUT DATA

ADT =	31,500	PK HR VOL =	3,150
SPEED =	45		
PK HR % =	10		
CTL DIST=	100		
DIST N/F=	75	AUTO SLE DISTANCE =	92.75
DT WALL=	100	MED TRUCK SLE DIST=	92.71
DT W/OB=	0	HVY TRUCK SLE DIST=	92.75
HTH WALL=	0.0	*****	
OBS HTH=	5.0		
AMBIENT=	0.0		
ROADWAY VIEW:	LF ANGLE=	-90	
	RT ANGLE=	90	
	DF ANGLE=	180	

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	15		
MEDIUM TRUCKS =	15	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	15	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	0 (0=WALL,1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS=	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	67.0	65.1	63.4	57.3	66.0	66.6
MEDIUM TRUCKS LEQ	58.1	56.6	50.2	48.7	57.1	57.4
HEAVY TRUCKS LEQ	58.7	57.2	48.2	49.4	57.8	57.9
VEHICULAR NOISE	68.1	66.3	63.7	58.5	67.0	67.6

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	68.1	66.3	63.7	58.5	67.0	67.6

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	57	122	263	566

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.1	68.1
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.1	***** 68.1
CNEL WITHOUT TOPO AND BARRIER =	67.6	67.6
MIT CNEL WITH TOPO AND BARRIER =	67.6	***** 67.6
LDN WITHOUT TOPO AND BARRIER =	67.0	67.0
MIT LDN WITH TOPO AND BARRIER =	67.0	***** 67.0

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GARDEN GROVE JOB #: 0762-11-02
 ROADWAY: HARBOR BLVD DATE: 18-May-11
 LOCATION: n/o LAMPSON AVENUE (2014 W/OUT PROJECT) BY: M. DICKERSON

NOISE INPUT DATA

ADT =	28,200	PK HR VOL =	2,820
SPEED =	45		
PK HR % =	10		
CTL DIST =	100		
DIST N/F =	75	AUTO SLE DISTANCE =	92.75
DT WALL =	100	MED TRUCK SLE DIST =	92.71
DT W/OB =	0	HVY TRUCK SLE DIST =	92.75
HTH WALL =	0.0	*****	
OBS HTH =	5.0		
AMBIENT =	0.0		
ROADWAY VIEW:	LF ANGLE =	-90	
	RT ANGLE =	90	
	DF ANGLE =	180	

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	15	GRADE ADJUSTMENT =	0.00
MEDIUM TRUCKS =	15	(ADJUSTMENT TO HEAVY TRUCKS)	
HEAVY TRUCKS =	15		
BARRIER =	0 (0=WALL, 1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS =	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	66.6	64.7	62.9	56.8	65.5	66.1
MEDIUM TRUCKS LEQ	57.6	56.1	49.7	48.2	56.7	56.9
HEAVY TRUCKS LEQ	58.2	56.7	47.7	49.0	57.3	57.4
VEHICULAR NOISE	67.6	65.8	63.2	58.0	66.6	67.1

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	67.6	65.8	63.2	58.0	66.6	67.1

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	53	113	244	526

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	67.6	67.6
MIT PK HR LEQ WITH TOPO AND BARRIER =	67.6	67.6
CNEL WITHOUT TOPO AND BARRIER =	67.1	67.1
MIT CNEL WITH TOPO AND BARRIER =	67.1	67.1
LDN WITHOUT TOPO AND BARRIER =	66.6	66.6
MIT LDN WITH TOPO AND BARRIER =	66.6	66.6

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GARDEN GROVE JOB #: 0762-11-02
 ROADWAY: HARBOR BLVD DATE: 18-May-11
 LOCATION: n/o THINTREE LANE (2014 W/OUT PROJECT) BY: M. DICKERSON

NOISE INPUT DATA

ADT =	30,300	PK HR VOL =	3,030
SPEED =	45		
PK HR % =	10		
CTL DIST=	100		
DIST N/F=	75	AUTO SLE DISTANCE =	92.75
DT WALL=	100	MED TRUCK SLE DIST=	92.71
DT W/OB=	0	HVY TRUCK SLE DIST=	92.75
HTH WALL=	0.0 *****		
OBS HTH=	5.0		
AMBIENT=	0.0		
ROADWAY VIEW:	LF ANGLE=	-90	
	RT ANGLE=	90	
	DF ANGLE=	180	
SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)			
AUTOMOBILES =	15		
MEDIUM TRUCKS =	15	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	15	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	0 (0=WALL, 1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS=	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0
VEHICLE TYPE			
	DAY	EVENING	NIGHT
AUTOMOBILES	0.775	0.129	0.096
MEDIUM TRUCKS	0.848	0.049	0.103
HEAVY TRUCKS	0.865	0.027	0.108
	DAILY		
	0.9742		0.0184
			0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	66.9	65.0	63.2	57.2	65.8	66.4
MEDIUM TRUCKS LEQ	57.9	56.4	50.1	48.5	57.0	57.2
HEAVY TRUCKS LEQ	58.5	57.1	48.0	49.3	57.6	57.8
VEHICULAR NOISE	67.9	66.1	63.5	58.3	66.9	67.4

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	67.9	66.1	63.5	58.3	66.9	67.4

NOISE CONTOUR (FT)

DAYTIME LEQ	70 dBA	65 dBA	60 dBA	55 dBA
	55	119	256	551

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	67.9	67.9
MIT PK HR LEQ WITH TOPO AND BARRIER =	67.9	67.9
CNEL WITHOUT TOPO AND BARRIER =	67.4	67.4
MIT CNEL WITH TOPO AND BARRIER =	67.4	67.4
LDN WITHOUT TOPO AND BARRIER =	66.9	66.9
MIT LDN WITH TOPO AND BARRIER =	66.9	66.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GARDEN GROVE JOB #: 0762-11-02
 ROADWAY: HARBOR BLVD DATE: 18-May-11
 LOCATION: n/o CHAPMAN AVENUE (2014 W/OUT PROJECT) BY: M. DICKERSON

NOISE INPUT DATA

ADT =	31,300	PK HR VOL =	3,130
SPEED =	45		
PK HR % =	10		
CTL DIST =	100		
DIST N/F =	75	AUTO SLE DISTANCE =	92.75
DT WALL =	100	MED TRUCK SLE DIST =	92.71
DT W/OB =	0	HVY TRUCK SLE DIST =	92.75
HTH WALL =	0.0	*****	
OBS HTH =	5.0		
AMBIENT =	0.0		
ROADWAY VIEW:	LF ANGLE =	-90	
	RT ANGLE =	90	
	DF ANGLE =	180	
SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)			
AUTOMOBILES =	15		
MEDIUM TRUCKS =	15	GRADE ADJUSTMENT =	0.00
HEAVY TRUCKS =	15	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	0 (0=WALL, 1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS =	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0
VEHICLE TYPE			
	DAY	EVENING	NIGHT
AUTOMOBILES	0.775	0.129	0.096
MEDIUM TRUCKS	0.848	0.049	0.103
HEAVY TRUCKS	0.865	0.027	0.108
			DAILY
			0.9742
			0.0184
			0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	67.0	65.1	63.4	57.3	65.9	66.5
MEDIUM TRUCKS LEQ	58.1	56.6	50.2	48.6	57.1	57.3
HEAVY TRUCKS LEQ	58.6	57.2	48.2	49.4	57.8	57.9
VEHICULAR NOISE	68.1	66.3	63.7	58.4	67.0	67.5

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	68.1	66.3	63.7	58.4	67.0	67.5

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	56	121	262	563

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.1	68.1
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.1	68.1
CNEL WITHOUT TOPO AND BARRIER =	67.5	67.5
MIT CNEL WITH TOPO AND BARRIER =	67.5	67.5
LDN WITHOUT TOPO AND BARRIER =	67.0	67.0
MIT LDN WITH TOPO AND BARRIER =	67.0	67.0

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GARDEN GROVE JOB #: 0762-11-02
 ROADWAY: HARBOR BLVD DATE: 18-May-11
 LOCATION: n/o S.R. 22 FREEWAY (2014 W/ PROJECT) BY: M. DICKERSON

NOISE INPUT DATA

ADT =	39,700	PK HR VOL =	3,970
SPEED =	45		
PK HR % =	10		
CTL DIST=	100		
DIST N/F=	75	AUTO SLE DISTANCE =	92.75
DT WALL=	100	MED TRUCK SLE DIST=	92.71
DT W/OB=	0	HVY TRUCK SLE DIST=	92.75
HTH WALL=	0.0	*****	
OBS HTH=	5.0		
AMBIENT=	0.0		
ROADWAY VIEW:	LF ANGLE=	-90	
	RT ANGLE=	90	
	DF ANGLE=	180	
SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)			
AUTOMOBILES =	15		
MEDIUM TRUCKS =	15	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	15	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	0 (0=WALL,1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS=	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0
VEHICLE TYPE			
	DAY	EVENING	NIGHT
AUTOMOBILES	0.775	0.129	0.096
MEDIUM TRUCKS	0.848	0.049	0.103
HEAVY TRUCKS	0.865	0.027	0.108
	DAILY		
	0.9742		0.0184
			0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	68.1	66.2	64.4	58.3	67.0	67.6
MEDIUM TRUCKS LEQ	59.1	57.6	51.2	49.7	58.1	58.4
HEAVY TRUCKS LEQ	59.7	58.2	49.2	50.4	58.8	58.9
VEHICULAR NOISE	69.1	67.3	64.7	59.5	68.0	68.6

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	69.1	67.3	64.7	59.5	68.0	68.6

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	66	142	306	660

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	69.1	69.1
MIT PK HR LEQ WITH TOPO AND BARRIER =	69.1	69.1
CNEL WITHOUT TOPO AND BARRIER =	68.6	68.6
MIT CNEL WITH TOPO AND BARRIER =	68.6	68.6
LDN WITHOUT TOPO AND BARRIER =	68.0	68.0
MIT LDN WITH TOPO AND BARRIER =	68.0	68.0

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GARDEN GROVE JOB #: 0762-11-02
 ROADWAY: HARBOR BLVD DATE: 18-May-11
 LOCATION: n/o GARDEN GROVE BLVD (2014 W/ PROJECT) BY: M. DICKERSON

NOISE INPUT DATA

ADT =	34,400	PK HR VOL =	3,440
SPEED =	45		
PK HR % =	10		
CTL DIST=	100		
DIST N/F=	75	AUTO SLE DISTANCE =	92.75
DT WALL=	100	MED TRUCK SLE DIST=	92.71
DT W/OB=	0	HVY TRUCK SLE DIST=	92.75
HTH WALL=	0.0	*****	
OBS HTH=	5.0		
AMBIENT=	0.0		
ROADWAY VIEW:	LF ANGLE=	-90	
	RT ANGLE=	90	
	DF ANGLE=	180	

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	15	GRADE ADJUSTMENT=	0.00
MEDIUM TRUCKS =	15	(ADJUSTMENT TO HEAVY TRUCKS)	
HEAVY TRUCKS =	15		
BARRIER =	0 (0=WALL,1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS=	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNSL
AUTOMOBILES LEQ	67.4	65.5	63.8	57.7	66.3	66.9
MEDIUM TRUCKS LEQ	58.5	57.0	50.6	49.1	57.5	57.8
HEAVY TRUCKS LEQ	59.0	57.6	48.6	49.8	58.2	58.3
VEHICULAR NOISE	68.5	66.7	64.1	58.8	67.4	67.9

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	68.5	66.7	64.1	58.8	67.4	67.9

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	60	129	279	600

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.5	68.5
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.5	68.5
CNEL WITHOUT TOPO AND BARRIER =	67.9	67.9
MIT CNEL WITH TOPO AND BARRIER =	67.9	67.9
LDN WITHOUT TOPO AND BARRIER =	67.4	67.4
MIT LDN WITH TOPO AND BARRIER =	67.4	67.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GARDEN GROVE JOB #: 0762-11-02
 ROADWAY: HARBOR BLVD DATE: 18-May-11
 LOCATION: n/o LAMPSON AVENUE (2014 W/ PROJECT) BY: M. DICKERSON

NOISE INPUT DATA

ADT =	31,600	PK HR VOL =	3,160
SPEED =	45		
PK HR % =	10		
CTL DIST =	100		
DIST N/F =	75	AUTO SLE DISTANCE =	92.75
DT WALL =	100	MED TRUCK SLE DIST =	92.71
DT W/OB =	0	HVY TRUCK SLE DIST =	92.75
HTH WALL =	0.0	*****	
OBS HTH =	5.0		
AMBIENT =	0.0		
ROADWAY VIEW:	LF ANGLE =	-90	
	RT ANGLE =	90	
	DF ANGLE =	180	
SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)			
AUTOMOBILES =	15		
MEDIUM TRUCKS =	15	GRADE ADJUSTMENT =	0.00
HEAVY TRUCKS =	15	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	0 (0=WALL, 1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS =	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	67.1	65.2	63.4	57.3	66.0	66.6
MEDIUM TRUCKS LEQ	58.1	56.6	50.2	48.7	57.2	57.4
HEAVY TRUCKS LEQ	58.7	57.2	48.2	49.5	57.8	57.9
VEHICULAR NOISE	68.1	66.3	63.7	58.5	67.1	67.6

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	68.1	66.3	63.7	58.5	67.1	67.6

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	57	122	263	567

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.1	68.1
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.1	68.1
CNEL WITHOUT TOPO AND BARRIER =	67.6	67.6
MIT CNEL WITH TOPO AND BARRIER =	67.6	67.6
LDN WITHOUT TOPO AND BARRIER =	67.1	67.1
MIT LDN WITH TOPO AND BARRIER =	67.1	67.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GARDEN GROVE JOB #: 0762-11-02
 ROADWAY: HARBOR BLVD DATE: 18-May-11
 LOCATION: n/o TWINTREE LANE (2014 W/ PROJECT) BY: M. DICKERSON

NOISE INPUT DATA

ADT = 33,200 PK HR VOL = 3,320
 SPEED = 45
 PK HR % = 10
 CTL DIST = 100
 DIST N/F = 75 AUTO SLE DISTANCE = 92.75
 DT WALL = 100 MED TRUCK SLE DIST = 92.71
 DT W/OB = 0 HVY TRUCK SLE DIST = 92.75
 HTH WALL = 0.0 *****
 OBS HTH = 5.0
 AMBIENT = 0.0
 ROADWAY VIEW: LF ANGLE = -90
 RT ANGLE = 90
 DF ANGLE = 180

SITE CONDITIONS (10-HARD SITE, 15-SOFT SITE)

AUTOMOBILES = 15
 MEDIUM TRUCKS = 15 GRADE ADJUSTMENT = 0.00
 HEAVY TRUCKS = 15 (ADJUSTMENT TO HEAVY TRUCKS)
 BARRIER = 0 (0=WALL, 1=BERM)
 PAD EL = 100.0 EL AUTOMOBILES = 102.0
 ROAD EL = 100.0 EL MEDIUM TRUCKS = 104.0
 GRADE = 0.1 % EL HEAVY TRUCKS = 108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	67.3	65.4	63.6	57.6	66.2	66.8
MEDIUM TRUCKS LEQ	58.3	56.8	50.4	48.9	57.4	57.6
HEAVY TRUCKS LEQ	58.9	57.5	48.4	49.7	58.0	58.2
VEHICULAR NOISE	68.3	66.5	63.9	58.7	67.3	67.8

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	68.3	66.5	63.9	58.7	67.3	67.8

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	59	126	272	586

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.3	68.3
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.3	68.3
CNEL WITHOUT TOPO AND BARRIER =	67.8	67.8
MIT CNEL WITH TOPO AND BARRIER =	67.8	67.8
LDN WITHOUT TOPO AND BARRIER =	67.3	67.3
MIT LDN WITH TOPO AND BARRIER =	67.3	67.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GARDEN GROVE JOB #: 0762-11-02
 ROADWAY: HARBOR BLVD DATE: 18-May-11
 LOCATION: n/o CHAPMAN AVENUE (2014 W/ PROJECT) BY: M. DICKERSON

NOISE INPUT DATA

ADT =	34,100	PK HR VOL =	3,410
SPEED =	45		
PK HR % =	10		
CTL DIST =	100		
DIST N/F =	75	AUTO SLE DISTANCE =	92.75
DT WALL =	100	MED TRUCK SLE DIST =	92.71
DT W/OB =	0	HVY TRUCK SLE DIST =	92.75
HTH WALL =	0.0	*****	
OBS HTH =	5.0		
AMBIENT =	0.0		
ROADWAY VIEW:	LF ANGLE =	-90	
	RT ANGLE =	90	
	DF ANGLE =	180	
SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)			
AUTOMOBILES =	15		
MEDIUM TRUCKS =	15	GRADE ADJUSTMENT =	0.00
HEAVY TRUCKS =	15	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	0 (0=WALL, 1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS =	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0
VEHICLE TYPE			
	DAY	EVENING	NIGHT
AUTOMOBILES	0.775	0.129	0.096
MEDIUM TRUCKS	0.848	0.049	0.103
HEAVY TRUCKS	0.865	0.027	0.108
			DAILY
			0.9742
			0.0184
			0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	67.4	65.5	63.7	57.7	66.3	66.9
MEDIUM TRUCKS LEQ	58.4	56.9	50.6	49.0	57.5	57.7
HEAVY TRUCKS LEQ	59.0	57.6	48.5	49.8	58.1	58.3
VEHICULAR NOISE	68.4	66.6	64.1	58.8	67.4	67.9

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	68.4	66.6	64.1	58.8	67.4	67.9

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	60	129	277	597

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.4	68.4
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.4	68.4
CNEL WITHOUT TOPO AND BARRIER =	67.9	67.9
MIT CNEL WITH TOPO AND BARRIER =	67.9	67.9
LDN WITHOUT TOPO AND BARRIER =	67.4	67.4
MIT LDN WITH TOPO AND BARRIER =	67.4	67.4

TwinTree Lane

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: HARBOR BLVD HOTEL AND WATER PARK ACOUSTICAL STUDY JOB #: 0762-11-02
 ROADWAY: TWINTREE LANE DATE: 10-May-11
 LOCATION: e/o HARBOR BLVD BY: M. DICKERSON

NOISE INPUT DATA

ADT =	2,000	PK HR VOL =	200
SPEED =	25		
PK HR % =	10		
CTL DIST=	100		
DIST N/F=	25	AUTO SLE DISTANCE =	99.26
DT WALL=	100	MED TRUCK SLE DIST=	99.22
DT W/OB=	0	HVY TRUCK SLE DIST=	99.26
HTH WALL=	0.0	*****	
OBS HTH=	5.0		
AMBIENT=	0.0		
ROADWAY VIEW:	LF ANGLE=	-90	
	RT ANGLE=	90	
	DF ANGLE=	180	
SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)			
AUTOMOBILES =	15	GRADE ADJUSTMENT=	0.00
MEDIUM TRUCKS =	15	(ADJUSTMENT TO HEAVY TRUCKS)	
HEAVY TRUCKS =	15		
BARRIER =	0 (0=WALL,1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS=	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0
VEHICLE TYPE			
	DAY	EVENING	NIGHT
AUTOMOBILES	0.775	0.129	0.096
MEDIUM TRUCKS	0.848	0.049	0.103
HEAVY TRUCKS	0.865	0.027	0.108
			DAILY
			0.9742
			0.0184
			0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	47.3	45.4	43.6	37.6	46.2	46.8
MEDIUM TRUCKS LEQ	41.7	40.2	33.8	32.3	40.7	41.0
HEAVY TRUCKS LEQ	43.9	42.5	33.4	34.7	43.0	43.2
VEHICULAR NOISE	49.7	48.0	44.4	40.1	48.7	49.1

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	49.7	48.0	44.4	40.1	48.7	49.1

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	3	7	16	34

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	49.7	49.7
MIT PK HR LEQ WITH TOPO AND BARRIER =	49.7	49.7
CNEL WITHOUT TOPO AND BARRIER =	49.1	49.1
MIT CNEL WITH TOPO AND BARRIER =	49.1	49.1
LDN WITHOUT TOPO AND BARRIER =	48.7	48.7
MIT LDN WITH TOPO AND BARRIER =	48.7	48.7

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: HARBOR BLVD HOTEL AND WATER PARK ACOUSTICAL STUDY JOB #: 0762-11-02
 ROADWAY: TWINTREE LANE DATE: 10-May-11
 LOCATION: e/o HARBOR BLVD BY: M. DICKERSON

NOISE INPUT DATA

ADT =	2,100	PK HR VOL =	210
SPEED =	25		
PK HR % =	10		
CTL DIST=	100		
DIST N/F=	25	AUTO SLE DISTANCE =	99.26
DT WALL=	100	MED TRUCK SLE DIST=	99.22
DT W/OB=	0	HVY TRUCK SLE DIST=	99.26
HTH WALL=	0.0	*****	
OBS HTH=	5.0		
AMBIENT=	0.0		
ROADWAY VIEW:	LF ANGLE=	-90	
	RT ANGLE=	90	
	DF ANGLE=	180	
SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)			
AUTOMOBILES =	15	GRADE ADJUSTMENT=	0.00
MEDIUM TRUCKS =	15	(ADJUSTMENT TO HEAVY TRUCKS)	
HEAVY TRUCKS =	15		
BARRIER =	0 (0=WALL, 1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS=	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	47.5	45.6	43.8	37.8	46.4	47.0
MEDIUM TRUCKS LEQ	41.9	40.4	34.0	32.5	41.0	41.2
HEAVY TRUCKS LEQ	44.1	42.7	33.6	34.9	43.2	43.4
VEHICULAR NOISE	49.9	48.2	44.6	40.4	48.9	49.3

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	49.9	48.2	44.6	40.4	48.9	49.3

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	4	8	16	35

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	49.9	49.9
MIT PK HR LEQ WITH TOPO AND BARRIER =	49.9	49.9
CNEL WITHOUT TOPO AND BARRIER =	49.3	49.3
MIT CNEL WITH TOPO AND BARRIER =	49.3	49.3
LDN WITHOUT TOPO AND BARRIER =	48.9	48.9
MIT LDN WITH TOPO AND BARRIER =	48.9	48.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: HARBOR BLVD HOTEL AND WATER PARK ACOUSTICAL STUDY JOB #: 0762-11-02
 ROADWAY: TWINTREE LANE DATE: 10-May-11
 LOCATION: e/o HARBOR BLVD BY: M. DICKERSON

NOISE INPUT DATA

ADT =	3,700	PK HR VOL =	370
SPEED =	25		
PK HR % =	10		
CTL DIST=	100		
DIST N/F=	25	AUTO SLE DISTANCE =	99.26
DT WALL=	100	MED TRUCK SLE DIST=	99.22
DT W/OB=	0	HVY TRUCK SLE DIST=	99.26
HTH WALL=	0.0	*****	
OBS HTH=	5.0		
AMBIENT=	0.0		
ROADWAY VIEW:	LF ANGLE=	-90	
	RT ANGLE=	90	
	DF ANGLE=	180	
SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)			
AUTOMOBILES =	15		
MEDIUM TRUCKS =	15	GRADE ADJUSTMENT=	0.00
HEAVY TRUCKS =	15	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	0 (0=WALL,1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS=	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0
VEHICLE TYPE			
	DAY	EVENING	NIGHT
AUTOMOBILES	0.775	0.129	0.096
MEDIUM TRUCKS	0.848	0.049	0.103
HEAVY TRUCKS	0.865	0.027	0.108
			DAILY
			0.9742
			0.0184
			0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	50.0	48.1	46.3	40.2	48.9	49.5
MEDIUM TRUCKS LEQ	44.4	42.9	36.5	35.0	43.4	43.6
HEAVY TRUCKS LEQ	46.6	45.1	36.1	37.4	45.7	45.8
VEHICULAR NOISE	52.3	50.6	47.1	42.8	51.3	51.8

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	52.3	50.6	47.1	42.8	51.3	51.8

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	5	11	24	51

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	52.3	52.3
MIT PK HR LEQ WITH TOPO AND BARRIER =	52.3	52.3
CNEL WITHOUT TOPO AND BARRIER =	51.8	51.8
MIT CNEL WITH TOPO AND BARRIER =	51.8	51.8
LDN WITHOUT TOPO AND BARRIER =	51.3	51.3
MIT LDN WITH TOPO AND BARRIER =	51.3	51.3

Hotel Tower Façade Noise Calculations

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GG JOB #: 0762-2011-02
 ROADWAY: HARBOR BLVD DATE: 11-May-11
 LOCATION: 1ST FLOOR HARBOR BLVD HOTEL BY: M. DICKERSON

NOISE INPUT DATA

ADT =	33,600	PK HR VOL =	3,360
SPEED =	45		
PK HR % =	10		
CTL DIST =	150		
DIST N/F =	75	AUTO SLE DISTANCE =	145.27
DT WALL =	100	MED TRUCK SLE DIST =	145.24
DT W/OB =	50	HVY TRUCK SLE DIST =	145.27
HTH WALL =	0.0	*****	
OBS HTH =	5.0		
AMBIENT =	0.0		
ROADWAY VIEW:	LF ANGLE =	-90	
	RT ANGLE =	90	
	DF ANGLE =	180	
SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)			
AUTOMOBILES =	15		
MEDIUM TRUCKS =	15	GRADE ADJUSTMENT =	0.00
HEAVY TRUCKS =	15	(ADJUSTMENT TO HEAVY TRUCKS)	
BARRIER =	0 (0=WALL, 1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS =	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	64.4	62.5	60.7	54.7	63.3	63.9
MEDIUM TRUCKS LEQ	55.4	53.9	47.6	46.0	54.5	54.7
HEAVY TRUCKS LEQ	56.0	54.6	45.6	46.8	55.2	55.3
VEHICULAR NOISE	65.4	63.6	61.1	55.8	64.4	64.9

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	65.4	63.6	61.1	55.8	64.4	64.9

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	57	122	263	566

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	65.4	65.4
MIT PK HR LEQ WITH TOPO AND BARRIER =	65.4	***** 65.4
CNEL WITHOUT TOPO AND BARRIER =	64.9	64.9
MIT CNEL WITH TOPO AND BARRIER =	64.9	***** 64.9
LDN WITHOUT TOPO AND BARRIER =	64.4	64.4
MIT LDN WITH TOPO AND BARRIER =	64.4	***** 64.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GG JOB #: 0762-2011-02
 ROADWAY: HARBOR BLVD DATE: 11-May-11
 LOCATION: 2ND FLOOR HARBOR BLVD HOTEL BY: M. DICKERSON

NOISE INPUT DATA

ADT =	33,600	PK HR VOL =	3,360
SPEED =	45		
PK HR % =	10		
CTL DIST=	150		
DIST N/F=	75	AUTO SLE DISTANCE =	145.82
DT WALL=	100	MED TRUCK SLE DIST=	145.65
DT W/OB=	50	HVY TRUCK SLE DIST=	145.41
HTH WALL=	0.0	*****	
OBS HTH=	15.0		
AMBIENT=	0.0		
ROADWAY VIEW:	LF ANGLE=	-90	
	RT ANGLE=	90	
	DF ANGLE=	180	

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10	GRADE ADJUSTMENT=	0.00
MEDIUM TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
HEAVY TRUCKS =	10		
BARRIER =	0 (0=WALL, 1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS=	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	67.9	66.0	64.3	58.2	66.8	67.4
MEDIUM TRUCKS LEQ	59.0	57.5	51.1	49.6	58.0	58.3
HEAVY TRUCKS LEQ	59.6	58.1	49.1	50.3	58.7	58.8
VEHICULAR NOISE	69.0	67.2	64.6	59.4	67.9	68.4

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	69.0	67.2	64.6	59.4	67.9	68.4

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	78	248	784	2480

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	69.0	69.0
MIT PK HR LEQ WITH TOPO AND BARRIER =	69.0	***** 69.0
CNEL WITHOUT TOPO AND BARRIER =	68.4	68.4
MIT CNEL WITH TOPO AND BARRIER =	68.4	***** 68.4
LDN WITHOUT TOPO AND BARRIER =	67.9	67.9
MIT LDN WITH TOPO AND BARRIER =	67.9	***** 67.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GG JOB #: 0762-2011-02
 ROADWAY: HARBOR BLVD DATE: 11-May-11
 LOCATION: 3RD FLOOR HARBOR BLVD HOTEL BY: M. DICKERSON

NOISE INPUT DATA

ADT = 33,600 PK HR VOL = 3,360
 SPEED = 45
 PK HR % = 10
 CTL DIST = 150
 DIST N/F = 75 AUTO SLE DISTANCE = 147.05
 DT WALL = 100 MED TRUCK SLE DIST = 146.75
 DT W/OB = 50 HVY TRUCK SLE DIST = 146.23
 HTH WALL = 0.0 *****
 OBS HTH = 25.0
 AMBIENT = 0.0
 ROADWAY VIEW: LF ANGLE = -90
 RT ANGLE = 90
 DF ANGLE = 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES = 10 GRADE ADJUSTMENT = 0.00
 MEDIUM TRUCKS = 10 (ADJUSTMENT TO HEAVY TRUCKS)
 HEAVY TRUCKS = 10
 BARRIER = 0 (0=WALL, 1=BERM)
 PAD EL = 100.0 EL AUTOMOBILES = 102.0
 ROAD EL = 100.0 EL MEDIUM TRUCKS = 104.0
 GRADE = 0.1 % EL HEAVY TRUCKS = 108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	67.9	66.0	64.2	58.2	66.8	67.4
MEDIUM TRUCKS LEQ	59.0	57.4	51.1	49.5	58.0	58.2
HEAVY TRUCKS LEQ	59.5	58.1	49.1	50.3	58.7	58.8
VEHICULAR NOISE	69.0	67.1	64.6	59.3	67.9	68.4

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	69.0	67.1	64.6	59.3	67.9	68.4

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	78	246	778	2460

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	69.0	69.0
MIT PK HR LEQ WITH TOPO AND BARRIER =	69.0	69.0
CNEL WITHOUT TOPO AND BARRIER =	68.4	68.4
MIT CNEL WITH TOPO AND BARRIER =	68.4	68.4
LDN WITHOUT TOPO AND BARRIER =	67.9	67.9
MIT LDN WITH TOPO AND BARRIER =	67.9	67.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GG JOB #: 0762-2011-02
 ROADWAY: HARBOR BLVD DATE: 11-May-11
 LOCATION: 4TH FLOOR HARBOR BLVD HOTEL BY: M. DICKERSON

NOISE INPUT DATA

ADT =	33,600	PK HR VOL =	3,360
SPRED =	45		
PK HR % =	10		
CTL DIST =	150		
DIST N/F =	75	AUTO SLE DISTANCE =	148.94
DT WALL =	100	MED TRUCK SLE DIST =	148.51
DT W/OB =	50	HVY TRUCK SLE DIST =	147.72
HTH WALL =	0.0	*****	
OBS HTH =	35.0		
AMBIENT =	0.0		
ROADWAY VIEW:	LF ANGLE =	-90	
	RT ANGLE =	90	
	DF ANGLE =	180	

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10	GRADE ADJUSTMENT =	0.00
MEDIUM TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
HEAVY TRUCKS =	10		
BARRIER =	0 (0=WALL, 1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS =	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	67.8	65.9	64.2	58.1	66.8	67.4
MEDIUM TRUCKS LEQ	58.9	57.4	51.0	49.5	57.9	58.2
HEAVY TRUCKS LEQ	59.5	58.1	49.0	50.3	58.6	58.8
VEHICULAR NOISE	68.9	67.1	64.5	59.3	67.8	68.4

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	68.9	67.1	64.5	59.3	67.8	68.4

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	77	243	769	2430

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.9	68.9
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.9	68.9
CNEL WITHOUT TOPO AND BARRIER =	68.4	68.4
MIT CNEL WITH TOPO AND BARRIER =	68.4	68.4
LDN WITHOUT TOPO AND BARRIER =	67.8	67.8
MIT LDN WITH TOPO AND BARRIER =	67.8	67.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GG JOB #: 0762-2011-02
 ROADWAY: HARBOR BLVD DATE: 11-May-11
 LOCATION: 5TH FLOOR HARBOR BLVD HOTEL BY: M. DICKERSON

NOISE INPUT DATA

ADT = 33,600 PK HR VOL = 3,360
 SPEED = 45
 PK HR % = 10
 CTL DIST = 150
 DIST N/F = 75 AUTO SLE DISTANCE = 151.47
 DT WALL = 100 MED TRUCK SLE DIST = 150.91
 DT W/OB = 50 HVY TRUCK SLE DIST = 149.87
 HTH WALL = 0.0 *****
 OBS HTH = 45.0
 AMBIENT = 0.0
 ROADWAY VIEW: LF ANGLE = -90
 RT ANGLE = 90
 DF ANGLE = 180

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES = 10
 MEDIUM TRUCKS = 10 GRADE ADJUSTMENT = 0.00
 HEAVY TRUCKS = 10 (ADJUSTMENT TO HEAVY TRUCKS)
 BARRIER = 0 (0=WALL, 1=BERM)
 PAD EL = 100.0 EL AUTOMOBILES = 102.0
 ROAD EL = 100.0 EL MEDIUM TRUCKS = 104.0
 GRADE = 0.1 % EL HEAVY TRUCKS = 108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	67.8	65.9	64.1	58.1	66.7	67.3
MEDIUM TRUCKS LEQ	58.8	57.3	51.0	49.4	57.9	58.1
HEAVY TRUCKS LEQ	59.4	58.0	49.0	50.2	58.6	58.7
VEHICULAR NOISE	68.8	67.0	64.4	59.2	67.8	68.3

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	68.8	67.0	64.4	59.2	67.8	68.3

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	76	239	756	2391

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.8	68.8
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.8	68.8
CNEL WITHOUT TOPO AND BARRIER =	68.3	68.3
MIT CNEL WITH TOPO AND BARRIER =	68.3	68.3
LDN WITHOUT TOPO AND BARRIER =	67.8	67.8
MIT LDN WITH TOPO AND BARRIER =	67.8	67.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GG
ROADWAY: HARBOR BLVD
LOCATION: 6TH FLOOR HARBOR BLVD HOTEL

JOB #: 0762-2011-02
DATE: 11-May-11
BY: M. DICKERSON

NOISE INPUT DATA

ADT =	33,600	PK HR VOL =	3,360
SPEED =	45		
PK HR % =	10		
CTL DIST =	150		
DIST N/F =	75	AUTO SLE DISTANCE =	154.61
DT WALL =	100	MED TRUCK SLE DIST =	153.93
DT W/OB =	50	HVY TRUCK SLE DIST =	152.65
HTH WALL =	0.0 *****		
OBS HTH =	55.0		
AMBIENT =	0.0		
ROADWAY VIEW:	LF ANGLE =	-90	
	RT ANGLE =	90	
	DF ANGLE =	180	

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10	GRADE ADJUSTMENT =	0.00
MEDIUM TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
HEAVY TRUCKS =	10		
BARRIER =	0 (0=WALL, 1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS =	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNBL
AUTOMOBILES LEQ	67.7	65.8	64.0	58.0	66.6	67.2
MEDIUM TRUCKS LEQ	58.7	57.2	50.9	49.3	57.8	58.0
HEAVY TRUCKS LEQ	59.3	57.9	48.9	50.1	58.5	58.6
VEHICULAR NOISE	68.7	66.9	64.4	59.1	67.7	68.2

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNBL
VEHICULAR NOISE	68.7	66.9	64.4	59.1	67.7	68.2

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	74	234	741	2343

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.7	68.7
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.7 *****	68.7
CNBL WITHOUT TOPO AND BARRIER =	68.2	68.2
MIT CNBL WITH TOPO AND BARRIER =	68.2 *****	68.2
LDN WITHOUT TOPO AND BARRIER =	67.7	67.7
MIT LDN WITH TOPO AND BARRIER =	67.7 *****	67.7

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GG JOB #: 0762-2011-02
 ROADWAY: HARBOR BLVD DATE: 11-May-11
 LOCATION: 7TH FLOOR HARBOR BLVD HOTEL BY: M. DICKERSON

NOISE INPUT DATA

ADT =	33,600	PK HR VOL =	3,360
SPEED =	45		
PK HR % =	10		
CTL DIST=	150		
DIST N/F=	75	AUTO SLE DISTANCE =	158.31
DT WALL=	100	MED TRUCK SLE DIST=	157.53
DT W/OB=	50	HVY TRUCK SLE DIST=	156.02
HTH WALL=	0.0	*****	
OBS HTH=	65.0		
AMBIENT=	0.0		
ROADWAY VIEW:	LF ANGLE=	-90	
	RT ANGLE=	90	
	DF ANGLE=	180	

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10	GRADE ADJUSTMENT=	0.00
MEDIUM TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
HEAVY TRUCKS =	10		
BARRIER =	0 (0=WALL,1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS=	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	67.6	65.7	63.9	57.9	66.5	67.1
MEDIUM TRUCKS LEQ	58.6	57.1	50.8	49.2	57.7	57.9
HEAVY TRUCKS LEQ	59.2	57.8	48.8	50.0	58.4	58.5
VEHICULAR NOISE	68.6	66.8	64.2	59.0	67.6	68.1

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	68.6	66.8	64.2	59.0	67.6	68.1

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	72	229	724	2289

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.6	68.6
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.6	68.6
CNEL WITHOUT TOPO AND BARRIER =	68.1	68.1
MIT CNEL WITH TOPO AND BARRIER =	68.1	68.1
LDN WITHOUT TOPO AND BARRIER =	67.6	67.6
MIT LDN WITH TOPO AND BARRIER =	67.6	67.6

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GG JOB #: 0762-2011-02
 ROADWAY: HARBOR BLVD DATE: 11-May-11
 LOCATION: 8TH FLOOR HARBOR BLVD HOTEL BY: M. DICKERSON

NOISE INPUT DATA

ADT =	33,600	PK HR VOL =	3,360
SPEED =	45		
PK HR % =	10		
CTL DIST=	150		
DIST N/F=	75	AUTO SLE DISTANCE =	162.55
DT WALL=	100	MED TRUCK SLE DIST=	161.66
DT W/OB=	50	HVY TRUCK SLE DIST=	159.94
HTH WALL=	0.0	*****	
OBS HTH=	75.0		
AMBIENT=	0.0		
ROADWAY VIEW:	LF ANGLE=	-90	
	RT ANGLE=	90	
	DF ANGLE=	180	

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10	GRADE ADJUSTMENT=	0.00
MEDIUM TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
HEAVY TRUCKS =	10		
BARRIER =	0 (0=WALL,1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS=	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	67.5	65.6	63.8	57.7	66.4	67.0
MEDIUM TRUCKS LEQ	58.5	57.0	50.7	49.1	57.6	57.8
HEAVY TRUCKS LEQ	59.1	57.7	48.7	49.9	58.3	58.4
VEHICULAR NOISE	68.5	66.7	64.1	58.9	67.5	68.0

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	68.5	66.7	64.1	58.9	67.5	68.0

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	71	223	705	2230

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.5	68.5
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.5	***** 68.5
CNEL WITHOUT TOPO AND BARRIER =	68.0	68.0
MIT CNEL WITH TOPO AND BARRIER =	68.0	***** 68.0
LDN WITHOUT TOPO AND BARRIER =	67.5	67.5
MIT LDN WITH TOPO AND BARRIER =	67.5	***** 67.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GG JOB #: 0762-2011-02
 ROADWAY: HARBOR BLVD DATE: 11-May-11
 LOCATION: 9TH FLOOR HARBOR BLVD HOTEL BY: M. DICKERSON

NOISE INPUT DATA

ADT =	33,600	PK HR VOL =	3,360
SPEED =	45		
PK HR % =	10		
CTL DIST=	150		
DIST N/F=	75	AUTO SLE DISTANCE =	167.28
DT WALL=	100	MED TRUCK SLE DIST=	166.30
DT W/OB=	50	HVY TRUCK SLE DIST=	164.38
HTH WALL=	0.0 *****		
OBS HTH=	85.0		
AMBIENT=	0.0		
ROADWAY VIEW:	LF ANGLE=	-90	
	RT ANGLE=	90	
	DF ANGLE=	180	

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10	GRADE ADJUSTMENT=	0.00
MEDIUM TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
HEAVY TRUCKS =	10		
BARRIER =	0 (0=WALL, 1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS=	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	67.3	65.4	63.7	57.6	66.2	66.9
MEDIUM TRUCKS LEQ	58.4	56.9	50.5	49.0	57.5	57.7
HEAVY TRUCKS LEQ	59.0	57.6	48.6	49.8	58.2	58.3
VEHICULAR NOISE	68.4	66.6	64.0	58.8	67.3	67.9

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	68.4	66.6	64.0	58.8	67.3	67.9

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	69	217	685	2167

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.4	68.4
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.4	68.4
CNEL WITHOUT TOPO AND BARRIER =	67.9	67.9
MIT CNEL WITH TOPO AND BARRIER =	67.9	67.9
LDN WITHOUT TOPO AND BARRIER =	67.3	67.3
MIT LDN WITH TOPO AND BARRIER =	67.3	67.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GG JOB #: 0762-2011-02
 ROADWAY: HARBOR BLVD DATE: 11-May-11
 LOCATION: 10TH FLOOR HARBOR BLVD HOTEL BY: M. DICKERSON

NOISE INPUT DATA

ADT =	33,600	PK HR VOL =	3,360
SPEED =	45		
PK HR % =	10		
CTL DIST=	150		
DIST N/F=	75	AUTO SLE DISTANCE =	172.46
DT WALL=	100	MED TRUCK SLE DIST=	171.39
DT W/OB=	50	HVY TRUCK SLE DIST=	169.30
HTH WALL=	0.0 *****		
OBS HTH=	95.0		
AMBIENT=	0.0		
ROADWAY VIEW:	LF ANGLE=	-90	
	RT ANGLE=	90	
	DF ANGLE=	180	

SITE CONDITIONS (10=HARD SITE, 15=SOFT SITE)

AUTOMOBILES =	10	GRADE ADJUSTMENT=	0.00
MEDIUM TRUCKS =	10	(ADJUSTMENT TO HEAVY TRUCKS)	
HEAVY TRUCKS =	10		
BARRIER =	0 (0=WALL,1=BERM)		
PAD EL =	100.0	EL AUTOMOBILES =	102.0
ROAD EL =	100.0	EL MEDIUM TRUCKS=	104.0
GRADE =	0.1 %	EL HEAVY TRUCKS =	108.0

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES LEQ	67.2	65.3	63.5	57.5	66.1	66.7
MEDIUM TRUCKS LEQ	58.3	56.8	50.4	48.9	57.3	57.6
HEAVY TRUCKS LEQ	58.9	57.5	48.4	49.7	58.0	58.2
VEHICULAR NOISE	68.3	66.5	63.9	58.6	67.2	67.7

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
VEHICULAR NOISE	68.3	66.5	63.9	58.6	67.2	67.7

NOISE CONTOUR (FT)

	70 dBA	65 dBA	60 dBA	55 dBA
DAYTIME LEQ	66	210	665	2102

	W/O AMBIENT	W/ AMBIENT
PK HR LEQ WITHOUT TOPO OR BARRIER =	68.3	68.3
MIT PK HR LEQ WITH TOPO AND BARRIER =	68.3	***** 68.3
CNEL WITHOUT TOPO AND BARRIER =	67.7	67.7
MIT CNEL WITH TOPO AND BARRIER =	67.7	***** 67.7
LDN WITHOUT TOPO AND BARRIER =	67.2	67.2
MIT LDN WITH TOPO AND BARRIER =	67.2	***** 67.2

Appendix E

Traffic Data

**TABLE 3
Project Trip Generation**

Land Use	ITE Code	Quantity	Units ¹	Proposed Land Uses						Daily
				Peak Hour			In	Out	Total	
				AM	PM	Total				
Hotel	310	769	RM	261	169	430	238	215	453	6,283
Quality Restaurant	931	34,000	TSF	17	11	28	171	84	255	3,058
Less Internal Capture (35%)				-6	-4	-10	-60	-29	-89	-1,070
Less Pass-By (25%)				-3	-2	-5	-28	-14	-42	-497
Sub-Total (Quality Restaurant)				8	5	13	83	41	124	1,491
Gross Trip generation (Entire Site)				278	180	458	409	299	708	9,341
Net Trip Generation (Entire Site)				269	174	443	321	256	577	7,774

Note: In order to develop a worst-case future traffic analysis, existing trip generation credit will not be taken at the project driveways or any of the study area intersections. The existing land use trip generation table listed above is included for informational purposes only. Trip generation for future conditions will be consistent with the proposed land use trip generation gross and net totals listed above.

¹ RM = Rooms
TSF = Thousand Square Feet

Appendix F

Stationary Noise Calculations

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GG JOB #: 0762-11-02
 SOURCE: LOADING DOCKS DATE: 09-May-11
 LOCATION: EAST PROPERTY LINE BY: B. Estrada

OBS DIST= 50.8
 DT WALL= 40.8
 DT W/OB= 10.0
 HTH WALL= 8.0 *****
 BARRIER = 0.0 (0=WALL, 1=BERM)
 OBS HTH= 5.0
 NOISE HTH= 8.0 BARRIER+
 OBS EL = 0.0 TOPO SHIELDING = -10.10
 NOISE EL = 0.0 NOISE HTH EL= 0.0
 DROP-OFF= 20.0 20 = 6 dBA PER DOUBLING OF DISTANCE)
 COFF

NOISE LEVELS (dBA)							
	DIST (FT)	Leq	Lmax	L2	L8	L25	L50
REF LEVEL	6	66.3	84.0	78.5	68.0	61.5	58.5
PROJ LEVE:	50.8	47.7	65.4	59.9	49.4	42.9	39.9
SHIELDING	50.8	-10.1	-10.1	-10.1	-10.1	-10.1	-10.1
ADJ LEVEL	50.8	37.6	55.3	49.8	39.3	32.8	29.8

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GG JOB #: 0762-11-02
 SOURCE: PARKING STRUCTURE DATE: 09-May-11
 LOCATION: SOUTH PROPERTY LINE BY: B. Estrada

OBS DIST= 185.0
 DT WALL= 185.0
 DT W/OB= 0.0
 HTH WALL= 0.0 *****
 BARRIER = 0.0 (0=WALL,1=BERM)
 OBS HTH= 5.0
 NOISE HTH= 30.0 BARRIER+
 OBS EL = 0.0 TOPO SHIELDING = 0.00
 NOISE EL = 0.0 NOISE HTH EL= 0.0
 DROP-OFF= 10.0 (10 = 3 dBA PER DOUBLING OF DISTANCE)

COFF

NOISE LEVELS (dBA)							
	DIST (FT)	Leq	Lmax	L2	L8	L25	L50
REF LEVEL	10	59.0	70.9	64.4	61.9	59.8	57.6
PROJ LEVEL	185	46.3	58.2	51.7	49.2	47.1	44.9
SHIELDING	185	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	185	46.3	58.2	51.7	49.2	47.1	44.9

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GG JOB #: 0762-11-02
 SOURCE: OUTDOOR POOL AREA DATE: 09-May-11
 LOCATION: EAST PROPERTY LINE BY: B. Estrada

OBS DIST= 87.0
 DT WALL= 77.0
 DT W/OB= 10.0
 HTH WALL= 8.0 *****
 BARRIER = 0.0 (0=WALL, 1=BERM)
 OBS HTH= 5.0
 NOISE HTH= 4.0 BARRIER+
 OBS EL = 0.0 TOPO SHIELDING = -20.00
 NOISE EL = 70.0 NOISE HTH EL= 0.0
 DROP-OFF= 20.0 (20= 6 dBA PER DOUBLING OF DISTANCE)
 COFF

NOISE LEVELS (dBA)							
	DIST (FT)	Leq	Lmax	L2	L8	L25	L50
REF LEVEL	10	62.1	71.7	66.6	64.8	62.6	61.4
PROJ LEVE	87	43.3	52.9	47.8	46.0	43.8	42.6
SHIELDING	87	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
ADJ LEVEL	87	23.3	32.9	27.8	26.0	23.8	22.6

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GG JOB #: 0762-11-02
 SOURCE: LOADING DOCKS DATE: 09-May-11
 LOCATION: SOUTH PROPERTY LINE BY: B. Estrada

OBS DIST= 150.0
 DT WALL= 150.0
 DT W/OB= 0.0
 HTH WALL= 0.0 *****
 BARRIER = 0.0 (0=WALL,1=BERM)
 OBS HTH= 5.0
 NOISE HTH= 8.0 BARRIER+
 OBS EL = 0.0 TOPO SHIELDING = 0.00
 NOISE EL = 0.0 NOISE HTH EL= 0.0
 DROP-OFF= 20.0 20= 6 dBA PER DOUBLING OF DISTANCE)
 COFF

NOISE LEVELS (dBA)

	DIST (FT)	Leq	Lmax	L2	L8	L25	L50
REF LEVEL	6	66.3	84.0	78.5	68.0	61.5	58.5
PROJ LEV:	150	38.3	56.0	50.5	40.0	33.5	30.5
SHIELDING	150	0.0	0.0	0.0	0.0	0.0	0.0
ADJ LEVEL	150	38.3	56.0	50.5	40.0	33.5	30.5

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GG JOB #: 0762-11-02
 SOURCE: PARKING STRUCTURE DATE: 09-May-11
 LOCATION: EAST PROPERTY LINE BY: B. Estrada

OBS DIST= 32.0
 DT WALL= 22.0
 DT W/OB= 10.0
 HTH WALL= 8.0 *****
 BARRIER = 0.0 (0=WALL, 1=BERM)
 OBS HTH= 5.0
 NOISE HTH= 30.0 BARRIER+
 OBS EL = 0.0 TOPO SHIELDING = -11.20
 NOISE EL = 0.0 NOISE HTH EL= 0.0
 DROP-OFF= 10.0 (10 = 3 dBA PER DOUBLING OF DISTANCE)
 COFF

NOISE LEVELS (dBA)							
	DIST (FT)	Leq	Lmax	L2	L8	L25	L50
REF LEVEL	10	59.0	70.9	64.4	61.9	59.8	57.6
PROJ LEVE	32	53.9	65.8	59.3	56.8	54.7	52.5
SHIELDING	32	-11.2	-11.2	-11.2	-11.2	-11.2	-11.2
ADJ LEVEL	32	42.7	54.6	48.1	45.6	43.5	41.3

NOISE BARRIER CALCULATIONS - BASED UPON FHWA - RD-77-108

PROJECT: SITE "C" HOTEL AND RESTAURANT, CITY OF GG JOB #: 0762-11-02
 SOURCE: OUTDOOR POOL AREA DATE: 09-May-11
 LOCATION: SOUTH PROPERTY LINE BY: B. Estrada

OBS DIST= 200.0
 DT WALL= 200.0
 DT W/OB= 0.0
 HTH WALL= 0.0 *****
 BARRIER = 0.0 (0=WALL,1=BERM)
 OBS HTH= 5.0
 NOISE HTH= 4.0 BARRIER+
 OBS EL = 0.0 TOPO SHIELDING = -20.00
 NOISE EL = 70.0 NOISE HTH EL= 0.0
 DROP-OFF= 20.0 (20 = 6 dBA PER DOUBLING OF DISTANCE)
 COFF

NOISE LEVELS (dBA)

	DIST (FT)	Leq	Lmax	L2	L8	L25	L50
REF LEVEL	10	62.1	71.7	66.6	64.8	62.6	61.4
PROJ LEVE:	200	36.1	45.7	40.6	38.8	36.6	35.4
SHIELDING	200	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
ADJ LEVEL	200	16.1	25.7	20.6	18.8	16.6	15.4

[0762-11-02] - NOISE LEVEL ADDITION (dBA)
[South Property Line - Day] - [Stationary Noise Sources]

Leq

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	38.3	6,760.8
Parking Structure	42.7	18,620.9
Outdoor Pool Area	16.1	40.7
Ambient	56.7	467,735.1
Combined Noise Level (dBA)	56.9	493,157.6

Lmax

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	56.0	398,107.2
Parking Structure	54.6	288,403.2
Outdoor Pool Area	25.7	371.5
Ambient	70.0	10,000,000.0
Combined Noise Level (dBA)	70.3	10,686,881.9

L2

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	50.5	112,201.8
Parking Structure	48.1	64,565.4
Outdoor Pool Area	20.6	114.8
Ambient	64.8	3,019,951.7
Combined Noise Level (dBA)	65.0	3,196,833.8

L8

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	40.0	10,000.0
Parking Structure	45.6	36,307.8
Outdoor Pool Area	18.8	75.9
Ambient	61.3	1,348,962.9
Combined Noise Level (dBA)	61.4	1,395,346.5

L25

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	33.5	2,238.7
Parking Structure	43.5	22,387.2
Outdoor Pool Area	16.6	45.7
Ambient	57.2	524,807.5
Combined Noise Level (dBA)	57.4	549,479.1

L50

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	30.5	1,122.0
Parking Structure	41.3	13,489.6
Outdoor Pool Area	15.4	34.7
Ambient	53.0	199,526.2
Combined Noise Level (dBA)	53.3	214,172.6

[0762-11-02] - NOISE LEVEL ADDITION (dBA)
[South Property Line - Night] - [Stationary Noise Sources]

Leq

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	38.3	6,760.8
Parking Structure	42.7	18,620.9
Outdoor Pool Area	16.1	40.7
Ambient	50.2	104,712.9
Combined Noise Level (dBA)	51.1	130,135.3

Lmax

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	56.0	398,107.2
Parking Structure	54.6	288,403.2
Outdoor Pool Area	25.7	371.5
Ambient	64.0	2,511,886.4
Combined Noise Level (dBA)	65.0	3,198,768.3

L2

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	50.5	112,201.8
Parking Structure	48.1	64,565.4
Outdoor Pool Area	20.6	114.8
Ambient	63.0	1,995,262.3
Combined Noise Level (dBA)	63.4	2,172,144.4

L8

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	40.0	10,000.0
Parking Structure	45.6	36,307.8
Outdoor Pool Area	18.0	75.9
Ambient	56.7	467,735.1
Combined Noise Level (dBA)	57.1	514,118.8

L25

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	33.5	2,238.7
Parking Structure	43.5	22,387.2
Outdoor Pool Area	16.6	45.7
Ambient	52.3	169,824.4
Combined Noise Level (dBA)	52.9	194,496.0

L50

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	30.5	1,122.0
Parking Structure	41.3	13,489.6
Outdoor Pool Area	15.4	34.7
Ambient	49.2	83,176.4
Combined Noise Level (dBA)	49.9	97,822.7

[0762-11-02] - NOISE LEVEL ADDITION (dBA)
[Eastern Residential Area-Day] - [Stationary Noise Sources]

Leq

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	37.6	5,754.4
Parking Structure	46.3	42,658.0
Outdoor Pool Area	23.3	213.8
Ambient	49.4	87,096.4
Combined Noise Level (dBA) =	51.3	135,722.5

Lmax

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	55.3	338,844.2
Parking Structure	58.2	660,693.4
Outdoor Pool Area	32.9	1,949.8
Ambient	74.9	30,902,954.3
Combined Noise Level (dBA) =	75.0	31,904,441.8

L2

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	49.8	95,499.3
Parking Structure	51.7	147,910.8
Outdoor Pool Area	27.8	602.6
Ambient	54.8	301,995.2
Combined Noise Level (dBA) =	57.4	546,007.8

L8

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	39.3	8,511.4
Parking Structure	49.2	83,176.4
Outdoor Pool Area	26.0	398.1
Ambient	53.0	199,526.2
Combined Noise Level (dBA) =	54.6	291,612.1

L25

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	32.8	1,905.5
Parking Structure	47.1	51,286.1
Outdoor Pool Area	23.8	239.9
Ambient	49.6	91,201.1
Combined Noise Level (dBA) =	51.6	144,632.6

L50

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	29.8	955.0
Parking Structure	44.9	30,903.0
Outdoor Pool Area	22.6	182.0
Ambient	47.6	57,544.0
Combined Noise Level (dBA) =	49.5	89,583.9

[0762-11-02] - NOISE LEVEL ADDITION (dBA)
[Eastern Residential Area-Night] - [Stationary Noise Sources]

Leq

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	37.6	5,754.4
Parking Structure	46.3	42,658.0
Outdoor Pool Area	23.3	213.8
Ambient	45.4	34,673.7
Combined Noise Level (dBA) =	49.2	83,299.9

Lmax

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	55.3	338,844.2
Parking Structure	58.2	660,693.4
Outdoor Pool Area	32.9	1,949.8
Ambient	62.8	1,905,460.7
Combined Noise Level (dBA) =	64.6	2,906,948.2

L2

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	49.8	95,499.3
Parking Structure	51.7	147,910.8
Outdoor Pool Area	27.8	602.6
Ambient	52.4	173,780.1
Combined Noise Level (dBA) =	56.2	417,792.7

L8

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	39.3	8,511.4
Parking Structure	49.2	83,176.4
Outdoor Pool Area	26.0	398.1
Ambient	49.6	91,201.1
Combined Noise Level (dBA) =	52.6	183,286.9

L25

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	32.8	1,905.5
Parking Structure	47.1	51,286.1
Outdoor Pool Area	23.8	239.9
Ambient	48.1	64,565.4
Combined Noise Level (dBA) =	50.7	117,996.9

L50

Source	Noise Level (dBA)	10 ⁿ dBA/10
Loading Docks	29.8	955.0
Parking Structure	44.9	30,903.0
Outdoor Pool Area	22.6	182.0
Ambient	44.5	28,183.8
Combined Noise Level (dBA) =	47.8	60,223.7

Appendix G

Construction Noise Calculations

Subject: Fwd: Site "C" Hotel and Restaurant Air Quality Impact Study
From: Greg Blodgett <greg1@ci.garden-grove.ca.us>
Date: Wed, 6 Jul 2011 15:45:23 -0700 (PDT)
To: Matthew Reid <matt.reid@landanddesign.com>
CC: Paul Guerrero <paulg@ci.garden-grove.ca.us>

Greg Blodgett
SR Project Manager
City of Garden Grove
Economic Development

----- Forwarded Message -----

From: "Jayna Morgan" <Jayna.Morgan@aecom.com>
To: "Karl Hill" <karlh@garden-grove.org>
Cc: "greg1" <greg1@garden-grove.org>
Sent: Thursday, June 23, 2011 11:09:25 AM
Subject: FW: Site "C" Hotel and Restaurant Air Quality Impact Study

Here is the Air Quality Study.

Let us know if you have any questions or comments on any of the three technical studies prepared by RK Engineering.

We would like to begin incorporating them into the CEQA documentation next week.

Thanks!

Jayna Morgan

AECOM

T. 949.660.8044

From: Nancy Quach [<mailto:nq@rkengineer.com>]
Sent: Tuesday, June 21, 2011 3:07 PM
To: Morgan, Jayna
Cc: Rogier Goedecke
Subject: FW: Site "C" Hotel and Restaurant Air Quality Impact Study, City of Garden Grove (JN:0762-2011-03/RK9012)

From: Nancy Quach
Sent: Thursday, May 19, 2011 11:04 AM
To: 'gregl@ci.garden-grove.ca.us'
Cc: 'Jayna.Morgan@aecom.com'; Bob Kahn; Michael Dickerson
Subject: Site "C" Hotel and Restaurant Air Quality Impact Study, City of Garden Grove (JN:0762-2011-03/RK9012)

Dear Mr. Blodgett:

Please find the attached PDF of the Site "C" Hotel and Restaurant Air Quality Impact Study, City of Garden Grove (JNL0762-2011-03/RK9012). If you would like hardcopies of the report, please feel free to contact us at (949) 474-0809 or via e-mail. We would be happy to send them out to you.

If you have any questions, please do not hesitate to call Mike Dickerson at (949) 474-0809, ext. 208.

We have enjoyed teaming with you on this project and look forward to partnering with you on future projects.

Kind regards,

Nancy Quach
Administrative Assistant

transportation planning / traffic engineering & design
acoustical engineering / community traffic calming
4000 Westerly Place, Suite 280
Newport Beach, CA 92660
tel. 949.474.0809
fax. 949.474.0902
www.rkengineer.com

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image001.gif	Content-Description: image001.gif
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—RK9012.pdf

RK9012.pdf	Content-Description: RK9012.pdf Content-Type: application/octet-stream Content-Encoding: base64
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LETTER OF TRANSMITTAL

TO: CITY OF GARDEN GROVE
11222 Acacia Parkway
Garden Grove, CA 92840

DATE: May 17, 2011

JOB NO.: 0762-2011-03

SUBJECT: Site "C" Hotel and Restaurant Air Quality
Impact Study, City of Garden Grove


ATTN: Mr. Greg Blodgett

WE ARE FORWARDING: By Messenger By Email
 By Blueprinter By Fedex

NUMBER OF COPIES	DESCRIPTION
1	Pdf ecopy of report for your use

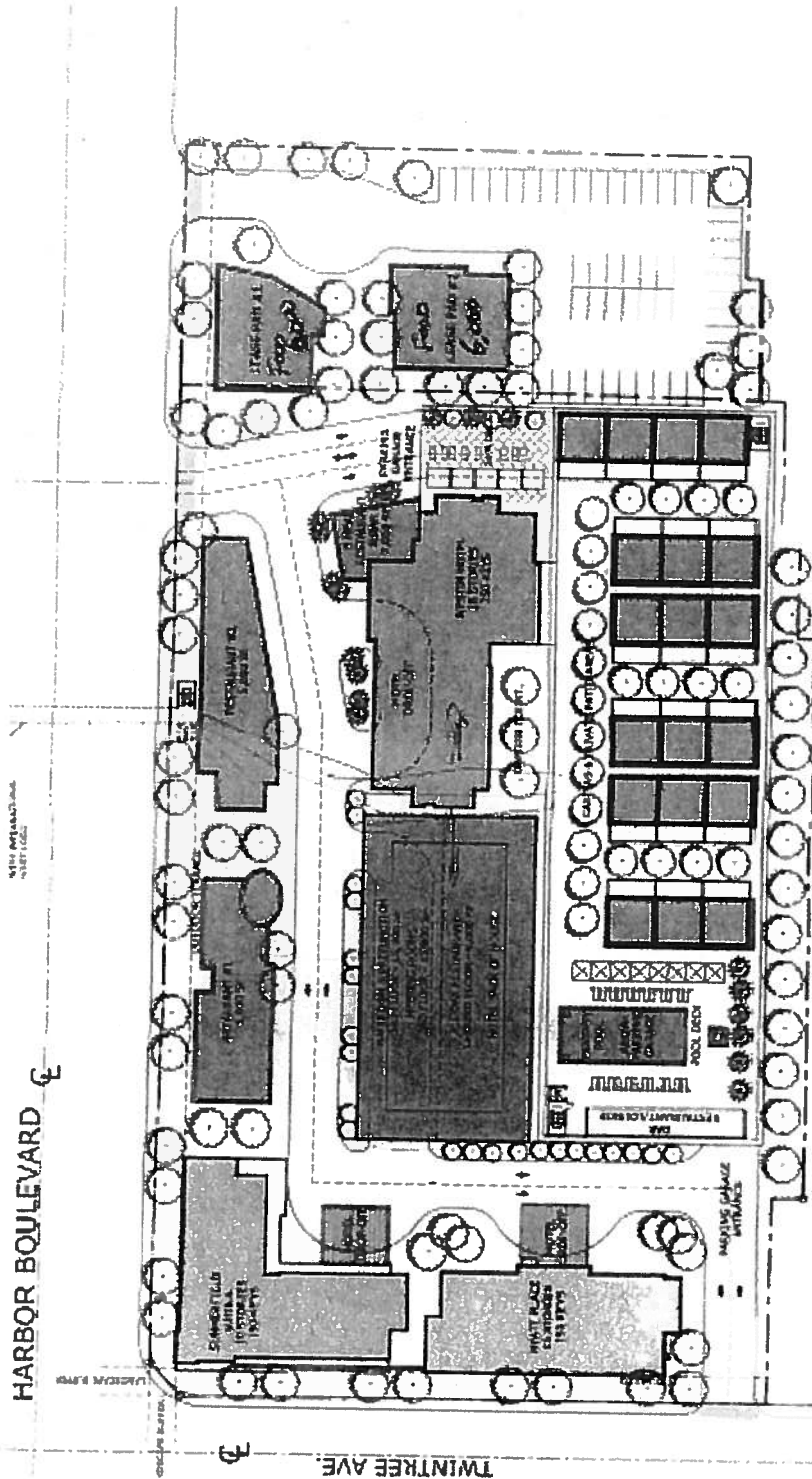
SENT FOR YOUR	STATUS	PLEASE NOTE
<input type="checkbox"/> Approval	<input type="checkbox"/> Preliminary	<input type="checkbox"/> Revisions
<input type="checkbox"/> Signature	<input type="checkbox"/> Revised	<input type="checkbox"/> Additions
<input checked="" type="checkbox"/> Use	<input type="checkbox"/> Approved	<input type="checkbox"/> Omissions
<input type="checkbox"/> File	<input type="checkbox"/> Released	<input type="checkbox"/> Corrections

REMARKS:
Attached please find the Site "C" Hotel and Restaurant Air Quality Impact Study, City of Garden Grove. Please call me at (949) 474-0809 if you have any questions.

BY: 
Mike Dickerson
Air Quality Specialist

COPIES TO:

SITE "C" HOTEL AND RESTAURANT AIR QUALITY IMPACT STUDY City of Garden Grove, California



May 17, 2011

Mr. Greg Blodgett
CITY OF GARDEN GROVE
11222 Acacia Parkway
Garden Grove, CA 92840

Subject: Site "C" Hotel and Restaurant Air Quality Impact Study, City of Garden Grove

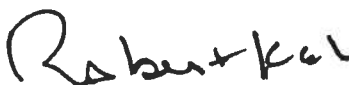
Dear Mr. Blodgett:

RK ENGINEERING GROUP, INC. (RK) has completed an air quality analysis of the Site "C" Hotel and Restaurant project. The project is located at the northeast corner of Harbor Boulevard and Twintree Avenue in the City of Garden Grove, as indicated in Exhibit A. The City of Garden Grove has requested that an air quality study be performed to address the effects of potential sources of air quality impacts from the project site to the surrounding area. The current federal and state/local air quality parameters can be found in Table 1.

The attached study indicates that the proposed Site "C" Hotel and Restaurant project meets both regional significance and localized significance thresholds for the South Coast Air Quality Management District (SCAQMD) during construction (short-term) and operation (long-term). In addition, the recommended mitigation measures will further reduce any potential impacts the project may have. This study was prepared in accordance with appropriate standards, using procedures and methodologies set-forth in the California Environmental Quality Act (CEQA) Air Quality Handbook of the SCAQMD.

RK is pleased to provide this air quality analysis for the proposed Site "C" Hotel and Restaurant project. RK appreciates this opportunity to work with the CITY OF GARDEN GROVE and looks forward to working with you on future projects. If you have any questions regarding this analysis, or would like further review, please do not hesitate to call us at (949) 474-0809.

Sincerely,
RK ENGINEERING GROUP, INC.



Robert Kahn, P.E.
Principal



Mike Dickerson
Noise/Air Specialist

**SITE "C" HOTEL AND RESTAURANT
AIR QUALITY IMPACT STUDY
City of Garden Grove, California**

Prepared for:

CITY OF GARDEN GROVE
11222 Acacia Parkway
Garden Grove, CA 92840

Prepared by:

RK ENGINEERING GROUP, INC.
4000 Westerly Place, Suite 280
Newport Beach, CA 92660

**Robert Kahn, P.E.
Mike Dickerson**



May 17, 2011

Table of Contents

Section	Page
1.0 Introduction	1-1
2.0 Background Information	2-1
2.1 Project Description	2-1
2.2 Air Quality Setting	2-1
2.2.1 Regional Climate and Meteorology	2-1
2.2.2 Local Air Quality	2-3
2.3 Regulatory Background	2-5
2.3.1 Federal and State Air Quality Standards	2-5
2.4 Regional Air Quality Planning	2-7
2.5 Global Warming and Greenhouse Gases	2-8
2.5.1 Global Warming Potentials	2-9
2.5.2 GHG Inventory	2-9
2.5.3 GHG Regulation	2-10
3.0 Study Method and Procedure	3-1
3.1 Regional Significance Thresholds	3-1
3.2 Localized Significance Threshold (LST)	3-2
3.3 Significance Criteria for Greenhouse Gases	3-3
4.0 Future Air Quality Environment and Impacts	4-1
4.1 Construction Impacts	4-1
4.1.1 Regional Significance Thresholds	4-2
4.1.2 Localized Significance Thresholds	4-2
4.1.3 Construction Greenhouse Gas Emissions	4-3
4.2 Operational Impacts	4-3
4.2.1 Regional Significance Thresholds	4-3
4.2.2 Localized Significance Thresholds	4-4
4.2.3 Operational Greenhouse Gas Emissions	4-4
5.0 Mitigation Recommendations	5-1
5.1 Construction Mitigation	5-1
5.1.1 Vehicle Emissions	5-1
5.1.2 Fugitive Dust Emissions and Control	5-2
5.1.3 Off-Site Impacts	5-2
5.2 Operational Emissions Reduction Measures	5-3
6.0 Conclusions	6-1

List of Attachments

Exhibits

Location Map	A
Site Plan	B

Tables

Central Orange County Air Quality Monitoring Summary – 2005-2009 (Days Standards Were Exceeded and Maximum Observed Levels).....	1
Current Federal and State Ambient Air Quality Standards	2
State and Federal Attainment Status	3
Atmospheric Lifetimes and Global Warming Potential	4
SCAQMD Air Quality Significance Thresholds.....	5
SCAQMD Air Quality Localized Significance Thresholds.....	6
Regional Significance – Unmitigated Maximum Daily Emissions During Construction (lbs/day)	7
Localized Significance - Unmitigated Daily Construction Emissions.....	8
Construction Greenhouse Gas Emissions (lbs/day).....	9
Regional Significance – Unmitigated Maximum Daily Operational Emissions (lbs/day)	10
Localized Significance - Unmitigated Daily Operational Emissions	11
Proposed Project Greenhouse Gas Emissions During Operation.....	12
Regional Significance –Mitigated Maximum Daily Emissions During Construction (lbs/day)	13

Appendices

URBEMIS2007 Computer Model Output	A
Proposed Project GHG Emission Calculations Output (CalEEMod)	B
Traffic Impact Study Project Trip Generation	C

1.0 Introduction

RK ENGINEERING GROUP, INC. (RK) is pleased to provide this Air Quality Impact study for the proposed Site "C" Hotel and Restaurant project. The project site is located at the northeast corner of Harbor Boulevard and Twintree Avenue in the City of Garden Grove, as shown in Exhibit A. The site plan for the project was provided by AECOM and is shown in Exhibit B.

The purpose of this study is to assess potential air quality impacts associated with the Site "C" Hotel and Restaurant project by investigating the existing meteorological and climate conditions in the project area, identifying the project related sources of potential air quality impact and predicting the future air quality impact levels. As a result of this effort, RK has prepared a list of recommended emission reduction measures, outlined in *Section 5.0 Mitigation Recommendations*, which should be implemented as part of the development project to reduce air quality impacts.

The study evaluates the air quality impacts associated with the project by evaluating both short-term and long-term impacts and comparing them to the SCAQMD regional and localized significance thresholds. The 5 acre project site will consist of 769 room (10 to 18 story) full-service resort hotels with approximately 30,000 square feet of meeting space and 34,000 square feet of restaurant space included on-site via detached PADs, and an approximate (5) story parking structure. The project site completion is expected to be in the Year 2014. The proposed project was analyzed as follows: 2011 mass grade project site, 2013 construction and 2014 build out.

The results of the analysis indicate that short-term construction operation and dust from the project site will represent the principle sources of on-site air quality impacting the surrounding area. With implementation of the recommended mitigation measures, construction emissions are not expected to exceed South Coast Air Quality Management District (SCAQMD) regional and localized thresholds during the buildout of the project. Localized thresholds are not expected to be exceeded during construction. Once the

project is completed and in operation, it is expected that the project site's operational impact will not exceed the SCAQMD operational thresholds.

2.0 Background Information

2.1 Project Description

The project site is located at the northeast corner of Harbor Boulevard and Twintree Avenue in the City of Garden Grove, as shown in Exhibit A. Currently, the project site has an RV Park, a restaurant and a vacant land use. The existing structures will be razed for new construction.

The project site is located directly adjacent to residential units to the east, commercial uses to the north, residential and commercial uses to the south, and residential uses to the west, across Harbor Boulevard. The proposed project will consist of site grading, infrastructure design (electrical, parking, etc.), the construction of 769 room (10 to 18 story) full-service resort hotels with approximately 30,000 square feet of meeting space and 34,000 square feet of restaurant space included on-site via detached PADs, and an approximate (5) story parking structure.

2.2 Air Quality Setting

2.2.1 Regional Climate and Meteorology

The project is located in the South Coast Air Quality Basin with SCAQMD monitoring and regulating the air quality within the Basin. The Basin includes Orange County and the non-desert portions of Riverside, San Bernardino and Los Angeles Counties. The air quality conditions are under the jurisdiction of the SCAQMD, a regional agency that regulates stationary sources of pollution throughout the Basin. The Basin consists of a coastal plain with connecting broad valleys and low hills.

The regional climate significantly influences the air quality in the Basin. In addition, the temperature, humidity, wind and precipitation influence the air quality in the Basin. The climate of the City of Garden Grove area, as with all of Southern California, is governed largely by the strength and location of the semi-permanent high pressure center over the Pacific Ocean and the moderating effects of the nearby vast oceanic heat reservoir. The Local semi-arid climatic condition is characterized by very warm summers, mild winters, and moderate rainfall. This weather pattern is at times interrupted by periods of extremely hot weather, winter storms, or Santa Ana Winds.

Temperatures in the project vicinity average 80 degrees Fahrenheit annually with summer afternoons in the mid 90s and winter mornings in the upper 40s. It should also be noted that temperatures above 100 degrees have been recorded in recent years. On average the warmest months are July and August and the coolest month is December.

Humidity ranges between 70 percent on the Coast and 57 percent in the Eastern Basin. Unfortunately, the same climatic conditions that create this desirable Mediterranean-like climate combine to severely restrict the ability of the local atmosphere to disperse the large volumes of air pollution generated by the population and industry attracted in part by the climate.

The City of Garden Grove is situated in an area where the pollutants generated in coastal portions of the Basin undergo photochemical reactions and then move inland across the project site during the daily sea breeze cycle. Despite dramatic improvement in air quality in the local area throughout the 1980s, the project site is nevertheless, expected to continue to experience some unhealthful air quality for at least the next decade.

Winds across the project area blow predominately from the west-northwesterly direction at relatively low velocities. During the summer, wind speeds tend to

remain at higher levels when compared to winter conditions. Low average wind speeds coupled with a persistent temperature inversion, limit the vertical dispersion of the air pollutants throughout the Basin. The combination of stagnant wind speeds and low inversions creates the greatest pollution concentration. Air emissions generated by urbanized coastal areas are transported eastward toward the eastern region of the San Gabriel Mountains. The drainage winds which move slowly across the area have some potential for localized stagnation. During the fall and winter months strong dry north-northeasterly winds known as the Santa Ana winds disperse air pollutants. Days in which wind speeds are high or no inversion exists, air pollutant concentrations are their lowest.

In contrast to the slow annual variation of temperature, precipitation is highly variable seasonally. Rainfall in the City of Garden Grove area averages between 9 – 14 inches annually and falls from late November to early April with February yielding the greatest amount of precipitation and summers almost completely dry. Because much of the rainfall comes from the fringes of mid-latitude storms, a shift in the storm track of a few hundred miles can mean the difference between a very wet year and a year with drought conditions.

2.2.2 Local Air Quality

There is one ambient air monitoring station (Central Orange County Station) operated by the SCAQMD near the project site. The Central Orange County station can be utilized to describe the existing ambient air quality conditions. The data is presented in Table 1.

This station measures both regional pollution levels such as ozone, as well as community levels of local pollutants such as carbon monoxide and nitrogen dioxide. Table 1 is a 5-year summary of monitoring data for the major air pollutants

compiled from the Central Orange County air monitoring station. From this data the following conclusions can be drawn:

1. Photochemical smog (ozone) levels frequently exceed standards. The 1-hour state standard was violated an average of 5 days a year in the last five years near the City of Garden Grove area. The federal 8-hour standard has been exceeded an average of 5 days a year within the last five years. While ozone levels are still high, they are much lower than 10 to 20 years ago. Attainment of all clean air standards in the project vicinity is not likely to occur soon, but the severity and frequency of violations is expected to continue to slowly decline during the current decade.
2. PM_{10} levels have exceeded the state 24-hour standard on approximately 8.0 percent of all measurement days. The three times less stringent federal 24 hour-standard was not exceeded in the past five years. Year to year fluctuations of overall maximum 24-hour PM_{10} levels seem to follow no discernable trend.
3. $PM_{2.5} > 35 \mu g/m^3$ have exceeded the federal 24-hour $PM_{2.5}$ ambient standard an average of 3.5 percent of the days data was collected over the past three years, as data is only available for the most recent years.
4. With the adoption of the revised lower Nitrogen Dioxide Annual Average Concentration > 0.030 ppm level, the state annual standard in 2007, 2008 and 2009 was not exceeded.
5. More localized pollutants such as carbon monoxide, sulfur dioxide, etc. are very low near the project site because background levels in Riverside County never exceed allowable levels. There is substantial excess dispersive capacity to accommodate localized vehicular air pollutants such as NO_x or CO

without any threat of violating applicable AAQS (Ambient Air Quality Standards).

2.3 Regulatory Background

2.3.1 Federal and State Air Quality Standards

The U.S. Environmental Protection Agency (EPA) is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for six pollutants, oxidants (O₃), CO, NO_x, SO₂, particulate matter (PM₁₀) and lead (Pb). The NAAQS are established at levels necessary, with an adequate margin of safety, to protect the public health, including the sensitive populations including asthmatics, children and the elderly. Table 2 summarizes the NAAQS for these pollutants. The EPA, under the provisions of the Federal Clean Air Act (CAA) requires each state with regions that do not meet the air quality standards to prepare a State Implementation Plan (SIP). These Plans must include pollution control measures that demonstrate how the standards will be met.

The CAA was first enacted in 1955 and since then has been amended numerous times. The revisions in 1990 require that transportation plans, programs and projects must conform to the purpose of the SIP. The SIP is a legal agreement between the state of California and the federal government to commit resources to improving air quality. It provides a template for conducting regional and project-level air quality analysis. The California Air Resources Board (CARB), which is part of the California Environmental Protection Agency, is the lead agency for the development of the SIP. Local air quality management districts, such as the SCAQMD, prepare Air Quality Attainment Plans (AQAP) or Air Quality Management Plan (AQMP) and submit them to CARB for review and approval.

The CARB, which became part of the California EPA in 1991, is responsible for ensuring the implementation of the California Clean Air Act (AB2595). The CARB

has established ambient air quality standards for O₃, CO, NO_x, SO₂, PM₁₀, PM_{2.5} and Pb that are more stringent than the EPA's standards as demonstrated on Table 2. In addition the CARB established standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. Over the past decade many amendments have occurred, imposing more strict standards on the criteria pollutants. On April 17, 2006, the Office of Administrative Law approved a new 8-hour average O₃ standard of 0.070 part per million (ppm), not to be exceeded, and revoked the existing 1-hour O₃ standard of 0.09 ppm.

CARB maintains air quality monitoring stations throughout the state in conjunction with local air districts. There are more than 200 monitoring stations throughout California. As part of the monitoring process, all air pollution control districts are classified as being in "attainment" or "non attainment" with respect to each monitored pollutant. Serious non attainment areas are required to prepare an AQAP/AQMP that includes specified emission reduction strategies in an effort to meet clean air goals. The AQAP are required to achieve a minimum 5 percent annual reduction in emissions of non-attainment pollutants unless all feasible measures have been implemented. Table 3 indicates the non-attainment area for O₃, PM_{2.5}, and PM₁₀.

The following paragraphs briefly describe the effects of the six criteria pollutants:

Carbon Monoxide (CO): CO is a colorless, odorless, tasteless and toxic gas resulting from the incomplete combustion of fossil fuels. CO passes through the lungs into the bloodstream where it interferes with the transfer ability of oxygen to body tissue.

Nitrogen Oxides (Oxides of Nitrogen or NO_x): NO_x consists of nitric oxide (NO), nitrogen dioxide (NO₂) and nitrous oxide (N₂O) and are formed when nitrogen combines with oxygen (O₂). NO_x contributes to pollution problems including high

concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 absorbs blue light, resulting in a red-brownish color in the atmosphere.

Oxides of Sulfur (SO_x): Typical strong smelling, colorless gases that are formed by the combustion of fossil fuels. SO_x can irritate the respiratory tract, can injure lung tissue when combined with fine particulate matter and reduces visibility.

Particulate Matter (PM_{10} and $\text{PM}_{2.5}$): Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles (larger than 2.5 microns or PM_{10}) come from a variety of sources including wind blown dust, and grinding operations. Fine particles also known as $\text{PM}_{2.5}$ often develop from fuel combustion, power plants, and diesel automobiles. Particles can easily enter into the lungs causing a wide array of health issues including asthma, respiratory issues, even premature death.

Ozone (O_3): Typically known as smog, O_3 is a strong smelling, pale blue, reactive toxic chemical gas consisting of three oxygen atoms. Its levels typically peak during summer and early fall months. O_3 can cause numerous health effects to the respiratory tract.

Volatile Organic Compounds (VOC): VOC are hydrocarbon compounds that exist in the ambient air. VOC are formed from combustion of fuels and evaporation of organic solvents. Some examples of VOC are vapors from gasoline, alcohol and paints. VOC is also commonly referred to as Reactive Organic Gas (ROG).

2.4 Regional Air Quality Planning

The state of California is divided into 15 air basins. Local air quality districts such as the SCAQMD regulate stationary source emissions and develop local attainment plans. The SCAQMD and the Southern California Association of Governments (SCAG) are responsible for developing regional air quality plans. The AQMP ensures that there is a

continued progress towards cleaner air and regulation compliance. Starting in 1979, the two agencies every three years update the overall adopted AQMP to improve the overall air quality within the region. On June 1, 2007 the SCAQMD adopted the 2007 AQMP which employs strategies at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources and area sources. The plan builds upon the approaches of the 2003 AQMP for the attainment of the federal O₃ standard. The plan focuses on the 1-hour O₃ standard attainment strategies to the 8-hour standard. It proposes potential attainment of the federal PM_{2.5} standards through a more focused control of sulfur oxides and nitro oxides, supplemented with VOC by 2014. The 8-hour ozone strategy builds upon the strategy, expanded with additional VOC reductions to meet the standard by 2020.

Key emissions reductions strategies in the updated air quality plan include:

- Application of Best Available Retrofit Control Technology to existing sources.
- Implementing reasonable available transportation control measures and assuring a substantial reduction growth rate of vehicle trips and miles traveled.
- Sufficient control strategies to achieve a five or more annual reduction in emissions or 15 percent or more in a period of 3 years for ROG, NO_x, CO and PM₁₀.
- Ultra low emission standards for both new and existing sources.

2.5 Global Warming and Greenhouse Gases

The Earth's climate has continually evolved over the last 500,000 years. Climate is generally defined as average weather, and as such climate change and weather are intertwined. The Earth's climate is regulated by naturally occurring atmospheric

gases such as water vapor, carbon dioxide (CO₂), oxygen, methane (CH₄) and nitrous oxide (N₂O). As sunlight strikes the atmosphere some of the infrared radiation passes through, but most is absorbed and re-emitted in all directions by these greenhouse gas molecules and clouds. The effect of this is to warm the Earth's surface and lower atmosphere. This effect is known as "green house effect."

Many Greenhouse Gas (GHG) emissions from human sources are expected to increase as a result of urban development growth. In an effort to curtail emission levels an ongoing effort of newer cleaner technologies and policies continue to be explored. These efforts extend from local municipalities to the national government all the way to international territories. At each agency level, GHG reduction measures are being formulated.

2.5.1 Global Warming Potentials

In an effort to help quantify GHG emissions, the EPA has constructed an index of Global Warming Potentials (GWPs) based upon the radiative properties each individual green house gas. GWP is based on a variety of factors including; radiative efficiency (relative to that of CO₂) and the decay rate of each gas. The EPA has defined GWP, as the cumulative radiative forcing effects of a gas over a specified time horizon, resulting from the emission of a unit mass of gas relative to a reference gas (the reference gas being CO₂). One teragram of carbon dioxide equivalent (Tg CO₂ Eq) is the emission of the gas multiplied by the GWP. Table 4 illustrates the atmospheric lifetimes for the GWPs.

2.5.2 GHG Inventory

The United Nations Framework Convention on Climate Change (UNFCCC) has compiled annual GHG data. According to the UNFCCC, in 2004 the U.S. contributed 7,074.4 Tg CO₂ Eq. (nearly 35% of global emissions). A total of 20,135 Tg CO₂ Eq., were emitted worldwide (excluding emissions from removals

from land use, land use change and forestry). The U.S. had an increase of 15.8% from 1990 emission levels.

California is the second largest contributor to GHGs in the U.S. During 1990 to 2003, California's gross state product grew by 83% while GHG emissions grew by 12%. In 2004, California produced 492 Tg CO₂ Eq, which is approximately 7% of U.S. emissions. The main contributors to California's GHG emissions are transportation (41%) and electricity generation (22%). Over that same period of time (1990 to 2004), GHG emissions from the residential/commercial sectors decreased by 9.7%. This decrease in GHGs could illustrate the effectiveness of energy conservation in buildings (Title 24 requirements) and appliances. During that same period of time, California saw an increase in population.

2.5.3 GHG Regulation

On the local level the SCAQMD is currently devising an acceptable methodology to properly analyze GHG emissions. The SCAQMD has recently adopted an interim GHG significance threshold of 10,000 metric tons of CO₂eq/year for industrial projects and is actively considering establishing a significance threshold for residential/commercial projects. Human created GHG include: CO₂, CH₄, N₂O, and fluorinated gases (Hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride).

Assembly Bill 32

In 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the California Climate Solutions Act. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. This reduction will be accomplished by an enforceable statewide cap on GHG emissions. AB 32 requires that the CARB adopt a quantified cap on GHG emissions representing 1990 levels and disclose how it arrives at the cap. The CARB must institute a schedule to meet emission standards, develop tracking, reporting and enforcement mechanisms to

ensure that the state achieves reductions in GHG emissions necessary to meet the cap. Currently, GHG levels have been estimated to be 600 million metric tons (MMTs) of CO₂ Eq., while 1990 levels have been estimated to be 427 MMTs. Accordingly, emissions need to be reduced by 173 MMTs by 2020.

On December 11, 2008, CARB adopted a scoping plan to reduce GHG emissions to 1990 levels. The Scoping Plan's recommendations for reducing GHG emissions to 1990 levels by 2020 include, a cap-and-trade program linked to Western Climate Initiative partner jurisdictions, green building strategies, recycling and waste-related measures, and Voluntary Early Action and Reductions. CARB has until January 11, 2011, to adopt the necessary regulations to implement that plan. Implementation of the plan must begin no later than January 1, 2012, so that emission reduction target can be achieved by 2020.

Senate Bill 97

In 2007, the Legislature adopted Senate Bill 97 (SB 97) which requires the California Office of Planning and Research (OPR) to prepare and transmit new CEQA guidelines for the mitigation of GHG emissions or the effects of GHG emissions to the Resources agency by July 2009. These guidelines for mitigation must address but are not limited to, GHG emissions and effects associated with transportation and energy consumption.

OPR's Technical Advisory and CEQA Guideline Amendments

On January 8, 2009, OPR released its preliminary draft CEQA Guideline Amendments for GHG emissions. Shortly there after in April, OPR submitted its final proposed guidelines to the Secretary of Natural Resources. On March 18, 2010, the final proposed guidelines were approved. In the CEQA Guideline amendments, the OPR does not identify a threshold of significance for

GHG emissions, nor does it specify an assessment methodology or specific mitigation measure. Furthermore it states that a lead agency shall have discretion to determine whether to: (1) Use a model or methodology to quantify GHG emissions resulting from a project, and which methodology to use...;or (2) Rely on a qualitative analysis or performance standards.

The OPR calls for a "good faith effort, based on available information, to describe, calculate or estimate the amount of GHG emissions resulting from a project." The Amendments are relatively modest and leave substantial discretion to lead agencies to evaluate and mitigate GHG emissions in an environmental document. The Technical Advisory encourages lead agencies to follow three basic steps: (1) identify and quantify the greenhouse gas emissions that could result from the proposed project; (2) analyze the effects of those emissions and determine whether the effect is significant, and (3) if the impact is significant, identify feasible mitigation measures or alternatives that will reduce the impact below a level of significance.

CARB's Preliminary Draft Staff Proposal for Interim Significance Thresholds

In the effort to develop the CEQA Guidelines Amendments, OPR's Technical Advisory has asked CARB to recommend GHG-related significance thresholds. CARB released a draft proposal in Oct, 2008 with interim guidance on significance thresholds. The proposal takes a different approach for different sectors – (1) industrial projects and (2) commercial and residential projects. As previously mentioned a numerical threshold for industrial projects has been devised, however for commercial and residential projects, CARB recommends that if a project complies with a previously approved plan (that addresses GHG emissions), it would not be considered to have a significant impact. Alternatively, if the project does not comply with a previously approved plan, staff recommends a threshold based upon the implementation of performance standards or mitigation measures which address energy usage (transportation,

water use, waste and construction). Specific Performance standards have not been developed for such energy usage as of yet, however CARB staff recommends the California Energy Commission's Tier II Energy Efficiency Standards (specified as 35% above Title 24 requirements), existing GHG-reduction programs (i.e., LEED and California Green Building Code).

Senate Bill 375

In 2008, Senate Bill (SB) 375 was signed by Governor Arnold Schwarzenegger. SB 375 requires the CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles, for 2020 and 2035. The 18 metropolitan planning organizations (i.e. SCAG) are responsible to prepare a "sustainable communities strategy" to reduce the amount of vehicle miles traveled (VMT) in their respective regions and demonstrate the ability for the region to attain CARB's targets.

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3.0 Study Method and Procedure

The air quality study analyzes potential emission impacts from the project site during construction and operational activities by comparing the emissions to the pollutant significant thresholds. An impact is considered significant if it exceeds the emission thresholds set-forth by the SCAQMD. Construction emissions are considered short-term because of the typical short time period the project takes to construct. Operational emissions are considered long-term.

To evaluate both construction and operational emission impacts of the proposed project, URBEMIS 2007 (9.2.4) was utilized. Construction data, starting with project construction phasing, typical construction equipment and timeline was inputted into the computer model to simulate realistic construction activities. The short-term and long-term impacts were compared to the regional and localized significance thresholds.

3.1 Regional Significance Thresholds

The SCAQMD California Environmental Quality Act (CEQA) Handbook (SCAQMD, 1993) establishes mass daily thresholds on a regional level for both construction and operational impacts, as outlined in Table 5. The SCAQMD has developed suggested significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. The 1993 SCAQMD Handbook (as subsequently revised) states that any projects in the SCAB (South Coast Air Basin) with daily emissions that may exceed any of the thresholds should be considered as having an individually and cumulatively significant air quality impact. Additional indicators should be used as screening criteria to evaluate the need for further analysis with respect to air quality. Whenever possible, the project should be evaluated in a quantitative analysis; otherwise a qualitative analysis is appropriate. The additional significance thresholds include whether the:

- Project may interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation.
- Project may result in population increases within the regional statistical area which would be in excess of that projected in the AQMP.
- Project may generate vehicle trips that became a CO hot spot.
- Project might have the potential to create or be subjected to objectionable odors.
- Project may have hazardous materials on-site and could result in an accidental release of air toxic emissions.
- Project may involve disposal of hazardous waste.
- Project may involve being occupied by sensitive receptors near a facility that emits air toxics or near CO hot spots.
- Project may emit carcinogenic air contaminants that may pose a cancer risk.

3.2 Localized Significance Threshold (LST)

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. The use of LSTs is voluntary, to be implemented at the discretion of local government acting as a lead agency pursuant to CEQA. These analysis elements are called Localized Significance Thresholds (LST). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005. LSTs are only applicable to the following criteria pollutants: NO₂, CO, and particulate matter (PM₁₀ and PM_{2.5}). For PM₁₀ LSTs were derived based upon requirements in SCAQMD Rule 403 – Fugitive Dust. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent

applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA) and distance to the nearest sensitive receptor.

Pollutant emissions are considered to have a significant effect on the environment if they result in concentrations that create either: a violation of an ambient air quality standard; contribute to an existing air quality violation or expose SRAs to substantial pollutant concentrations.

The SCAQMD has provided lookup tables to quickly determine if the daily emissions for the proposed project could result in a significant localized impact for projects with a daily disturbance area of 2 acres or smaller. For PM_{10} and $PM_{2.5}$ the South Coast Air Basin (SCAB) is currently in non-attainment. LST emission contributions are derived using an air quality dispersion model to back calculate the emissions that would cause or contribute to a violation of any of the ambient air quality standards. The localized significance emission thresholds for the proposed project are located in Table 6.

3.3 Significance Criteria for Greenhouse Gases

Since the adoption of AB 32, there has been little regulatory guidance with regard to GHG emission thresholds. The CARB is collaborating with Cal/EPA and the Resources Agency to further develop guidelines (pursuant to Senate Bill 97) for analyzing and mitigating GHG emissions. With an absence of a statewide threshold, the SCAQMD is in the process of developing an interim GHG significance threshold. This process includes the development of a tiered GHG significance threshold proposal for stationary sources. Given the complexity of the overall interactions between various global and regional-scale air emissions, it is difficult to determine whether the presence or absence of the proposed project would alter any conditions.

The URBEMIS 2007 computer program can quantify the amount of CO₂ emitted from the project generated by vehicle from the identified area sources, however the model does not take into account the CO₂ emitted from electricity use and generation as a result of the project.

February 2011, the SQAQMD released the CalEEMod GHG Emissions software. The software does not replace the URBEMIS 2007 computer program; however, it can work in conjunction with it and is able to calculate the greenhouse gas emissions for a project.

4.0 Future Air Quality Environment and Impacts

Air pollution emissions associated with the proposed project would occur over both a short and long-term time period. Short-term emissions include fugitive dust from construction activities (i.e., demo, grading, and exhaust emission) at the project site. Long-term emissions review the operational effect the project would have over the projects life cycle. Long-term emissions include vehicle exhaust traveling to and from the project site, electricity and natural gas. The construction and operational emissions were estimated and compared to the SCAQMD significance thresholds.

4.1 Construction Impacts

Temporary construction activity emissions will occur during project build-out. The project site is subject to follow SCAQMD rules for the reduction of fugitive dust emissions, Rule 403. SCAQMD Rule 403 requires the use of best available control measures (BACM) to mitigate construction and operation activities. The required mitigation for the project site is listed in Section 5.0.

The following general assumptions were used to help determine the construction emissions estimates:

- The project is expected to begin construction in late 2011 and take approximately two to two and half years to complete.
- The first phase of construction is expected to be demolition of the existing RV Park, restaurant and vacant land use. It is estimated that approximately 9,660 cubic feet of debris will be removed daily over a 1 to 2 month period.
- The next phase of construction is expected to be site grading which will occur for approximately 1 month. It is estimated that a maximum of 2 acres would be disturbed on any one day. There is no estimated soil hauling.

- Building construction will begin directly after the site has been graded. It is estimated that the project will take approximately 18 – 26 months to construct the resort hotel, indoor water park and parking structure.
- The next phase of the project would be painting/architectural coating. Painting the project site is expected to take approximately 3 to 6 months to complete. It is expected that one crew will paint the project site.
- The project site paving will occur during the final phase of the construction process. Paving is expected to take approximately 1 to 2 months to complete.

4.1.1 Regional Significance Thresholds

The project's unmitigated construction emissions are indicated in Table 7, for each phase of the project. Typically the URBEMIS 2007 Version 9.2.4 Model assumes for non-residential land uses that nearly all interior spaces will be painted. Calculations for the emissions are indicated in Appendix A.

4.1.2 Localized Significance Thresholds

Since the project's maximum disturbance area is approximately 3 acres per day, the SCAQMD localized thresholds lookup tables for a 1, 2 and 5 acres site was utilized. The information is provided for a 2 acre disturbance footprint, the LST concentration thresholds for a 5 acre site were compared to the project's emissions. The SCAQMD tables contain emission thresholds at a distance of 50 meters, 200 meters and 500 meters. Currently, there are two sensitive receivers located near the project site. For purposes of this project, the thresholds for a distance of 50 meters were used. Table 8 indicates the construction emissions for the localized significance thresholds. The project's emissions from construction will not exceed the SCAQMD localized significance threshold, with the implementation of the required mitigation measures.

4.1.3 Construction Greenhouse Gas Emissions

During the construction phase, GHG emissions will be released through the burning of fossil fuels in construction equipment. There are no significant criteria for these emissions at this time. However, in order to provide decision makers with as much information as possible, the GHG emissions associated with construction are listed in Table 9. The project's worst-case GHG emissions during construction are expected to be approximately 64,000 pounds of CO₂ equivalents.

4.2 Operational Impacts

Long-term operational impacts typically include vehicles traveling in and out of the project site and land use emissions. Land use emissions can include natural gas and electricity use (i.e. hair dryer, stove, lawn mower, etc). The URBEMIS 2007 Version 9.2.4 was utilized to determine the estimated daily emissions from mobile sources. In order to calculate accurately the mobile emissions the daily trip rates for the project and the fleet mix (per the traffic impact study) were used to reflect the vehicle distribution data. The operational data is located in Appendix A.

The default trip lengths, average speed, fleet mix, and parking spaces were utilized with the URBEMIS model.

It is anticipated that odors will not impact the adjacent land use.

4.2.1 Regional Significance Thresholds

The estimated unmitigated operational emissions are indicated in Table 10. The operational emissions will not exceed the SCAQMD regional significance thresholds. The impact is considered not significant.

4.2.2 Localized Significance Thresholds

According to the LST methodology, mobile source emissions do not need to be included in the LST analysis. Only land use emissions and on-site vehicle emissions need to be analyzed for the project. Table 11 compares the operational emissions from the land use emissions to the localized significance thresholds. The emissions from operation will not exceed the SCAQMD localized thresholds of significance.

4.2.3 Operational Greenhouse Gas Emissions

The projected GHG operational emissions are presented in Table 12. The project site is expected to produce on average 17,857.9 tons of CO₂ per year. These emissions include mobile sources, electrical usage, and combustion of natural gas. Electrical usage is not quantified in the URBEMIS 2007 model, however, the SCAQMD Handbook (Table A9-11) and the CalEEMod software indicates typical electrical usage of certain land uses based on square footage. GHG and electrical usage calculations are indicated in Appendix B. The EPA estimates that approximately 5% of the VMT's for the project would include CH₄ and N₂O emissions. It should be noted that mobile source emissions will vary due to the fact there is existing traffic in the area.

In accordance with the 2007 AQMP, the emission levels in California are estimated to be approximately 600 million metric tons of CO₂ equivalents (Eq.) for 2010. At approximately 17,857.9 tons per year, the project operations represent less than 0.003 percent of this state's annual 2011 emissions budget.

When converting the other GHG emissions to CO₂ Eq., the overall estimated GHG contribution to California's emission levels is 18,025.0 metric tons per year (MTPY) of CO₂ Eq. or 0.0037 Tg CO₂ Eq, as indicated in Table 12 and in Appendix B.

As previously mentioned the SCAQMD has yet to establish a residential/commercial interim threshold for GHG Emissions; however they have established a stationary

source interim threshold of 10,000 MTPY CO₂ Eq. for industrial projects. AB32 requires that emission levels be reduced back to 1990 levels.

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5.0 Mitigation Recommendations

5.1 Construction Mitigation

Recommended emissions reduction measures for construction activities are outlined in the sections below. If implemented as part of the proposed project, these measures will yield a reduction in air quality impacts associated with the development. Table 13 indicates the mitigated daily construction emissions. The mitigated construction emissions do not exceed the SCAQMD thresholds of significance.

5.1.1 Vehicle Emissions

The following measures are recommended to reduce impact during project construction.

- Construction equipment shall be maintained in proper tune.
- Utilize gasoline or electricity-powered equipment instead of diesel equipment whenever possible.
- Suspend use of heavy construction equipment during first stage smog alerts.
- All construction vehicles shall be prohibited from excessive idling. Excessive idling is defined as five minutes or longer.
- Encourage use of "clean diesel" equipment if modified engines (catalyst equipped or newer Moyer Program retrofit) are available at a reasonable cost.

5.1.2 Fugitive Dust Emissions and Control

To reduce fugitive dust emissions during construction, the use of best available control measures (BACM) shall be implemented during grading. The menu of enhanced dust control measures includes the following:

- Water all active construction areas three times daily.
- Cover all haul trucks or maintain at least 2 feet of freeboard.
- Pave or apply water three times daily to all unpaved parking or staging areas.
- Reduce speed on unpaved roads to less than 15 mph.
- Sweep or wash any site access points within 30 minutes of any visible dirt deposition on any public roadway.
- Cover or water twice daily any on-site stockpiles of debris, dirt or other dusty material.
- Suspend all operations on any unpaved surface if winds exceed 25 mph.
- Take measures to limit daily disturbance area to 5 acres or less.

5.1.3 Off-Site Impacts

Based on the description of the proposed project, the following are recommendations to help reduce the potential air quality impact to the surrounding community. These recommendations can help further mitigate the potential impact to daily construction activities.

- Encourage car pooling for construction workers.
- Limit lane closures to off-peak travel periods.
- Park construction vehicles off traveled roadways.
- Wet down or cover dirt hauled off-site.
- Wash or sweep access points daily.

- Encourage receipt of materials during non-peak traffic hours.
- Sandbag construction sites for erosion control.

5.2 Operational Emissions Reduction Measures

To further reduce the operational land use emissions impact for mobile and stationary sources the following reduction measures may be implemented into the project design.

Encourage the building construction design to exceed the minimum statewide energy requirements of Title 24: this may include but is not limited to:

- Use of low emission water heaters
- Use of central air heating systems
- Use of energy efficient appliances
- Use of increased insulation
- Use of energy-efficient parking lot lights
- Use of lighting controls and energy efficient lighting

Transportation Management Techniques to Reduce Vehicle Emissions:

- Encourage use of shuttle service, public transit and carpooling
- Participate in City's existing TDM (Transportation Demand Management) Programs
- Encourage a mix of uses on the site (i.e. hotel, restaurant, recreation and retail) to minimize off-site travel

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6.0 Conclusions

This air quality analysis assesses the potential air quality impacts and necessary mitigation measures for the Site "C" Hotel and Restaurant project. The project site is located at the northeast corner of Harbor Boulevard and Twintree Avenue in the City of Garden Grove, as shown in Exhibit A. The results of the analysis indicate that construction operation and dust from the project site will represent the principle sources of on-site air quality impacting the surrounding area.

The following conclusions for the project are listed below:

- The project-related short-term unmitigated construction emissions along with the SCAQMD regional and localized thresholds are shown in Table 7 and 8. Short-term construction impacts are below the SCAQMD thresholds, when the mitigation requirements are implemented and are considered less than significant.
- Table 9 indicates the estimated GHG construction emissions.
- The project related long-term emissions along with the SCAQMD regional and localized thresholds are shown in Table 10 and 11. Long-term operation impacts are below the SCAQMD regional and localized significance thresholds, and are considered not significant.
- The estimate GHG emissions during operation are indicated in Table 12.
- The project-related short-term mitigated emissions along with the SCAQMD thresholds are indicated in Table 13. Emission levels do not exceed the SCAQMD thresholds of significance and are considered less than significant.

A detailed list of necessary air quality mitigation measures is presented in *Section 5.0 Mitigation Recommendations*. The air quality mitigation analysis and recommendations are intended to satisfy the South Coast Air Basin (SCAB) standards with respect to this project.

Exhibits

Exhibit A
Location Map

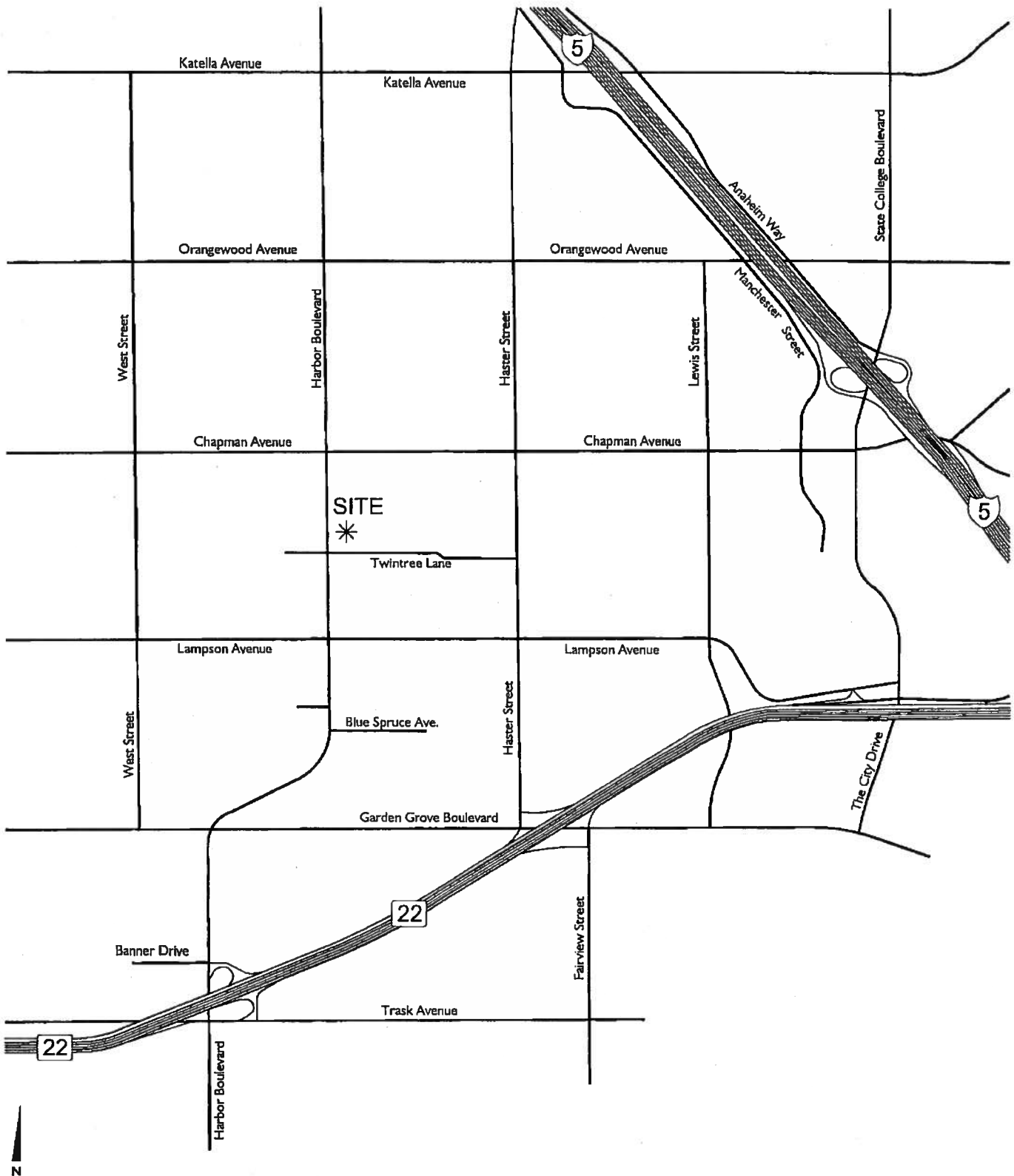
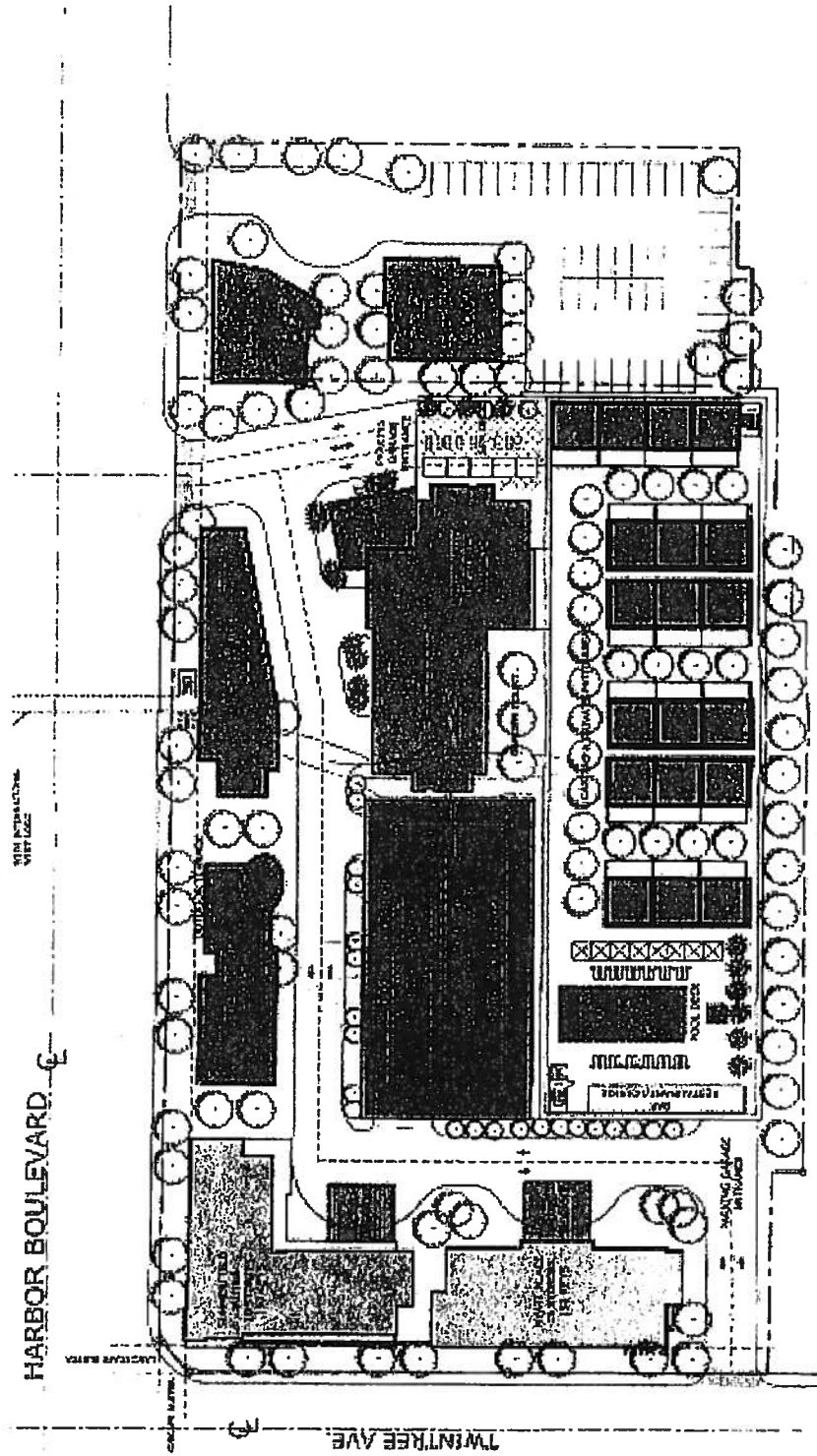


Exhibit B
Site Plan



0762-11-03 (ExB)

SITE 'C' HOTEL AND RESTAURANT AIR QUALITY STUDY, City of Garden Grove, California

Tables

TABLE 1
Central Orange County
Air Quality Monitoring Summary – 2005-2009
(Days Standards Were Exceeded and Maximum Observed Levels)

Pollutant/Standard	2005	2006	2007	2008	2009
Ozone					
1-Hour > 0.09 ppm (S)	1	5	2	2	0
8-Hour > 0.07 ppm (S)	4	3	7	10	2
8-Hour > 0.08 ppm (F)	0	1	1	1	0
8-Hour > 0.075 ppm (F)	--	--	1	4	1
Max 1-Hour Conc. (ppm)	0.095	0.110	0.127	0.105	0.093
Carbon Monoxide					
1-Hour > 20. ppm (S)	0	0	0	0	0
8-Hour > 9. ppm (S, F)	0	0	0	0	0
Max 1-Hour Conc. (ppm)	4	5	4*	4	3
Max 8-Hour Conc. (ppm)	3.3	3.0	2.9*	3.6	2.7
Nitrogen Dioxide					
1-Hour > 0.18 ppm (S)	0	0	0	0	0
Max 1-Hour Conc. (ppm)	0.09	0.11	0.1	0.09	0.07
Annual Ave AAM Conc > 0.030 ppm (S)	--	--	0.0208	0.0203	0.0179
Suspended Particulate PM-10					
24-Hour > 50 $\mu\text{g}/\text{m}^3$ (S)	3/61	7/56	5/58	3/58	1/50
24-Hour > 150 $\mu\text{g}/\text{m}^3$ (F)	0/61	0/56	0/58	0/58	0/58
Max. 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	41	104	75	61	63
Fine Particulates (PM-2.5)					
24-Hour > 65 $\mu\text{g}/\text{m}^3$ (F)	0/333	0/336	1/336	1/336	0/365
24-Hour > 35 $\mu\text{g}/\text{m}^3$ (F)	--	8/330	14/336	13/336	4/365
Max. 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	54.7	56.5	79.4	67.9	64.6

Source: South Coast AQMD Air Monitoring Station Data Summaries

*Less than 12 full months of data available for Central Orange County Monitoring Station #3176 may not be representative.

TABLE 2
Current Federal and State Ambient Air Quality Standards

Pollutant	Average Time	National Standards	California Standards	Major Pollutant Sources
Ozone (O ₃)	1-hr	No Federal Standard	0.09 ppm	Motor Vehicles, paints, coatings, and solvents.
	8-hr	0.075 ppm	0.070 ppm	
Carbon Monoxide (CO)	1-hr	35 ppm	20 ppm	Internal combustion engines, primarily gasoline powered motor vehicles
	8-hr	9 ppm	9.0 ppm	
Nitrogen Dioxide (NO ₂)	Annual Avg	0.05 ppm	0.030 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and
	1-hr	No Federal Standard	0.18 ppm	
Sulfur Dioxide (SO ₂)	Annual Avg	0.030 ppm	--	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1-hr 24-hr	No Federal Standard 0.14 ppm	0.25 ppm 0.04 ppm	
Lead (Pb)	Monthly	--	1.5 µg/m ³	Present source: Lead smelters, battery manufacturing and recycling facilities. Past source: Combustion of leaded gasoline
	Quarterly	1.5 µg/m ³	--	
Particulate Matter (PM ₁₀)	Annual Avg	No Federal Standard	20 µg/m ³	Dust and fume-producing construction, industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (i.e., wind raised dust and ocean sprays).
	24-hr	150 µg/m ³	50 µg/m ³	
Particulate Matter (PM _{2.5})	Annual Avg	15.0 µg/m ³	12 µg/m ³	Dust and fume-producing construction, industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (i.e., wind raised dust and ocean sprays).
	24-hr	35 µg/m ³	--	

ppm = parts per million

µg/m³ = micrograms per cubic meter

Source: South Coast Air Quality Management District

TABLE 3
State and Federal Attainment Status

Criteria Pollutant	State Designation	Federal Designation
Ozone (1 hour)	Extreme Nonattainment	Revoked 2005
Ozone (8 hour)	Extreme Nonattainment	Nonattainment
PM ₁₀	Serious Nonattainment	Nonattainment
PM _{2.5}	Nonattainment	Nonattainment
CO	Attainment	Attainment ¹
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
Lead	Attainment	Attainment

Source: www.arb.ca.gov

¹ Effective June 17, 2007 the EPA granted the request to redesignate the South Coast Air Basin from non-attainment to attainment for CO.

TABLE 4
Atmospheric Lifetimes and Global Warming Potential

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100 year time horizon)
Carbon Dioxide	50 - 200	1
Methane	12 (\pm 3)	21
Nitrous Oxide	120	310
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: Tetrafluoromethane (CF ₄)	50,000	6,500
PFC: Hexafluoroethane (C ₂ F ₆)	10,000	9,200
Sulfur Hexafluoride (SF ₆)	3,200	23,900

Source: United States EPA, 2006

TABLE 5
SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds¹		
Pollutant	Construction²	Operation³
NO _x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
SO _x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day

¹ Source : SCAQMD CEQA Handbook (SCAQMD, 1993)

² Construction thresholds apply to both the South Coast Air Basin and Coachella Valley (Salton Sea and Mojave Desert Air Basin)

³ For the Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds

TABLE 6
SCAQMD Air Quality Localized Significance Thresholds¹

LST Pollutants	CO (lbs/day)	NO _x (lbs/day)	PM ₁₀ (lbs/day)	PM _{2.5} (lbs/day)
SCAQMD Construction Threshold	1,041	114	19	6
SCAQMD Operational Threshold	1,041	114	5	2

¹ Reference LST thresholds are from 2006-2008 SCAQMD Mass rate Localized Significant Thresholds for construction and operation Table C-1 for a disturbance area of 2 acres and at a receptor distance of 50 meters

TABLE 7
Regional Significance - Unmitigated Maximum Daily Emission During Construction (lbs/day)

Activity	Time Period	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	CO ₂
Demo	2 Month	1.18	8.53	6.04	0.0	4.67	0.55	1,014.22
Grading	1 Month	5.72	46.99	25.87	0.0	27.36	7.39	4,743.37
Building Construction	18 - 26 Months	74.51	42.66	54.86	0.04	3.10	2.74	8,446.14
Painting	4 - 6 Months	67.42	0.04	0.66	0.1	0.0	0.0	97.81
Paving	1- 2 Months	3.99	25.00	17.39	0.0	1.90	1.73	2,911.7
Maximum ¹		74.51	46.99	54.86	0.10	27.36	7.39	8,446.14
SCAQMD Threshold		75.	100.	550.	150.	150.	55	N/A ²
Exceeds Threshold (?)		No	No	No	No	No	No	N/A

¹ Construction activities are not expected to overlap except during paving and painting; therefore the maximum emissions represent the largest of each activity alone and the combined paving and painting emissions.

² There is no significance threshold for CO₂ emissions

TABLE 8**Localized Significance - Unmitigated Daily Construction Emissions¹**

LST Pollutants	CO (lbs/day)	NO _x (lbs/day)	PM ₁₀ (lbs/day)	PM _{2.5} (lbs/day)
Maximum (from Table 7)	54.86	46.99	27.36	7.39
SCAQMD Construction Threshold	1,041	114	19	6
Exceeds Threshold (?) ²	No	No	Yes	No

Localized Significance - Mitigated Daily Construction Emissions¹

LST Pollutants	CO (lbs/day)	NO _x (lbs/day)	PM ₁₀ (lbs/day)	PM _{2.5} (lbs/day)
Mitigated (from Table 13)	54.86	46.99	6.65	3.06
SCAQMD Construction Threshold	1,041	114	19	6
Exceeds Threshold (?) ²	No	No	No	No

¹ Reference LST thresholds are from 2006-2008 SCAQMD Mass rate Localized Significant Thresholds for construction and operation Table C-1 for a disturbance area of 2 acres and at a receptor distance of 50 meters

² See Table 13 for mitigated conditions

TABLE 9
Construction Greenhouse Gas Emissions (lbs/day)

Activity	CO ₂	N ₂ O		CH ₄	
	(lbs/day)	(lbs/day)	(lbs/day) CO ₂ EQ	(lbs/day)	(lbs/day) CO ₂ EQ
Demo	23,086.65	0.008	2.48	2.00	42
Grading	22,419.36	0.006	1.86	1.77	37.17
Building Construction/Painting	15,341.00	0.062	19.22	0.95	19.95
Paving	3,103.41	0.029	8.99	0.48	10.08
Total (lbs/day)	63,950.4	0.1	32.6	5.2	109.20
Total (Teragrams CO ₂ equivalent)	0.0641				

TABLE 10
Regional Significance - Unmitigated Maximum Daily Operational Emissions (lbs/day)

Activity	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	CO ₂
Vehicles Emissions	53.92	62.78	557.61	0.60	5.34	3.45	58,164.2
Area Source Emissions	3.17	6.52	8.53	0.0	0.02	0.02	7,782.42
Total: Vehicles + Area Source	57.09	69.30	566.14	0.60	5.36	3.47	65,946.6
SCAQMD Threshold	55	55	550.	150.	150.	55	N/A ¹
Exceeds Threshold (?)	Yes	Yes	Yes	No	No	No	N/A

Regional Significance - Mitigated Maximum Daily Operational Emissions (lbs/day)²

Activity	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	CO ₂
Vehicles Emissions	29.77	31.45	279.34	0.30	2.68	1.73	29,138.7
Area Source Emissions	3.17	6.52	8.53	0.0	0.02	0.02	7,782.42
Total: Vehicles + Area Source	32.94	37.97	287.87	0.30	2.70	1.75	36,921.1
SCAQMD Threshold	55	55	550.	150.	150.	55	N/A ¹
Exceeds Threshold (?)	No	No	No	No	No	No	N/A

¹ There is no significance threshold for CO₂ emissions

² Refer to Section 5.0 of the report for outline of mitigation requirements

TABLE 11
Localized Significance - Unmitigated Daily Operational Emissions^{1,2}

LST Pollutants	CO (lbs/day)	NO_x (lbs/day)	PM₁₀ (lbs/day)	PM_{2.5} (lbs/day)
Emissions (calculated from Table 10) ³	287.3	37.91	2.69	1.75
SCAQMD Operational Thresholds	1,041	114	5	2
Exceeds Threshold (?)	No	No	No	No

¹ Reference LST thresholds are from 2006-2008 SCAQMD Mass rate Localized Significant Thresholds for construction and operation Table C-1 for a disturbance area of 2 acres and at a receptor distance of 50 meters

² Per LST methodology, mobile source emissions do not need to be included except for land use emissions and on-site vehicle emissions.

³ It is estimated that only 50% of the overall trip length for the project will occur on-site, therefore LST emissions are reduced to 50% of the overall LST emission. $LST = (.5 * \text{vehicle emission}) + \text{Area Source}$

TABLE 12
Proposed Project Greenhouse Gas Emissions During Operation (MTPY¹)²

Emission Source	CO ₂	N ₂ O		CH ₄	
	mtpy	mtpy	mtpy CO ₂ EQ	mtpy	mtpy CO ₂ EQ
Mobile Source	13,561.4	0.00	0.00	0.001	0.03
Energy Use	2,876.3	0.05	16.41	0.055	1.15
Natural Gas	1,420.29	0.46	141.44	0.007	0.1533
Total (mtpy)	17,857.9	0.5	157.8	0.1	1.33
Total (Teragrams CO ₂ equivalent)	0.0180				

¹ Metric Tons Per Year

² See Appendix B for Operational GHG emission calculations

TABLE 13

Regional Significance - Mitigated Maximum Daily Emission During Construction (lbs/day)

Activity	Time Period	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	CO ₂
Demo	2 Month	1.18	8.53	6.04	0.0	4.67	0.55	1,014.22
Grading	1 Month	5.72	46.99	25.87	0.0	6.65	3.06	4,743.37
Building Construction	18 - 26 Months	74.51	42.66	54.86	0.04	3.10	2.74	8,446.14
Painting	4 - 6 Months	67.42	0.04	0.66	0.1	0.0	0.0	97.81
Paving	1 - 2 Months	3.99	25.00	17.39	0.0	1.90	1.73	2,911.7
Maximum ¹		74.51	46.99	54.86	0.10	6.65	3.06	8,446.14
SCAQMD Threshold		75.	100.	550.	150.	150.	55	N/A ²
Exceeds Threshold (?)		No	No	No	No	No	No	N/A

¹ Construction activities are not expected to overlap except during paving and painting; therefore the maximum emissions represent the largest of each activity alone and the combined paving and painting emissions.

² There is no significance threshold for CO₂ emissions

Appendices

Appendix A

URBEMIS2007 Computer Model Output

Combined Summer Emissions Reports (Pounds/Day)

File Name: J:\Jobs\07621103\07621103_Urbemis\07621103_Urbemis.urb924

Project Name: SITE C HOTEL AND RESTAURANT PROJECT

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2011 TOTALS (lbs/day unmitigated)	5.72	46.99	25.87	0.00	25.01	2.35	27.36	5.23	2.16	7.39	4,743.37
2011 TOTALS (lbs/day mitigated)	5.72	46.99	25.87	0.00	4.30	2.35	6.65	0.90	2.16	3.06	4,743.37
2012 TOTALS (lbs/day unmitigated)	7.74	42.66	54.86	0.04	0.19	2.91	3.10	0.07	2.67	2.74	8,348.69
2012 TOTALS (lbs/day mitigated)	7.74	42.66	54.86	0.04	0.19	2.91	3.10	0.07	2.67	2.74	8,348.69
2013 TOTALS (lbs/day unmitigated)	74.51	39.65	53.11	0.04	0.19	2.63	2.82	0.07	2.41	2.48	8,446.14
2013 TOTALS (lbs/day mitigated)	74.51	39.65	53.11	0.04	0.19	2.63	2.82	0.07	2.41	2.48	8,446.14
2014 TOTALS (lbs/day unmitigated)	3.99	25.00	17.39	0.00	0.02	1.88	1.90	0.01	1.73	1.73	2,911.74
2014 TOTALS (lbs/day mitigated)	3.99	25.00	17.39	0.00	0.02	1.88	1.90	0.01	1.73	1.73	2,911.74

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AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	3.17	6.52	8.63	0.00	0.02	0.02	7,782.42
OPERATIONAL (VEHICLE) EMISSION ESTIMATES							
	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	53.92	62.78	557.61	0.60	5.34	3.45	58,164.19
TOTALS (lbs/day, mitigated)	29.77	31.45	279.34	0.30	2.68	1.73	29,138.70
Percent Reduction	44.79	49.90	49.90	50.00	49.81	49.86	49.90

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	57.09	69.30	566.14	0.60	5.36	3.47	65,946.61

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
Time Slice 10/3/2011-11/30/2011 Active Days: 43	1.18	8.53	6.04	0.00	4.07	0.60	0.85	0.55	1.40	1,014.22
Demolition 10/03/2011- 11/30/2011	1.18	8.53	6.04	0.00	4.07	0.60	0.85	0.55	1.40	1,014.22
Fugitive Dust	0.00	0.00	0.00	0.00	4.06	0.00	0.84	0.00	0.84	0.00
Demo Off Road Diesel	1.05	7.22	4.58	0.00	0.00	0.55	0.00	0.50	0.50	700.30
Demo On Road Diesel	0.10	1.25	0.48	0.00	0.01	0.05	0.00	0.05	0.05	189.55
Demo Worker Trips	0.03	0.06	0.98	0.00	0.01	0.00	0.00	0.00	0.00	124.37

5/11/2011 11:19:38 AM

Time Slice 12/1/2011-12/30/2011
Active Days: 22

Mass Grading 12/01/2011-
12/31/2011

Mass Grading Dust

Mass Grading Off Road Diesel

Mass Grading On Road Diesel

Mass Grading Worker Trips

Time Slice 1/2/2012-12/31/2012
Active Days: 261

Building 01/02/2012-12/31/2013

Building Off Road Diesel

Building Vendor Trips

Building Worker Trips

Time Slice 1/1/2013-6/27/2013
Active Days: 128

Building 01/02/2012-12/31/2013

Building Off Road Diesel

Building Vendor Trips

Building Worker Trips

5.72	46.99	25.87	0.00	25.01	2.35	27.36	5.23	2.16	7.39	4,743.37
5.72	46.99	25.87	0.00	25.01	2.35	27.36	5.23	2.16	7.39	4,743.37
0.00	0.00	0.00	0.00	25.00	0.00	25.00	5.22	0.00	5.22	0.00
5.66	46.87	23.92	0.00	0.00	2.34	2.34	0.00	2.16	2.16	4,494.64
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.06	0.11	1.95	0.00	0.01	0.01	0.02	0.00	0.01	0.01	248.74
7.74	42.66	54.86	0.04	0.19	2.91	3.10	0.07	2.67	2.74	8,348.69
6.67	37.65	27.37	0.00	0.00	2.67	2.67	0.00	2.46	2.46	4,160.77
0.33	3.62	3.18	0.01	0.03	0.15	0.18	0.01	0.14	0.15	857.44
0.73	1.39	24.31	0.03	0.16	0.09	0.25	0.06	0.08	0.13	3,330.49
7.08	39.61	52.45	0.04	0.19	2.62	2.81	0.07	2.41	2.47	8,348.33
7.08	39.61	52.45	0.04	0.19	2.62	2.81	0.07	2.41	2.47	8,348.33
6.11	35.14	26.93	0.00	0.00	2.40	2.40	0.00	2.21	2.21	4,160.77
0.30	3.21	2.93	0.01	0.03	0.13	0.16	0.01	0.12	0.13	657.48
0.67	1.27	22.59	0.03	0.16	0.09	0.25	0.06	0.08	0.13	3,330.09

5/11/2011 11:19:38 AM

Time Slice 6/28/2013-12/31/2013 Active Days: 133	74.51	39.65	53.11	0.04	0.19	2.63	2.82	0.07	2.41	2.48	8,446.14
Building 01/02/2012-12/31/2013	7.08	39.61	52.45	0.04	0.19	2.62	2.81	0.07	2.41	2.47	8,348.33
Building Off Road Diesel	6.11	35.14	26.93	0.00	0.00	2.40	2.40	0.00	2.21	2.21	4,160.77
Building Vendor Trips	0.30	3.21	2.93	0.01	0.03	0.13	0.16	0.01	0.12	0.13	857.48
Building Worker Trips	0.67	1.27	22.59	0.03	0.16	0.09	0.25	0.06	0.08	0.13	3,330.09
Coating 06/28/2013-12/31/2013	67.42	0.04	0.66	0.00	0.00	0.00	0.01	0.00	0.00	0.00	97.81
Architectural Coating	67.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.02	0.04	0.66	0.00	0.00	0.00	0.01	0.00	0.00	0.00	97.81
Time Slice 1/6/2014-2/28/2014 Active Days: 40	3.99	25.00	17.39	0.00	0.02	1.88	1.90	0.01	1.73	1.73	2,911.74
Asphalt 01/06/2014-02/28/2014	3.99	25.00	17.39	0.00	0.02	1.88	1.90	0.01	1.73	1.73	2,911.74
Paving Off-Gas	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.83	24.66	15.14	0.00	0.00	1.86	1.86	0.00	1.71	1.71	2,522.32
Paving On Road Diesel	0.02	0.22	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	47.55
Paving Worker Trips	0.06	0.12	2.16	0.00	0.02	0.01	0.03	0.01	0.01	0.01	341.88

Phase Assumptions

- Phase: Demolition 10/3/2011 - 11/30/2011 - Demo (Building Removal)
- Building Volume Total (cubic feet): 578580
- Building Volume Daily (cubic feet): 9660
- On Road Truck Travel (VMT): 44.72
- Off-Road Equipment:
- 1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
 - 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day
 - 2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day
- Phase: Mass Grading 12/1/2011 - 12/31/2011 - Grade Site

Page: 5

5/11/2011 11:19:38 AM

Total Acres Disturbed: 5

Maximum Daily Acreage Disturbed: 1.25

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

- 2 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
- 2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
- 2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
- 2 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 1/6/2014 - 2/28/2014 - Type Your Description Here

Acres to be Paved: 1.25

Off-Road Equipment:

- 4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
- 1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
- 1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day
- 1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
- 2 Trenchers (63 hp) operating at a 0.75 load factor for 8 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 1/2/2012 - 12/31/2013 - Building Construction

Off-Road Equipment:

- 1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day
- 2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
- 4 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
- 1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day
- 2 Skid Steer Loaders (44 hp) operating at a 0.55 load factor for 8 hours per day
- 4 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

5/11/2011 11:19:38 AM

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 6/28/2013 - 12/31/2013 - Architectural Coating

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 10/3/2011-11/30/2011 Active Days: 43	1.18	8.53	6.04	0.00	4.07	0.60	0.85	0.55	1.40	1,014.22
Demolition 10/03/2011- 11/30/2011	1.18	8.53	6.04	0.00	4.07	0.60	0.85	0.55	1.40	1,014.22
Fugitive Dust	0.00	0.00	0.00	0.00	4.06	0.00	0.84	0.00	0.84	0.00
Demo Off Road Diesel	1.05	7.22	4.58	0.00	0.00	0.55	0.00	0.50	0.50	700.30
Demo On Road Diesel	0.10	1.25	0.48	0.00	0.01	0.05	0.00	0.05	0.05	189.55
Demo Worker Trips	0.03	0.06	0.98	0.00	0.01	0.00	0.00	0.00	0.00	124.37

5/11/2011 11:19:38 AM

Time Slice 12/1/2011-12/30/2011 Active Days: 22	5.72	46.99	25.87	0.00	4.30	2.35	6.65	0.90	2.16	3.06	4,743.37
Mass Grading 12/01/2011- 12/31/2011	5.72	46.99	25.87	0.00	4.30	2.35	6.65	0.90	2.16	3.06	4,743.37
Mass Grading Dust	0.00	0.00	0.00	0.00	4.29	0.00	4.29	0.90	0.00	0.90	0.00
Mass Grading Off Road Diesel	5.66	46.87	23.92	0.00	0.00	2.34	2.34	0.00	2.16	2.16	4,494.64
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.06	0.11	1.95	0.00	0.01	0.01	0.02	0.00	0.01	0.01	248.74
Time Slice 1/2/2012-12/31/2012 Active Days: 261	7.74	42.66	54.86	0.04	0.19	2.91	3.10	0.07	2.67	2.74	8,348.69
Building 01/02/2012-12/31/2013	7.74	42.66	54.86	0.04	0.19	2.91	3.10	0.07	2.67	2.74	8,348.69
Building Off Road Diesel	6.67	37.65	27.37	0.00	0.00	2.67	2.67	0.00	2.46	2.46	4,160.77
Building Vendor Trips	0.33	3.62	3.18	0.01	0.03	0.15	0.18	0.01	0.14	0.15	857.44
Building Worker Trips	0.73	1.39	24.31	0.03	0.16	0.09	0.25	0.06	0.08	0.13	3,330.49
Time Slice 1/1/2013-6/27/2013 Active Days: 128	7.08	39.61	52.45	0.04	0.19	2.62	2.81	0.07	2.41	2.47	8,348.33
Building 01/02/2012-12/31/2013	7.08	39.61	52.45	0.04	0.19	2.62	2.81	0.07	2.41	2.47	8,348.33
Building Off Road Diesel	6.11	35.14	26.93	0.00	0.00	2.40	2.40	0.00	2.21	2.21	4,160.77
Building Vendor Trips	0.30	3.21	2.93	0.01	0.03	0.13	0.16	0.01	0.12	0.13	857.48
Building Worker Trips	0.67	1.27	22.59	0.03	0.16	0.09	0.25	0.06	0.08	0.13	3,330.09

5/11/2011 11:19:38 AM

Time Slice 6/28/2013-12/31/2013 Active Days: 133	<u>74.51</u>	<u>39.65</u>	<u>53.11</u>	<u>0.04</u>	<u>0.19</u>	<u>2.63</u>	<u>2.82</u>	<u>0.07</u>	<u>2.41</u>	<u>2.48</u>	<u>8,446.14</u>
Building 01/02/2012-12/31/2013	7.08	39.61	52.45	0.04	0.19	2.62	2.81	0.07	2.41	2.47	8,348.33
Building Off Road Diesel	6.11	35.14	26.93	0.00	0.00	2.40	2.40	0.00	2.21	2.21	4,160.77
Building Vendor Trips	0.30	3.21	2.93	0.01	0.03	0.13	0.16	0.01	0.12	0.13	857.48
Building Worker Trips	0.67	1.27	22.59	0.03	0.16	0.09	0.25	0.06	0.08	0.13	3,330.09
Coating 06/28/2013-12/31/2013	67.42	0.04	0.66	0.00	0.00	0.00	0.01	0.00	0.00	0.00	97.81
Architectural Coating	67.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.02	0.04	0.66	0.00	0.00	0.00	0.01	0.00	0.00	0.00	97.81
Time Slice 1/6/2014-2/28/2014 Active Days: 40	<u>3.99</u>	<u>25.00</u>	<u>17.39</u>	<u>0.00</u>	<u>0.02</u>	<u>1.88</u>	<u>1.90</u>	<u>0.01</u>	<u>1.73</u>	<u>1.73</u>	<u>2,911.74</u>
Asphalt 01/06/2014-02/28/2014	3.99	25.00	17.39	0.00	0.02	1.88	1.90	0.01	1.73	1.73	2,911.74
Paving Off-Gas	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.83	24.66	15.14	0.00	0.00	1.86	1.86	0.00	1.71	1.71	2,522.32
Paving On Road Diesel	0.02	0.22	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	47.55
Paving Worker Trips	0.06	0.12	2.16	0.00	0.02	0.01	0.03	0.01	0.01	0.01	341.88

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 12/1/2011 - 12/31/2011 - Grade Site

For Soil Stabilizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stabilizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stabilizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.47	6.48	5.44	0.00	0.01	0.01	7,776.80
Hearth							
Landscape	0.25	0.04	3.09	0.00	0.01	0.01	5.62
Consumer Products							
Architectural Coatings	2.45						
TOTALS (lbs/day, unmitigated)	3.17	6.52	8.53	0.00	0.02	0.02	7,782.42

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Quality restaurant	15.59	19.15	170.71	0.18	1.61	1.04	17,547.96
Hotel	38.33	43.63	386.90	0.42	3.73	2.41	40,616.23
TOTALS (lbs/day, unmitigated)	53.92	62.78	557.61	0.60	5.34	3.45	58,164.19

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Temperature (F): 80 Season: Summer

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Quality restaurant	89.95	1000 sq ft	34.00	3,058.30	16,895.25	
Hotel	8.17	rooms	769.00	6,282.73	39,259.27	
				9,341.03	56,154.52	

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.6	0.8	99.0	0.2
Light Truck < 3750 lbs	7.3	2.7	94.6	2.7
Light Truck 3751-5750 lbs	23.0	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.6	0.9	99.1	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	81.2	18.8
Life-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.8	64.3	35.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential				Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer	
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9	
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6	
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0	
% of Trips - Residential	32.9	18.0	49.1				
% of Trips - Commercial (by land use)							
Quality resturant				8.0	4.0	88.0	
Hotel				5.0	2.5	92.5	

Operational Changes to Defaults

Appendix B

Proposed Project
GHG Emission Calculations Output
(CalEEMod)

Site "C" Hotel and Restaurant Project
South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Hotel	769	Room
Quality Restaurant	34	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Utility Company	Southern California Edison
Climate Zone	8	Precipitation Freq (Days)	31		

1.3 User Entered Comments

- Project Characteristics -
- Land Use - Project Site will be constructed on a 5 acre site.
- Construction Phase - Construction phasing based on an estimated timeline for the project.
- Off-road Equipment -
- Construction Off-road Equipment Mitigation -
- Mobile Land Use Mitigation -

- Area Mitigation -
- Energy Mitigation -
- Water Mitigation -
- Waste Mitigation -

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Year	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Blk-CO2	NBlk-CO2	Total CO2	CH4	N2O	CO2e
2011	30.33	161.36	134.86	0.23	9.18	8.46	17.63	0.14	8.33	8.48	0.00	23,086.65	0.00	2.00	0.00	23,128.65
2012	226.74	131.06	125.89	0.22	12.55	7.33	19.88	0.17	7.21	7.36	0.00	22,419.36	0.00	1.77	0.00	22,456.57
2013	17.49	69.12	77.44	0.15	9.18	3.61	12.78	0.14	3.50	3.65	0.00	15,341.57	0.00	0.95	0.00	15,361.49
2014	5.47	32.18	21.73	0.03	0.23	2.74	2.97	0.00	2.74	2.75	0.00	3,103.41	0.00	0.48	0.00	3,113.46
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

Year	lb/day											lb/day				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2011	30.33	161.36	134.86	0.23	9.18	8.46	17.63	0.14	8.33	8.48	0.00	23,086.65	0.00	2.00	0.00	23,128.65
2012	228.74	131.06	125.89	0.22	12.55	7.33	19.88	0.17	7.21	7.38	0.00	22,419.38	0.00	1.77	0.00	22,456.57
2013	17.48	68.12	77.44	0.15	9.18	3.61	12.78	0.14	3.50	3.65	0.00	15,341.57	0.00	0.95	0.00	15,361.49
2014	5.47	32.18	21.73	0.03	0.23	2.74	2.97	0.00	2.74	2.75	0.00	3,103.41	0.00	0.48	0.00	3,113.46
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

2.2 Overall Operational

Unmitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	30.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	1.44	13.13	11.03	0.08	0.00	0.00	1.00	0.00	0.00	1.00	0.30	15,760.51	0.29	0.30	0.29	15,856.42
Mobile	100.83	110.72	434.77	0.74	77.37	4.82	82.19	1.10	4.12	5.22	2.84	74,308.83	2.84	2.84	2.84	74,368.42
Total	132.35	123.85	445.80	0.82	77.37	4.82	83.19	1.10	4.12	6.22	3.14	90,069.34	3.14	0.29	0.29	90,224.84

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	30.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	1.34	12.14	10.20	0.07	0.00	0.00	0.92	0.00	0.00	0.92	0.28	14,567.90	0.27	0.28	0.27	14,656.56
Mobile	99.99	109.86	431.25	0.73	76.60	4.77	81.37	1.09	4.08	5.17	2.81	73,590.56	2.81	2.81	2.81	73,649.64
Total	131.41	122.00	441.45	0.80	76.60	4.77	82.29	1.09	4.08	6.09	3.09	88,158.46	3.09	0.27	0.27	88,306.20

3.0 Construction Detail

3.1 Mitigation Measures Construction

- Use Soil Stabilizer
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Demo - 2011

Unmitigated Construction On-Site

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Off-Road	15.95	120.09	69.98	0.11	6.90	6.90	6.90	6.90	6.90	6.90		11,551.44		1.43		11,581.45
Total	15.95	120.09	69.98	0.11		6.90	6.90		6.90	6.90		11,551.44		1.43		11,581.45

3.2 Demo - 2011

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	4.16	37.55	22.13	0.05	1.76	1.33	3.09	0.04	1.22	1.27		5,188.14		0.16		5,192.60
Worker	10.22	3.72	42.75	0.06	7.41	0.23	7.65	0.10	0.22	0.32		6,346.07		0.41		6,354.80
Total	14.38	41.27	64.88	0.11	9.17	1.56	10.74	0.14	1.44	1.59		11,535.21		0.57		11,547.20

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Off-Road	15.95	120.09	69.88	0.11	6.90	6.90	6.90	6.90	6.90	6.90	0.00	11,551.44		1.43		11,581.45
Total	15.95	120.09	69.88	0.11	6.90	6.90	6.90	6.90	6.90	6.90	0.00	11,551.44		1.43		11,581.45

3.2 Demo - 2011

Mitigated Construction Off-Site

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	4.16	37.55	22.13	0.05	1.76	1.33	3.09	0.04	1.22	1.27		5,189.14		0.16		5,192.60
Worker	10.22	3.72	42.75	0.06	7.41	0.23	7.65	0.10	0.22	0.32		6,346.07		0.41		6,354.60
Total	14.38	41.27	64.88	0.11	9.17	1.56	10.74	0.14	1.44	1.59		11,535.21		0.57		11,547.20

3.3 Grading - 2011

Unmitigated Construction On-Site

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					6.55	0.00	6.55	0.00	0.00	0.00						0.00
Off-Road	7.18	55.38	32.83	0.05		3.27	3.27		3.27	3.27		5,240.07		0.64		5,253.60
Total	7.18	55.38	32.83	0.05	6.55	3.27	9.82	0.00	3.27	3.27		5,240.07		0.64		5,253.60

3.3 Grading - 2011

Unmitigated Construction Off-Site

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.32	0.12	1.33	0.00	0.23	0.01	0.24	0.00	0.01	0.01	0.01	197.08	0.01	0.01	0.01	197.35	197.35
Total	0.32	0.12	1.33	0.00	0.23	0.01	0.24	0.00	0.01	0.01	0.01	197.08	0.01	0.01	0.01	197.35	197.35

Mitigated Construction On-Site

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					2.43	0.00	2.43	0.00	0.00	0.00						0.00	
Off-Road	7.18	55.38	32.83	0.05		3.27	3.27		3.27	3.27	0.00	5,240.07	0.64			5,253.60	
Total	7.18	55.38	32.83	0.05	2.43	3.27	5.70	0.00	3.27	3.27	0.00	5,240.07	0.64	0.64	0.64	5,253.60	5,253.60

3.3 Grading - 2011

Mitigated Construction Off-Site

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.32	0.12	1.33	0.00	0.23	0.01	0.24	0.00	0.01	0.01	0.01	197.08	0.01	0.01	0.01	197.35	197.35
Total	0.32	0.12	1.33	0.00	0.23	0.01	0.24	0.00	0.01	0.01	0.01	197.08	0.01	0.01	0.01	197.35	197.35

3.4 Building - 2012

Unmitigated Construction On-Site

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	5.63	37.37	23.73	0.04	2.54	2.54	2.54	2.54	2.54	2.54	4,040.62	0.51	0.51	0.51	4,051.23	4,051.23
Total	5.63	37.37	23.73	0.04	2.54	2.54	2.54	2.54	2.54	2.54	4,040.62	0.51	0.51	0.51	4,051.23	4,051.23

3.4 Building - 2012

Unmitigated Construction Off-Site

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	3.74	34.39	20.02	0.05	1.76	1.20	2.97	0.04	1.11	1.15	5,200.54	0.15	5,203.69	0.15	0.15	5,203.69	0.15
Worker	9.56	3.38	39.20	0.06	7.41	0.24	7.65	0.10	0.22	0.32	6,215.65	0.38	6,223.57	0.38	0.38	6,223.57	0.38
Total	13.30	37.77	59.22	0.11	9.17	1.44	10.62	0.14	1.33	1.47	11,416.19	0.53	11,427.26	0.53	0.53	11,427.26	0.53

Mitigated Construction On-Site

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	5.63	37.37	23.73	0.04	2.54	2.54	2.54	2.54	2.54	2.54	0.00	4,040.62	0.51	0.51	0.51	4,051.23	0.51
Total	5.63	37.37	23.73	0.04	2.54	2.54	2.54	2.54	2.54	2.54	0.00	4,040.62	0.51	0.51	0.51	4,051.23	0.51

3.4 Building - 2012

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Vendor	3.74	34.39	20.02	0.05	1.76	1.20	2.97	0.04	1.11	1.15		5,200.54	0.15	0.15		5,203.69
Worker	9.56	3.38	39.20	0.06	7.41	0.24	7.65	0.10	0.22	0.32		6,215.65	0.38	0.38		6,223.57
Total	13.30	37.77	59.22	0.11	9.17	1.44	10.62	0.14	1.33	1.47		11,416.19	0.53	0.53		11,427.26

3.4 Building - 2013

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	5.17	34.66	23.45	0.04		2.28	2.28		2.28	2.28		4,040.62	0.46	0.46		4,050.31
Total	5.17	34.66	23.45	0.04		2.28	2.28		2.28	2.28		4,040.62	0.46	0.46		4,050.31

3.4 Building - 2013

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	3.35	31.39	18.03	0.05	1.76	1.08	2.85	0.04	1.00	1.04		5,212.17		0.14		5,215.03
Worker	8.99	3.07	35.95	0.06	7.41	0.24	7.66	0.10	0.22	0.32		5,088.78		0.35		6,096.15
Total	12.33	34.46	53.98	0.11	9.17	1.32	10.51	0.14	1.22	1.36		11,300.95		0.49		11,311.18

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	5.17	34.66	23.45	0.04		2.28	2.28		2.28	2.28	0.00	4,040.62		0.46		4,050.31
Total	5.17	34.66	23.45	0.04		2.28	2.28		2.28	2.28	0.00	4,040.62		0.46		4,050.31

3.4 Building - 2013

Mitigated Construction Off-Site

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	3.35	31.39	16.03	0.05	1.76	1.08	2.85	0.04	1.00	1.04		5,212.17		0.14		5,215.03
Worker	8.98	3.07	35.95	0.06	7.41	0.24	7.66	0.10	0.22	0.32		6,086.78		0.35		6,096.15
Total	12.33	34.46	53.98	0.11	9.17	1.32	10.51	0.14	1.22	1.36		11,300.95		0.49		11,311.18

3.5 Architectural Coating - 2012

Unmitigated Construction On-Site

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	200.31					0.00	0.00		0.00	0.00						0.00
Off-Road	7.28	55.14	33.84	0.05		3.29	3.29		3.29	3.29		5,521.26		0.65		5,534.94
Total	207.59	55.14	33.84	0.05		3.29	3.29		3.29	3.29		5,521.26		0.65		5,534.94

3.5 Architectural Coating - 2012

Unmitigated Construction Off-Site

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	2.22	0.78	9.09	0.01	3.37	0.06	3.43	0.02	0.05	0.07	1,441.31	0.09	1,443.15	0.09		1,443.15	
Total	2.22	0.78	9.09	0.01	3.37	0.06	3.43	0.02	0.05	0.07	1,441.31	0.09	1,443.15	0.09		1,443.15	

Mitigated Construction On-Site

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Archit Coating	200.31				0.00	0.00	0.00	0.00	0.00	0.00						0.00	
Off-Road	7.28	55.14	33.84	0.05	3.29	3.29	3.29	3.29	3.29	3.29	0.00	5,521.26	0.65	0.65		5,534.94	
Total	207.59	55.14	33.84	0.05	3.29	3.29	3.29	3.29	3.29	3.29	0.00	5,521.26	0.65	0.65		5,534.94	

3.5 Architectural Coating - 2012

Mitigated Construction Off-Site

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	2.22	0.78	9.09	0.01	3.37	0.06	3.43	0.02	0.05	0.07	1,441.31	1,441.31	0.09	0.09		1,443.15	
Total	2.22	0.78	9.09	0.01	3.37	0.06	3.43	0.02	0.05	0.07	1,441.31	1,441.31	0.09	0.09		1,443.15	

3.6 Paving - 2014

Unmitigated Construction On-Site

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	5.20	32.09	20.70	0.03	2.74	2.74	2.74	2.74	2.74	2.74	2,917.65	2,917.65	0.47	0.47		2,927.48	
Paving	0.00				0.00	0.00	0.00	0.00	0.00	0.00						0.00	
Total	5.20	32.09	20.70	0.03	2.74	2.74	2.74	2.74	2.74	2.74	2,917.65	2,917.65	0.47	0.47		2,927.48	

3.6 Paving - 2014

Unmitigated Construction Off-Site

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.26	0.09	1.03	0.00	0.23	0.01	0.24	0.00	0.01	0.01	0.01	185.76	0.01	0.01		185.96	
Total	0.26	0.09	1.03	0.00	0.23	0.01	0.24	0.00	0.01	0.01	0.01	185.76	0.01	0.01		185.98	

Mitigated Construction On-Site

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	5.20	32.09	20.70	0.03	2.74	2.74	2.74	2.74	2.74	2.74	0.00	2,917.65	0.47			2,927.48	
Paving	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	5.20	32.09	20.70	0.03	2.74	2.74	2.74	2.74	2.74	2.74	0.00	2,917.65	0.47	0.47		2,927.48	

3.6 Paving - 2014

Mitigated Construction Off-Site

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.26	0.09	1.03	0.00	0.23	0.01	0.24	0.00	0.01	0.01	185.76	0.01	185.76	0.01	0.01	185.98	0.00
Total	0.26	0.09	1.03	0.00	0.23	0.01	0.24	0.00	0.01	0.01	185.76	0.01	185.76	0.01	0.01	185.98	0.00

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

Category	ROG	NOx	CD	SO2	ib/day				ib/day				CO2e
					Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	
Mitigated	98.99	109.86	431.25	0.73	76.60	4.77	81.37	1.08	4.08	5.17	73,590.56	2.81	73,649.64
Unmitigated	100.83	110.72	434.77	0.74	77.37	4.82	82.19	1.10	4.12	5.22	74,308.83	2.84	74,368.42
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT		Mitigated Annual VMT	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Hotel	6,282.73	6,298.11	4575.55	16,818,912	16,650,723		
Quality Restaurant	3,058.30	3,208.24	2453.44	5,443,114	5,388,683		
Total	9,341.03	9,506.35	7,028.99	22,262,027	22,039,407		

4.3 Trip Type Information

Land Use	Miles				Trip %			
	H-W or C-W	H-S or C-C	H-O or C-NW	H-O or C-C	H-W or C-W	H-S or C-C	H-O or C-NW	H-O or C-C
Hotel	8.90	13.30	7.40	19.40	61.60	19.00		
Quality Restaurant	8.90	13.30	7.40	12.00	69.00	19.00		

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
NaturalGas Mitigated	1.34	12.14	10.20	0.07	0.00	0.00	0.92	0.00	0.00	0.92	14,567.90	0.28	0.27	0.28	0.27	14,656.56
NaturalGas Unmitigated	1.44	13.13	11.03	0.08	0.00	0.00	1.00	0.00	0.00	1.00	15,760.51	0.30	0.29	0.30	0.29	15,856.42
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	lb/day																
	NaturalGas Use kBTU	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hotel	109426	1.18	10.73	9.01	0.06	0.00	0.00	0.82	0.00	0.00	0.82	12,873.50	0.25	0.24	0.25	0.24	12,951.95
Quality Restaurant	24538.7	0.26	2.41	2.02	0.01	0.00	0.00	0.18	0.00	0.00	0.18	2,886.90	0.06	0.05	0.06	0.05	2,904.47
Total		1.44	13.14	11.03	0.07	0.00	0.00	1.00	0.00	0.00	1.00	15,760.50	0.31	0.29	0.31	0.29	15,856.42

5.2 Energy by Land Use - Natural Gas

Mitigated

Land Use	lb/day																
	Natural Gas Use kBTU	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hotel	100,058	1.08	9.81	8.24	0.06	0.00	0.00	0.75	0.00	0.00	0.75	11,771.59	0.23	0.22	0.23	0.22	11,843.23
Quality Restaurant	23,7686	0.26	2.33	1.96	0.01	0.00	0.00	0.18	0.00	0.00	0.18	2,796.31	0.05	0.05	0.05	0.05	2,813.32
Total	1.34	12.14	10.20	0.07	0.00	0.00	0.93	0.93	0.00	0.00	0.93	14,567.90	0.28	0.27	0.28	0.27	14,656.55

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Exterior

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Mitigated	30.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated	30.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	7.30					0.00	0.00		0.00	0.00						0.00
Consumer Products	22.78					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	0.00		0.00
Total	30.08	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	0.00		0.00

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	7.30					0.00	0.00		0.00	0.00						0.00
Consumer Products	22.78					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	0.00		0.00
Total	30.08	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	0.00		0.00

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Reclaimed Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Vegetation

CALCULATION OF TOTAL GHG PERCENTAGES

CONSTRUCTION GHG CONTRIBUTION

lbs per day (Total from Table 9)	63950.4
1 ton:	<u>2000</u>
Total (tons per day)	<u>32.0</u>

OPERATION GHG CONTRIBUTION (Metric Tons per Year)

Phase 1	
lbs of CO2 Eq. per day (Total from Table 12)	98600
1 ton:	<u>2000</u>
tons per year	17994.5

Metric Tons of GHG (Cal)	600,000,000
Project's CO2 Emissions (tons)	<u>17994.5</u>
	0.000030
Project's % contribution	0.002999083

Tetragrams of GHG (Cal)	492
Project's CO2 Eq. Emissions (Tg from TB 12)	<u>0.018</u>
	0.000037
Project's % contribution	0.00365854

Appendix C

Traffic Impact Study
Project Trip Generation

TABLE 3
Project Trip Generation

Proposed Land Uses				Peak Hour						Daily
Land Use	ITE Code	Quantity	Units ¹	AM			PM			
				In	Out	Total	In	Out	Total	
Hotel	310	769	RM	261	169	431	238	215	454	6,283
Quality Restaurant	931	34,000	TSF	17	11	28	171	84	255	3,058
Less Internal Capture (35%)				-6	-4	-10	-60	-29	-89	-1,070
Less Pass-By (25%)				-3	-2	-5	-28	-14	-41	-497
Sub-Total (Quality Restaurant)				8	5	14	83	41	124	1,491
Gross Trip generation (Entire Site)				278	180	459	409	299	709	9,341
Net Trip Generation (Entire Site)				269	174	444	321	256	578	7,774

¹ RM = Rooms
TSF = Thousand Square Feet
ODU = Occupied Dwelling Units

² The ITE Trip Generation (8th Edition) does not provide daily trip generation for this land use. The daily trip generation shown above was computed as (PM Peak Hour Total) x (10).

Subject: Fwd: Hotel Site C
From: Greg Blodgett <greg1@ci.garden-grove.ca.us>
Date: Wed, 6 Jul 2011 15:45:54 -0700 (PDT)
To: Paul Guerrero <paulg@ci.garden-grove.ca.us>
CC: Matthew Reid <matt.reid@landanddesign.com>

Greg Blodgett
SR Project Manager
City of Garden Grove
Economic Development

----- Forwarded Message -----

From: "Jayna Morgan" <Jayna.Morgan@aecom.com>
To: "Greg Blodgett" <greg1@ci.garden-grove.ca.us>
Cc: "Paul Guerrero" <paulg@ci.garden-grove.ca.us>
Sent: Tuesday, July 5, 2011 10:12:58 AM
Subject: FW: Hotel Site C

Hi Guys,

I am forwarding you this WSA report as I did not see your name on the list.

Paul can you also send me a copy of the Title Report we talked about last week.

Don says we will be able to prove a more accurate cost for creating the base map with the Title Report including Legal Description.

Thanks!

Jayna Morgan

AECOM

T. 949.660.8044

From: Mike Swan [mailto:m~~swan~~@psomas.com]
Sent: Friday, July 01, 2011 5:01 PM
To: David Entsminger
Cc: Maria Parra; rhager@wss-law.com; Morgan, Jayna; Chang, Jane
Subject: RE: Hotel Site C

David -

Attached is a draft of the subject Water Supply Assessment. Please review and provide any comments. I still need to insert a vicinity/location map and a site plan, which I have requested from AECOM, the EIR consultant. If I get those, I will forward to you ASAP but they will definitely be in the final document. I have also not included Appendix C, which is meant to be your latest BMP report filing with the CUWCC and I understand the City is currently working on.

Michael D. Swan, PE
PSOMAS | Balancing the Natural and Built Environment

Senior Project Manager
Water & Wastewater Infrastructure
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707 714.751.7373
Direct 714.481.7979

From: David Entsminger [<mailto:daviden@ci.garden-grove.ca.us>]
Sent: Friday, July 01, 2011 8:58 AM
To: Mike Swan
Cc: Maria Parra
Subject: Re: Hotel Site C

Mike:

Are you still on schedule to get us copies of the WSA today? Please advise.....thanks.

David E. Entsminger
Water Services Manager
(714) 741-5349

----- Forwarded Message -----

From: "Mike Swan" <mswan@psomas.com>
To: "David Entsminger" <daviden@ci.garden-grove.ca.us>
Cc: "Maria Parra" <mariap@ci.garden-grove.ca.us>
Sent: Thursday, June 23, 2011 2:08:24 PM
Subject: RE: Hotel Site C

David -

We plan to have a draft in a week, by the end of next week at the latest. Do you have a distribution list for the first draft of the WSA. I was thinking it should be Jayna at AECOM, you and Greg (I assume). Does it need to go to anyone else, or is that enough and those individuals can forward it to whoever else needs to review?

Michael D. Swan, PE
PSOMAS | Balancing the Natural and Built Environment

Senior Project Manager
Water & Wastewater Infrastructure
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707 714.751.7373
Direct 714.481.7979

From: David Entsminger [mailto:daviden@ci.garden-grove.ca.us]
Sent: Thursday, June 23, 2011 1:57 PM
To: Mike Swan
Cc: Maria Parra
Subject: Hotel Site C

Mike:

As you know, we have not had much communication on this project. Maria was asking me about the status of the WSA for this project. Would you be so kind as to fill us in where you are at with this?

DEE

International_West_WSA_7_1_11.pdf	Content-Description: International_West_WSA_7_1_11.pdf
	Content-Type: application/pdf
	Content-Encoding: base64

HARBOR BOULEVARD SITE C HOTELS WATER SUPPLY ASSESSMENT

July 2011

Prepared for:
CITY OF GARDEN GROVE



Prepared by:
PSOMAS
3 Hutton Centre Drive
Suite 200
Santa Ana, CA 92707
Project No. 2GAR021500

TABLE OF CONTENTS

EXECUTIVE SUMMARY	ES-1
1.0 INTRODUCTION.....	1-1
2.0 LEGISLATION	2-1
2.1 SB 610 – Costa – Water Supply Planning	2-1
3.0 HARBOR BOULEVARD SITE C HOTELS	3-1
3.1 Proposed Project Description.....	3-1
3.2 Proposed Project Water Demands	3-1
4.0 CITY OF GARDEN GROVE WATER DEMAND AND SUPPLIES	4-1
4.1 Overview of Supply and Demand.....	4-1
4.2 Groundwater	4-4
4.3 Imported Water (Surface Water) - Metropolitan	4-8
4.4 Municipal Water District of Orange County	4-11
4.5 Recycled Water	4-11
5.0 RELIABILITY OF WATER SUPPLIES	5-1
5.1 Metropolitan Water District of Southern California	5-1
5.1.1 State Water Project	5-3
5.1.2 Colorado River Aqueduct.....	5-6
5.1.3 Water Transfer and Exchange Programs.....	5-9
5.1.4 Supply Management Strategies	5-13
5.1.5 Metropolitan Conjunctive Use Program.....	5-13
5.1.6 Metropolitan Groundwater Replenishment Program	5-13
5.2 Municipal Water District of Orange County	5-14
5.3 Orange County Water District	5-14
5.3.1 OCWD Long Term Facilities Plan (LTFP).....	5-17
5.3.2 OCWD Groundwater Management Plan (GMP).....	5-17
5.4 City of Garden Grove.....	5-18
5.4.1 Water System	5-18
5.4.2 Past and Current Efforts	5-21
5.5 Dry Year Reliability Comparison	5-24
6.0 CONCLUSION	6-1
7.0 REFERENCES.....	7-1

TABLES

Table 3.1 Existing Water Use Breakdown on Project Site (Acre-Feet per Year (AFY)).....	3-1
Table 3.2 Estimated Water Demand for Proposed Project	3-2
Table 4.1 Water Service Area Population – Past, Current and Projected.....	4-1
Table 4.2 Water Demand Projections (AFY)	4-2
Table 4.3 City of Garden Grove Historical Production by Source with Sales (AFY)....	4-3
Table 4.4 Projected Water Demand and Supply City of Garden Grove, including the Proposed Project (AFY)	4-4
Table 4.5 Total Retail Water Demand in Metropolitan’s Service Area for Orange County - Includes Municipal and Industrial, and Agriculture (AF).....	4-10
Table 5.1 SWP Deliveries to Metropolitan (AF).....	5-4
Table 5.2 Metropolitan’s Regional Water Supply/Demand Reliability Projections (AFY)	5-25
Table 5.3 City of Garden Grove Projected Water Supply and Demand Normal Year (AFY)	5-28
Table 5.4 City of Garden Grove Projected Water Supply and Demand Single Dry Year (AFY)	5-29
Table 5.5 City of Garden Grove Projected Water Supply and Demand Multiple Dry Water Years 2011-2015 (AFY).....	5-30
Table 5.6 City of Garden Grove Projected Water Supply and Demand Multiple Dry Water Years 2016-2020 (AFY).....	5-31
Table 5.7 City of Garden Grove Projected Water Supply and Demand Multiple Dry Water Years 2021-2025 (AFY).....	5-32
Table 5.8 City of Garden Grove Projected Water Supply and Demand Multiple Dry Water Years 2026-2030 (AFY).....	5-33
Table 5.9 City of Garden Grove Projected Water Supply and Demand Multiple Dry Water Years 2031-2035 (AFY).....	5-34

FIGURES

Figure 3.1 Regional Location of Proposed Project.....	3-3
Figure 3.2 Conceptual Site Plan.....	3-4
Figure 5.1 City of Garden Grove Facilities & Service Area.....	5-20

APPENDICES

Appendix A	Existing Water Demands on Project Site
Appendix B	Harbor Blvd. Development Land Use Plan and Statistics (from 2008 Water Master Plan)
Appendix C	2009-2010 Report Summary Filing with CUWCC

ABBREVIATIONS/ACRONYMS

AF	Acre-feet
AFY	Acre-feet per year
AWWA	American Waterworks Association
BDCP	Bay Delta Conservation Plan
BEA	Basin Equity Assessment
BMP	Best Management Practice
BPP	Basin Production Percentage
CAWCD	Central Arizona Water Conservation District
CDR	Center for Demographic Research
CEQA	California Environmental Quality Act
cfs	Cubic feet per second
CRA	Colorado River Aqueduct
CSUF	California State University Fullerton
CUP	Conjunctive Use Program
CVP	Central Valley Project
CVWD	Coachella Valley Water District
DMM	Demand Management Measure
DWCV	Desert Water Agency/Coachella Valley Water District
DWR	California Department of Water Resources
EIR	Environmental Impact Report
ESA	Endangered Species Act
ET	Evapotranspiration
FY	Fiscal Year
GMP	Groundwater Management Plan
gpd	Gallons per day
gpm	Gallons per minute
GWRS	Groundwater Replenishment System
HGL	Hydraulic grade line
IID	Imperial Irrigation District
IRP	Integrated Resources Planning
ksf	Thousand square feet
LACDPW	Los Angeles County Department of Public Works
LRP	Local Resources Program
LTFP	Long Term Facilities Plan
MAF	Million acre-feet
Metropolitan,	
MWD	Metropolitan Water District of Southern California
MGD	Million gallons per day
MOU	Memorandum of Understanding
MPR	Master Plan Report
MSL	Mean Sea Level

MWDOC	Municipal Water District of Orange County
NPDES	National Pollutant Discharge Elimination
OCSD	Orange County Sanitation District
OCWD	Orange County Water District
PVID	Palo Verde Irrigation District
QSA	Quantification Settlement Agreement
RA	Replenishment Assessment
RUWMP	Regional Urban Water Management Plan
SAR	Santa Ana River
SB	Senate Bill
SCAG	Southern California Association of Governments
SDCWA	San Diego County Water Authority
sf	Square feet
SNWA	Southern Nevada Water Authority
SSS	Seasonal Shift Storage
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAF	Thousand Acre-Feet
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
WOCWB	West Orange County Water Board
WRD	Water Replenishment District
WSA	Water Supply Assessment
WSDM	Water Surplus and Drought Management

EXECUTIVE SUMMARY

This Water Supply Assessment (WSA) has been prepared for the City of Garden Grove Harbor Boulevard Site C Hotels Project (the "Proposed Project") in accordance with applicable sections of the Public Resources Code and California Water Code as referenced in Senate Bill 610. The Proposed Project includes 3 hotels and 19 casitas with ancillary restaurant, ballroom and meeting space uses on approximately 5 acres located in an urbanized area in the City of Garden Grove, Orange County. The project site is entirely surrounded by development, which consists of commercial, retail, and residential uses.

The purpose of this WSA is to provide information to verify that there is sufficient water supply available to the City to provide for the Proposed Project now and into the future. This WSA evaluates the additional water demands that will need to be served by the City as a result of the development of the Proposed Project.

Water Demand

In 2009/10, the City's water demand was approximately 25,820 acre-feet per year (AFY), which was actually 3,480 AFY less than what was projected in the 2005 Urban Water Management Plan (UWMP) and 3,972 less than projected in the City's 2008 Water Master Plan. These totals include unaccounted for water. The 2009/10 demand is also 3,206 AFY less than what was actually used in 2005/06 (four years prior). In essence, this means that City businesses and residents are using substantially less water than was originally forecast, which is likely due to the fact that (i) the previous 2005 UWMP and Water Master Plan conservatively over-estimated water demand, and (ii) development has slowed due to the economic downturn, (iii) water demand is being reduced due to effective conservation efforts being undertaken by the City and consumers and due to more stringent codes and more efficient appliances (e.g., high-efficiency clothes washing machines, low flow toilets, more efficient landscape irrigation, etc.); (iv) the City adopted substantial water rate increases over the past few years; (v) 2009/10 was the first year Metropolitan Water District of Southern California (Metropolitan) enacted its Water Allocation Plan; and (vi) precipitation was above average in 2009/10.

At the end of the 20-year planning period for this WSA, as required by SB 610, City water demand for 2029/30 is projected to be approximately 30,472 AFY. This projection in future demand for the City was based on the City's 2010 Urban Water Management Plan (UWMP), which was adopted by City Council on June 14, 2011. This demand projection was based on detailed development and water demand projections included in the 2008 Water Master Plan, including the Proposed Project, and then adjusted based on existing demands and recent conservation.

The total water demand for the Proposed Project is 179.1 acre-feet per year (AFY) for the proposed hotels, 19 casitas and ancillary uses on the Project site. Taking this 179.1 AFY of water demand for the proposed new uses and subtracting out 4.8 AFY of existing

water use from land uses on the existing site to be removed; the total net new demand for the Proposed Project is 174.3 AFY.

Supply Projections

The City's sources of supply consist of groundwater and imported surface water. Over the past five years, the City has received, on average, 69 percent of its water supply from its groundwater wells that access the Orange County Groundwater Basin and 31 percent from imported water from the Metropolitan Water District of Southern California (Metropolitan).

Analysis of water supply projections for the City demonstrates that projected supplies will meet demand through fiscal year 2029/30. These projections consider water development programs and projects as well as water conservation, as described in the City's 2010 UWMP and Section 5 of this WSA. The City's groundwater and imported water supplies are anticipated to remain stable based on studies and reports of the Orange County Water District (OCWD) and the Metropolitan Water District of Southern California (Metropolitan), respectively. Statewide water planning is also considering current dry conditions and Bay Delta pumping scenarios, which are also discussed in Section 5.

Based on the expected long-term average Basin Production Percentage (BPP), the City's water supply projection assumes that up to 62 percent will be groundwater, and the remaining 38 percent will be imported water during normal, single-dry, and multiple dry years, consistent with Orange County Water District (OCWD) conservative planning estimates. Both the imported water and groundwater sources have been confirmed as reliable by Metropolitan and OCWD, respectively. Additionally, analyses of normal, single-dry, and multiple-dry year scenarios also demonstrate the City's ability to meet demand during the 20-year analysis period.

Moreover, should extraordinary circumstances require it, the City can meet its water demand by (1) increasing production of groundwater beyond the BPP up to the basin safe yield, (2) increasing imported water purchases from available storage programs, and/or (3) decreasing demand through water conservation measures. The latter method has proved effective in reducing citywide demands well below 10 percent as demonstrated during the recent Water Allocation Plan enacted by Metropolitan in 2009/10 and 2010/11 and passed through to the City by Municipal Water District of Orange County (MWDOC), the City's imported water wholesaler and Metropolitan member agency.

Reliability of future water supplies to the region will be ensured through continued implementation of the OCWD Groundwater Management Plan, OCWD's Long Term Facilities Plan, local agency programs, and the combined efforts and programs among member agencies of Metropolitan and cooperative agencies. These agencies include all water wholesalers and retailers, the Orange County Sanitation District, the Santa Ana Regional Water Quality Control Board, and the Santa Ana Watershed Project Authority.

Conclusion

The information included in this water supply assessment identifies a sufficient and reliable water supply for the City, now and into the future, including a sufficient water supply for the Proposed Project. These supplies are also sufficient to provide for overall City-wide growth at the rate projected in the City's 2008 Water Master Plan.

Existing infrastructure is adequate to provide the estimated water demand to the Project site; however, an internal fire loop will most likely be required to be constructed around the site to provide adequate fire fighting capability to all structures located on the parcel.

1.0 INTRODUCTION

Harbor Boulevard Site C Hotels – General Description/Location

The Harbor Boulevard Site C Hotel and Restaurant development (Proposed Project or Project) consists of 3 hotels, totaling up to 750 rooms, a building along the back (easterly side) of the site housing the parking structure with ancillary restaurant, ballroom, and meeting space uses and 19 casitas, and restaurants around the hotels to be constructed on a total site area of approximately 5 acres. In addition to the parking structure, the site also includes some surface parking.

The site currently includes eight assessor parcels located on the east side of Harbor Boulevard between Twintree Lane and Chapman Avenue. Regional access to the site is via Harbor Boulevard from State Route 22 approximately 1 ¼ miles to the north and from Interstate 5 approximately 1 ¾ miles to the west. The Project site is approximately 2 miles south of the Disneyland Resort and is entirely surrounded by existing development, which consists of commercial, retail and residential uses.

Purpose of this Water Supply Assessment (WSA)

The purpose of this WSA is to provide information to ascertain if there is sufficient water supply available to the City to provide for the Proposed Project now and in the future. This WSA develops the additional water demands that will need to be served by the City as a result of the proposed Harbor Boulevard Site C Hotels project. This additional demand is then added to the other projected demands on the City over the next 20 years and compared to available supplies. The proposed land use and commensurate additional water demand requires the preparation of a new WSA in conjunction with the environmental documentation for the Project.

2.0 LEGISLATION

Because of the size of the Proposed Project, the State of California's Senate Bill (SB) 610 requires that a WSA be completed to evaluate the potential affects of the proposed development on current and future water supplies. Prior to recordation of a final tract or parcel map, a Water Supply Verification in accordance with SB 221 may be required. In addition to the threshold triggering the requirement for a WSA at 500 residential dwelling units or more, one of the other thresholds is 500 hotel rooms or more. The following outlines the requirements of SB 610.

2.1 SB 610 – Costa – Water Supply Planning

SB 610 was adopted into law on October 9, 2001. It mandates that a city or county approving certain projects subject to CEQA (i) identify any public water system that may supply water for the project, and (ii) request the public water system to prepare a specified water supply assessment. The assessment is to include the following:

1. A discussion of whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing.
2. The identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project and water received in prior years pursuant to those entitlements, rights, and contracts.
3. A description of the quantities of water received in prior years by the public water system under the existing water supply entitlements, water rights, or water service contracts.
4. A demonstration of water supply entitlements, water rights, or water service contracts by the following means:
 - a. Written contracts or other proof of entitlement to an identified water supply.
 - b. Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.
 - c. Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.
 - d. Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

5. The identification of other public water systems or water service contract holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system.
6. If groundwater is included for the supply for a proposed project, the following additional information is required:
 - a. Review of any information contained in the Urban Water Management Plan (UWMP) relevant to the identified water supply for the proposed project.
 - b. Description of any groundwater basin(s) from which the proposed project will be supplied. Adjudicated basins must have a copy of the court order or decree adopted and a description of the amount of groundwater the public water system has the legal right to pump. For non-adjudicated basins, information on whether the DWR has identified the basin as over-drafted or has projected that the basin will become over-drafted if present management conditions continue, in the most current bulletin of DWR that characterizes the condition of the basin, and a detailed description of the efforts being undertaken in the basin to eliminate the long-term overdraft condition.
 - c. Description and analysis of the amount and location of groundwater pumped by the public water system for the past five years from any groundwater basin which the proposed project will be supplied. Analysis should be based on information that is reasonably available, including, but not limited to, historic use records.
 - d. Description and analysis of the amount and location of groundwater projected to be pumped by the public water system from any groundwater basin by which the proposed project will be supplied. Analysis should be based on information that is reasonably available, including, but not limited to, historic use records.
 - e. Analysis of the sufficiency of the groundwater from the basin(s) from which the proposed project will be supplied.

The WSA shall be included in any environmental documentation prepared for the project. The WSA may include an evaluation of any information included in that environmental documentation. A determination shall be made whether the projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses.

Additionally, SB 610 requires new information to be included as part of an UWMP if groundwater is identified as a source of water available to the supplier. Information must include a description of all water supply projects and programs that may be undertaken to meet total projected water use. SB 610 prohibits eligibility for funds from specified bond acts until the plan is submitted to the State.

3.0 HARBOR BOULEVARD SITE C HOTELS

3.1 Proposed Project Description

The Proposed Project is located in an urbanized area in the City of Garden Grove, Orange County. *Figure 3.1* shows the Proposed Project's regional location, with the conceptual site plan shown on *Figure 3.2*. The Proposed Project includes full-service hotels with a maximum of 769 rooms; approximately 30,000 square feet (sf) of meeting space; 34,000 sf of restaurant space; a resort pool; and a parking structure.

As mentioned previously, the site currently includes eight assessor parcels of which only three are owned by the City of Garden Grove. Existing land uses include commercial use along Harbor Boulevard and single family residential use along Twintree Lane. The Proposed Project will replace all other uses currently located within the project site and is proposed for completion by year 2014. The Proposed project has been analyzed in one complete phase and all existing water demands on-site are assumed to be gone by at least one year prior to that time to make way for construction.

3.2 Proposed Project Water Demands

Existing demands within the Proposed Project site area were accounted for in the Water Master Plan and 2010 UWMP, along with all of the other existing demands within the City, so any water use associated with existing parcels (all planned to be phased out/demolished and replaced with the Proposed Project demands) will generate a credit against water demand for the Proposed Project. Therefore, water meter readings for the past four years, related to existing parcels, were compiled and are included in Appendix A. Table 3.1 summarizes the existing water use as would have been reflected in the 2010 UWMP.

Table 3.1
Existing Water Use Breakdown on Project Site
(Acre-Feet per Year (AFY))

	Water Use
Commercial - Harbor Blvd	3.0
Single Family Residential – Twintree Lane	1.8
Total	4.8

To estimate the demand for hotel use within the Proposed Project, we have compared water use data gathered from three hotels in Anaheim from meter reads averaged over a recent five-year period totaling 2,350 rooms. These hotels averaged 167 gallons per day (gpd) per room with one hotel, the Anaheim Hilton, having a significant amount of conference room and banquet space. The Hilton had an 11% higher room demand than

the next highest hotel with more nominal ancillary uses so it is logical to assume the more typical hotels would average about 10% less or 150 gpd per room. For the Proposed Project, water demands for the conference/banquet space is calculated separately and estimated at 350 gpd per 1,000 square feet of floor space (gpd/ksf). The demand for the freestanding restaurant is estimated using the conservative Los Angeles County Sanitation District demand factor of 1,000 gpd/ksf of dining space. Based on the above discussion, the estimated total water demand projections for the Proposed Project are as shown in Table 3.2.

**Table 3.2
 Estimated Water Demand for Proposed Project**

Project Land Use	Quantity	Units	Demand Factor		Water Demand	
					GPD	AFY
Hotel	769	Rooms	150	gpd/room	115,350	129.2
Conference/Banquet	30,000	SF	350	gpd/ksf	10,500	11.8
Restaurant	34,000	SF	1,000	gpd/ksf	34,000	38.1
TOTAL					179.1	

Taking the 179.1 acre-feet per year (AFY) of water demand for the Proposed Project from Table 3.2 and subtracting out the 4.8 AFY of existing water use that was included in the existing uses in the 2010 UWMP and will no longer be a draw on the water system once the Project is constructed; the total net new demand for the Proposed Project is 174.3 AFY.

Existing infrastructure is adequate to provide the estimated water demand to the Proposed Project site, however, an internal fire loop will most likely be required to be constructed around the site to provide adequate fire fighting capability to all locations on the parcel.

Figure 3.1 Regional Location of Proposed Project



Figure 3.2 Conceptual Site Plan



4.0 CITY OF GARDEN GROVE WATER DEMAND AND SUPPLIES

4.1 Overview of Supply and Demand

The City currently obtains water from the following primary water sources: (1) naturally and artificially recharged local groundwater, and (2) imported water. In addition, the City of Garden Grove Water Services Division maintains nine emergency interconnections with adjacent water retailers that are temporarily utilized on an as-needed basis. Over the past five years, the City has received, on average, 69 percent of its water supply from groundwater from the Orange County Groundwater Basin and 31 percent from imported water from the Metropolitan Water District of Southern California (Metropolitan). The Orange County Groundwater Basin is managed by the Orange County Water District (OCWD). Each of the sources of water for the City are briefly discussed in this section and more fully discussed in the subsequent sections.

Population Growth

Based on the State of California, Department of Finance 2010 population projections, Garden Grove's population density was approximately 9,866 people per square mile (May 2010). The City of Garden Grove currently provides water to both residents and businesses within a service area of approximately 17.8 square miles.

The population in Garden Grove was approximately 123,300 in 1980, and grew approximately 43.6% to 2010's population of 177,020 people. The Center for Demographic Research (CDR) at California State University Fullerton projects a 10% increase in the City's population over the next 25 years. This represents an average growth rate of 0.4 percent per year. These projections for Orange County communities are also utilized by the Southern California Association of Governments (SCAG). Only minimal changes in land use are anticipated over the next 25 years. Based on the City's 2010 UWMP, Garden Grove's water service area population is projected to increase to approximately 191,044 by the year 2030 and 194,550 by year 2035. Table 4.1, below, shows this most recent population data from CDR/SCAG.

**Table 4.1
Water Service Area Population – Past, Current and Projected**

Year	2005	2010	2015	2020	2025	2030	2035
City of Garden Grove	171,201	177,020	180,526	184,032	187,538	191,044	194,550

Source: Center for Demographic Research, California State University, Fullerton 2010

Water Demand

Currently, the total water demand for retail customers served by the City is approximately 27,500 acre-feet annually consisting entirely of potable water. In the last five years, the City's water demand has decreased by about 5 percent while population has increased by 2.5%. Some of this was due to water conservation efforts of the City (park irrigation reductions) and its residents due to the water allocation program under effect from Municipal Water District of Orange County and Metropolitan going into its second straight year. Some of this conservation could subside and per capita use could rise slightly above its current low now that the state wide drought has officially been declared over and the water allocation has been lifted. Per capita use could also rise with improvements in the economic picture. With its diligence in the promotion of water conservation as well as financial incentives to customers to retrofit their homes and businesses with water efficient devices and appliances, the City is projecting a 7% demand increase in the next 25 years despite a projected 10% population growth.¹

Additionally, the passage of Senate Bill x7-7 (SBx7-7) will increase efforts to reduce the use of potable supplies in the future. This new law requires all of California's retail urban water suppliers serving more than 3,000 AFY or 3,000 service connections to achieve a 20 percent reduction in demands (from a historical baseline) by 2020. Due to great water conservation efforts in the past decade, the City is on its way to meeting this requirement on its own. Moreover, the City has elected to join the Orange County 20x2020 Regional Alliance for measuring compliance with this requirement. The City, together with 28 other retail agencies in Orange County are committed to reduce the region's water demand by 2020 through the leadership of MWDOC, the region's wholesale provider.

The City's 2009/10 total water demand was 28,792 AF, which was met through a combination of 62% local groundwater and 38% imported water. Table 4.2 provides a projection of the City's water supply sources for the next 25 years based on their 2010 UWMP. Groundwater supply is projected to account for approximately 62% of the City's total water supply on average over the next 25 years. Imported water from MWDOC meets the remaining demand. The BPP is projected to be 62% for all years.

Table 4.2 Water Demand Projections (AFY)

Water Supply Sources	Fiscal Year Ending					
	2010	2015	2020	2025	2030	2035
MWDOC (Imported)	10,941	11,111	11,281	11,409	11,579	11,745
BPP Groundwater	17,851	18,129	18,407	18,615	18,893	19,162
Total	28,792	29,240	29,688	30,024	30,472	30,907

¹ City of Garden Grove 2010 UWMP, June 2011

As the regional wholesale supplier of imported water for Orange County, MWDOC in collaboration with each of its member agencies as well as with Metropolitan, its wholesaler, develops demand projections for imported water. MWDOC also collaborates with the Orange County Water District (OCWD) to develop demand projections for local groundwater. The City's 25-year demand projections for imported water shown in Table 4.2 are based on the projections provided by the City to MWDOC. The projections are based on a small increase in population of approximately 0.4 percent per year between 2010 and 2035 because the City is almost built out.

Table 4.3 shows historic water production by source for the past five years and total water sales. During certain seasons of 2006 and 2007, OCWD operated the In-lieu Program with Metropolitan by purchasing water from Metropolitan to meet demands of member agencies rather than pumping water from the groundwater basin. In 2008, 2009, and 2010 OCWD did not utilize in-lieu water because such water was not available to purchase from Metropolitan. This program was recently re-instated by Metropolitan due to the wet winter of 2009/10. In-lieu water is included in groundwater production quantities shown in Table 4.3.

The variance between the Water Supply and Water Sales figures is the result of system losses or unaccounted-for-water. The City has an unaccounted-for-water loss of about 4.5% based on the average system losses experienced by the City over the past five-year period. The American Waterworks Association (AWWA) states that the average unaccounted-for-water loss is approximately 10 percent. This water loss occurs due to meter inaccuracies, fire suppression, fire flow testing, hydrant and pipe flushing, pipeline breaks, etc.

Table 4.3
City of Garden Grove Historical
Production by Source with Sales (AFY)

Water Source	Fiscal Year Ending				
	2006	2007	2008	2009	2010
Imported Water	10,322	9,416	5,811	8,542	10,941
Groundwater Production	18,703	21,126	23,116	18,905	17,851
Total Water Supply	29,025	30,542	28,927	27,447	28,792
Total Water Sales	28,174	28,944	27,620	26,150	27,886

Demand and Supply Comparison

Table 4.4 shows the projected water demand and supply for the City of Garden Grove for a normal year utilizing data from the City's 2010 UWMP. The water demand projections included in the UWMP are based on the City's 2008 Water Master Plan projections subsequently modified for recent reductions in use. A land use-based methodology was used to project water demands included in the Proposed Project as a part of the Harbor Boulevard Development Plan Area. The projections included 5,900 hotel rooms and 139,000 square feet of restaurants in the Harbor Boulevard Development Plan Area.

The Proposed Project is scheduled to open in 2014 with a net demand increase of 174 AFY (total projected demand from Table 3.2 minus existing demand from Table 3.1). The Project demand is subtracted out from the citywide demand in the 2015 fiscal year projection and shown separately from there on into the future. The total City demand without the Proposed Project (first line under Demand in Table 4.4) was taken from Table 4.2 above with the net Proposed Project demand removed. Supply projections are based on groundwater production equal to 62% of the projected water demand and imported water supplying the remaining 38% demand. These supply projections are discussed in Section 5.4 of this report and do not represent the total supply capacity, but rather the projected supply needed to meet projected demands, as regional water suppliers to the City of Garden Grove including Metropolitan Water District and Municipal Water District of Orange County show surplus water supplies will be available.

Table 4.4
Projected Water Demand and Supply
City of Garden Grove, including the Proposed Project (AFY)

Water Sources	2015	2020	2025	2030	2035
SUPPLY					
Imported	11,111	11,281	11,409	11,579	11,745
Groundwater	18,129	18,407	18,615	18,893	19,162
Total Potable Supply	29,240	29,688	30,024	30,472	30,907
DEMAND					
Total City Demand (without Project)	29,066	29,514	29,850	30,298	30,733
Proposed Project Demand	174	174	174	174	174
Total Demand	29,240	29,688	30,024	30,472	30,907

4.2 Groundwater

The information in this section is intended to furnish the information required by Water Code section 10910(f).

Lower Santa Ana River Groundwater Basin

Local groundwater has been the cheapest and most reliable source of supply for the City. The City relies on approximately 10,000 acre-feet of groundwater from the Lower Santa Ana River Groundwater Basin (Orange County Basin) each year. This local source of supply has historically met approximately 60-80% of the City's total annual demand. The Basin underlies the north half of Orange County beneath broad lowlands. A description of the Coastal Plain of the Basin or DWR's Groundwater Basin Number 8-1, dated September 2001, states that the Basin underlies a coastal alluvial plain in the northwestern portion of Orange County. The Basin covers an area of approximately 350 square miles, bordered by the Coyote and Chino Hills to the north, the Santa Ana Mountains to the northeast, the Pacific Ocean to the southwest, and terminates at the

Orange County line to the northwest, where its aquifer systems continue into the Central Basin of Los Angeles County.²

The Basin is dominated by a deep structural depression containing a thick accumulation of fresh water-bearing imbedded marine and continental sand, silt and clay deposits. The sediments containing easily recoverable fresh water extend to approximately 2,000 feet in depth. Although water bearing aquifers exist below that level, reduced water quality and pumping make these materials economically unviable at present. Upper, middle and lower aquifer systems are recognized in the Basin with well production yields ranging from 500 to 4,500 gallons per minute, but are generally 2,000 to 3,000 gallons per minute.³

The aquifers comprising the Basin form a complex series of interconnected sand and gravel deposits. The Basin holds millions of acre feet of water, of which about 1.25 to 1.5 million AF is available for use.⁴ As set forth in DWR Bulletin 118 and in the 2009-2010 OCWD Engineer's Report, the Orange County Basin is a managed basin and not in a state of overdraft. To ensure that the Basin is not overdrawn, OCWD recharges the Basin with local and imported water. Groundwater conditions in the Basin are influenced by the natural hydrologic conditions. The Basin is recharged primarily by four sources: (1) local rainfall, which varies due to the extent of the annual seasonal precipitation; (2) storm and base flows from the Santa Ana River, which includes recycled wastewater from treatment plants in Riverside and San Bernardino Counties; (3) imported water; and (4) highly treated recycled wastewater. The Basin generally operates as a reservoir in which the net amount of water stored is increased in wet years to allow for manageable overdrafts in dry years.

Basin Production Percentage

As stated, the Orange County Groundwater Basin is managed by the OCWD, a special district created by the State Legislature in 1933 pursuant to the OCWD Act, an uncodified statutory scheme set forth in the State's Water Code. The Basin is unadjudicated. The Basin meets approximately 60 to 70 percent of the water supply demand within the boundaries of OCWD. There are 19 major producers including cities, water districts, and private water companies, extracting water from the Basin serving a population of approximately 2.55 million.⁵ All pumpers within the basin are permitted to pump from the Basin, but OCWD is charged with managing the groundwater basin. OCWD manages the Basin largely through the Basin Production Percentage (BPP) that it establishes each water year.

² DWR's Bulletin 118-1 Basin Description for Coastal Plain of Orange County Groundwater Basin Number 8-1. September 5, 2001.

³ DWR's Bulletin 118-1 Basin Description for Coastal Plain of Orange County Groundwater Basin Number 8-1. September 5, 2001.

⁴ Orange County Water District 2020 Master Plan Report. Chapter 3, Orange County Groundwater Basin Hydrology. 2000.

⁵ MWDOC and Center for Demographics Research (2008)

The BPP is set based on groundwater conditions, availability of imported water supplies, ideal precipitation, Santa Ana River runoff, and basin management objectives. In essence, the BPP represents a set percentage identifying the amount of groundwater all pumpers in the basin can pump without paying a high “pumping tax” or Basin Equity Assessment (BEA) to OCWD (described below). Thus, for example, if OCWD establishes a BPP of 65%, all pumpers within the Basin, including the City, can supply 65% of their water needs from groundwater supplies at a cost significantly less than the cost of imported water. The BPP is a major factor for the City in determining the cost of groundwater production. Groundwater production equal to or less than the BPP pays a replenishment assessment (RA). Funds collected by OCWD through RA payments made by all producers in the basin are used to fund groundwater replenishment and recharge programs aimed at ensuring the long-term viability and stability of the Basin.

If groundwater production greater than the BPP occurs, a Basin Equity Assessment (BEA) is charged against the producer on the amount of groundwater extracted beyond the BPP. The BEA is an additional fee (i.e., a higher “pumping tax”) paid on each AF of water pumped above the BPP, making the total cost of that water to Garden Grove equal to the cost of Tier 2 imported water from Metropolitan, plus well production costs.⁶ Thus, the BPP creates pricing incentives to ensure that groundwater producers pump within the framework established by the BPP.

Like funds collected by OCWD through the RA, funds collected by OCWD through the BEA are also used to fund groundwater replenishment, and recharge and recycling programs aimed at ensuring the long-term viability and stability of the Basin. The programs funded by the RA and the BEA include all of the groundwater replenishment, recharge, and recycling programs discussed below.

As part of its Basin management function, OCWD operates an extensive groundwater monitoring program whereby OCWD routinely tests all groundwater production wells located within the Basin in compliance with Title 22 of the California Administrative Code. OCWD maintains a sophisticated laboratory whereby chemists test the well water for traces of pollution, hydrocarbons, pesticides, and other chemical components. OCWD’s laboratories process tens of thousands of samples a year, and perform hundreds of thousands of analyses a year. As part of its monitoring and management duties, OCWD has developed and adopted a Groundwater Management Plan which is a program to increase water supplies and increase monitoring and groundwater contamination cleanup.

⁶ Metropolitan charges a Tier 1 water rate to recover the cost of maintaining a reliable amount of supply and a Tier 2 rate to include the cost of developing additional supply to encourage efficient use of local resources. As an example, Metropolitan’s Tier 1 rate for treated water as of January 1, 2011 is \$744 per acre-foot and the Tier 2 rate for treated water is \$869 per acre-foot.

Recharge and Replenishment

Recharging water into the basin through natural and artificial means is essential to support pumping from the basin. Active recharge of groundwater began in 1949, in response to increasing drawdown of the basin and consequently the threat of seawater intrusion. In 1949, OCWD began purchasing imported Colorado River water from Metropolitan, which was delivered to Orange County via the Santa Ana River upstream of Prado Dam. The Basin's primary source of recharge is flow from the Santa Ana River. OCWD diverts river flows into recharge basins located in and adjacent to the Santa Ana River and its main Orange County tributary, Santiago Creek. Other sources of recharge water include natural infiltration and recycled water. Today OCWD owns and operates a network of recharge facilities that cover 1,067 acres. The recharge capacity has exceeded 10,000 AFY with the addition of the La Jolla Recharge Basin which came online in 2008. The La Jolla Recharge Basin is a 6-acre recharge basin.

The production capability of the Basin has increased as a result of wastewater reclamation and the blending of waters of different qualities to produce high-quality potable water for public distribution. The most recent example of a highly successful OCWD wastewater reclamation project is the construction and operation of OCWD's new water-purification plant, which is designed to turn wastewater into drinking water. This new Groundwater Replenishment System (GWRS) project has been praised by the environmental community because these types of projects reduce the amount of energy needed to transport water from the northern part of the state to the southern part of the state, thereby reducing greenhouse gas emissions. OCWD's GWRS program is being emulated throughout the State and in other parts of the country. This OCWD GWRS currently treats and recharges up to 70 million gallons per day of wastewater back into the Basin for future potable use. This equates to the recycling of over 72,000 AFY of wastewater back into the Basin for future extraction and potable use.

A treatment plant expansion of 30 million gallons per day is currently in the design process by OCWD, and it will increase the recharge capacity of the GWRS to 90,000 AFY. The treatment system is being laid out so that it could eventually be expanded to 130 million gallons per day.

OCWD, MWDOC, and Metropolitan have developed a successful and efficient groundwater replenishment program (in-lieu program) to increase storage in the Orange County Groundwater Basin. The Groundwater Replenishment Program allows Metropolitan to sell groundwater replenishment water to OCWD and make direct deliveries to the City's distribution system in lieu of producing water from the groundwater basin when surplus water is available. This in-lieu program indirectly replenishes the basin by avoiding pumping. In the in-lieu program, OCWD requests the City to halt pumping from specified wells. The City then takes replacement water through its import connections, which is purchased by OCWD from Metropolitan (through MWDOC). OCWD purchases the water at a reduced rate, and then bills the City the amount it would have had to pay for energy and the Replenishment Assessment (RA) if it had produced the water from its wells. The deferred local production results in water

being left in local storage for future use. In 2008 and 2009, OCWD did not utilize in-lieu water because such water was not available to purchase from Metropolitan.

Groundwater Production

According to OCWD's Engineer's Report for fiscal year 2008/2009, total groundwater production from the Basin in OCWD's jurisdiction was 324,147 AF, which was an 11.5% decrease from the previous year. In 2010, the City of Garden Grove produced groundwater for potable use from 11 existing wells located throughout the City as set forth in Section 5 (Figure 5.1). The City's existing wells range in depth from 280 to 1,200 feet, with production varying from 1,600 gpm to 3,600 gpm and total system capacity of approximately 28,255 gpm (excludes Well 28 based on inactive status). The City is also drilling a new well (Well 31). The addition of Well 31 and the retrofitting of Well 28 will bring the City's production capacity to 13 active-operating wells and a total system capacity of 35,755 gpm. Groundwater produced at these wells is easily accessible to City water distribution and storage facilities. For the location of each of the City's wells, refer to Section 5, Figure 5.1.

Section 5 of this WSA sets forth various groundwater production scenarios as required by the Water Code (Single Dry Year and Multiple Dry Years), and these latter tables and accompanying text should be reviewed for an understanding of how groundwater production by the City may be affected by hypothetical future conditions. This additional information set forth in Section 5 will furnish some of the additional information pertaining to the sufficiency of the groundwater basin in various pumping scenarios as required by Water Code section 10910(f)(5).

4.3 Imported Water (Surface Water) - Metropolitan

The information in this section is intended to furnish the information required by Water Code section 10910(d).

Metropolitan provides imported water supplies to the City through the Metropolitan member agency, MWDOC. Metropolitan is the wholesale water agency that serves supplemental imported water from northern California through the State Water Project (SWP) and the Colorado River via the Colorado River Aqueduct (CRA) to 26 member agencies located in portions of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura Counties.

The construction of the SWP was authorized by the State Legislature in 1951. Eight years later, the Legislature passed the Burns-Porter Act, which provided a mechanism for bonds to be issued to pay for the construction of certain portions of the SWP facilities. The DWR has entered into contracts with water districts and regional agencies (SWP Contractors) specifying the amount of SWP water to be delivered to each SWP Contractor. Each SWP Contractor was provided with a contract amount and capacity rights to the SWP aqueduct and storage system in return for payments intended to cover operation and maintenance, bondholder obligations, and repayment of moneys loaned

from the California Water Fund. DWR water supply contracts contemplate that the SWP would deliver 4.2 million AFY to 29 SWP Contractors. Although the SWP is not fully constructed and cannot yet deliver the full 4.2 million AFY in all years, the SWP has fully met SWP Contractors' water needs twelve out of the 17 years following 1992 (the end of a six year drought). The dry years include 1994, 2001, and 2007 through 2009. Of SWP water deliveries, about 70 percent is delivered to SWP urban contractors and about 30 percent is delivered to SWP agricultural contractors. Kern County Water Agency and Metropolitan are the largest Contractors with DWR for SWP water.⁷

From a statewide perspective, the maximum capacity of the overall SWP transportation system is generally limited by the capacity of the system pumps. The capacity of the California Aqueduct is 10,300 cubic feet per second (cfs) at its northern end, and 4,480 cfs below the Edmonston pumping plant (1,000 cfs equates to approximately 82.6 acre-feet per hour, 1,980 acre-feet per day and 725,000 AFY). If these transportation rates were maintained for a full year, they would result in the transport of approximately 7.2 million acre-feet near the Delta and 3.2 million acre-feet to users in Southern California.⁸

Demand can have a significant effect upon the reliability of a water system. For example, if the demand occurs only three months in the summer, a water system with a sufficient annual supply but insufficient water storage may not be able to reliably meet the demand. If, however, the same amount of demand is distributed over the year, the system could more easily meet the demand because the need for water storage is reduced. Because the City of Garden Grove overlies the Orange County Groundwater Basin and can utilize the Basin to smooth out seasonal peaks, its imported water reliability is enhanced.

Metropolitan's SWP imported water is stored at Castaic Lake on the western side of their service area and at Silverwood Lake near San Bernardino. Metropolitan water imported from the Colorado River via the Colorado River Aqueduct (CRA) is stored at Diamond Valley Lake and Lake Mathews in Riverside County.

Through the 1996 Integrated Resources Plan and subsequent updates, Metropolitan has worked toward identifying and developing water supplies to provide 100 percent reliability. Due to competing needs and uses for all of the water sources and regional water operation issues, Metropolitan undertook a number of planning processes: the Integrated Resources Planning (IRP) Process, the Water Surplus and Drought Management (WSDM) Plan, the Strategic Planning Process, the Regional Urban Water Management Plan, and the Report on Metropolitan Water Supplies: A Blueprint for Water Reliability. Combined, these documents provide a framework and guidelines for optimum water planning into the future. Reliability of Metropolitan's supply is further discussed in Section 5.0, Reliability of Water Supplies.

Metropolitan member agencies receive imported water at various delivery points along their system, and pay for it at tiered and/or uniform rates established by the Board, depending on the class of service. Metropolitan has recently increased its ability to supply

⁷ See, generally Bulletin No. 132-06 and latter supplements to Bulletin No. 132.

⁸ DWR, Bulletin No. 132-05, December 2006.

water, particularly in dry years, through implementation of storage and transfer programs. Metropolitan's 26 member agencies deliver to their customers a combination of groundwater, local surface water, recycled water and imported water purchased from Metropolitan. For some member agencies, Metropolitan supplies all the water used within their service area, while others obtain varying amounts of water from Metropolitan to supplement local supplies. Metropolitan has provided between 45 and 60 percent of the municipal, industrial and agricultural water used in its service area.⁹

Historical water demands in the Metropolitan service area increased from 3.14 million acre feet (MAF) in 1980 to 3.93 MAF in 1990. Total water use is projected to grow from its current 4.03 MAF in 2010 to a projected 4.23 MAF in 2030.¹⁰ For the Orange County service area, according to Metropolitan, demands are projected to increase approximately 0.95 percent between 2010 and 2030.¹¹ Table 4.5, *Total Retail Water Demand in Metropolitan's Service Area for Orange County*, shows the historic and projected total retail water demands for Metropolitan's Orange County service area. The water demand forecasts account for water savings resulting from plumbing codes, price effects, and actual and projected implementation of water conservation through BMP's and DMM's as mandated by Senate BillX7-7.¹²

Table 4.5
Total Retail Water Demand
in Metropolitan's Service Area for Orange County -
Includes Municipal and Industrial, and Agriculture (AF)

County	Reported			Projected					
	1995	2000	2005	2010	2015	2020	2025	2030	2035
Orange	577,000	660,000	629,000	629,000	624,000	651,000	634,000	635,000	635,000

Source: The Regional Urban Water Management Plan for the Metropolitan Water District of Southern California, Appendix A.1 Demand Forecast. November 2010.

Imported water represents approximately 38% of the City's water supply. The City currently relies on 10,941 AFY of imported water wholesaled by Metropolitan through MWDOC to supplement local groundwater.

⁹ Metropolitan Water District of Southern California, Regional Urban Water Management Plan, November 2010.

¹⁰ Metropolitan Water District of Southern California, Regional Urban Water Management Plan, November 2010.

¹¹ Metropolitan Water District of Southern California, Regional Urban Water Management Plan, November 2010.

¹² Metropolitan Water District of Southern California, Regional Urban Water Management Plan, November 2010.

4.4 Municipal Water District of Orange County

MWDOC supplies the City with treated water from Metropolitan conveyed through four metered connections, with a total capacity of 22,500 gallons per minute. All of the infrastructure and programs are in place and no further regulatory permits are required to permit MWDOC to convey imported water to these facilities for use by the City. A description of the amount of imported Metropolitan water delivered to the City in the past and anticipated to be delivered to the City in the future under a variety of scenarios is set forth in Section 5 of this WSA.

MWDOC was formed by Orange County voters in 1951 under the Municipal Water District Act of 1911 to provide imported water to much of Orange County. MWDOC is the second largest member agency of Metropolitan, providing imported water to 30 retail water agencies and cities. It serves 2 million people in 600 square miles of service area.

The West Orange County Water Board (WOCWB), a Joint Powers Agency, manages surface water deliveries through MWDOC to five of its member agencies including the cities of Garden Grove, Fountain Valley (with no voting rights), Huntington Beach, Westminster, and Seal Beach. The board oversees the maintenance of two feeder pipelines that connect to the treated surface water supply. The pipelines have a capacity of 21 cubic feet per second (cfs) and 45 cfs. The City of Fountain Valley has entered into an agreement to access imported water from the feeder pipelines, specifically OC-9 and OC-35. Each of the member agencies has paid for the capacity of the feeder pipelines and directly pays MWDOC for the use of water.

Approximately 50% of the water requirement in Orange County depends on imported water coming from two sources: The Colorado River Aqueduct and the State Water Project. Historical retail water usage in the MWDOC service area has been increasing over time to a high of 0.530 MAF in 2006/07 (excluding basin replenishment but including agricultural, recycled water and non-potable water use), primarily due to growth within the service area. In recent years, retail water usage in the MWDOC service area has been dropping, due primarily to the southern California water picture; to 0.488 MAF in 2008/09 (the last non-water allocation year) and to 0.448 MAF in 2009/10 (the first year of Metropolitan's Water Allocation Plan).

4.5 Recycled Water

The City of Garden Grove currently does not own or operate wastewater treatment facilities. Wastewater generated in Garden Grove is transported via large trunk sewer mains approximately five miles to the Orange County Sanitation District's (OCSD) facilities located in the cities of Fountain Valley and Huntington Beach. Indirectly, the City is part of a reclamation program by participating in the reclamation projects of OCWD and the OCSD. As manager of the Basin, OCWD strives to maintain and increase the reliability of the Basin by increasing recycled water usage to replace dependency on

groundwater. To further this goal, OCWD and OCSD have jointly constructed two water recycling projects, described below:

OCWD Green Acres Project

The Green Acres Project (GAP) is a water recycling effort that provides recycled water for landscape irrigation at parks, schools and golf courses as well as for industrial uses, such as carpet dyeing.

GAP provides an alternate source of water to the cities of Fountain Valley, Huntington Beach, Newport Beach, Santa Ana, and Mesa Consolidated Water District. Current water users include Mile Square Park in Fountain Valley, Costa Mesa Golf Course, Home Ranch bean field and Chroma Systems carpet dyeing. Due to a growing demand for water in Orange County, it is sensible that recycled water be used whenever possible for irrigation and industrial uses to supplement groundwater.

OCWD Groundwater Replenishment System

The Groundwater Replenishment System (GWRS) takes highly treated sewer water and purifies it to levels that meet state and federal drinking water standards. It uses a three-step process that includes reverse osmosis, which is used by manufacturers of bottled water, as well as microfiltration and ultraviolet light and hydrogen peroxide advanced oxidation treatment. The water will then be used to keep the ocean out of our groundwater basin and be percolated into deep aquifers where it eventually becomes part of our natural drinking water supply. The GWRS water exceeds all federal and state drinking water standards. The underground basin provides more than half of the water used by north and central Orange County.

5.0 RELIABILITY OF WATER SUPPLIES

This section provides a description of Metropolitan's, MWDOC's, OCWD's, and the City of Garden Grove's efforts in securing adequate water supply as well as reliability of the region and the City's normal, single dry year, and multiple dry year water supplies.

The Southern California region faces a challenge in satisfying its water requirements and securing its firm water supplies. Increased environmental regulations and the competition for water from outside the region have resulted in reduced supplies of imported water. Continued population and economic growth correspond to increased water demands within the region, putting an even larger burden on local supplies.

Reliability is a measure of a water system's expected success in managing water shortages. Reliability planning requires information about the following: (1) expected frequency and severity of shortages; (2) how additional water management measures are likely to affect the frequency and severity of shortages; and (3) how available contingency measures can reduce the impact of shortages when they occur. The reliability of the City's water supply is currently dependent on the reliability of both groundwater managed by OCWD and imported water supplies managed and delivered by Metropolitan. Despite the ongoing water supply challenges within the region, the goal and statutory mission of these agencies are to identify and develop projects to meet the water demands in the region. Sections 5.1 and 5.2 discuss these agencies, their roles in water supply reliability, and the near and long-term efforts they are involved with to ensure future reliability of water supplies to the City and the region as a whole.

State funding has been made available, through California voters' approval, to increase reliability of state water supplies. In March 2000, California voters approved Proposition 13, which authorized the State to issue \$1.97 billion of its general obligation bonds for water projects. Additionally, California voters approved Proposition 50 in November 2002 and Proposition 84 in November 2006, which authorized the issuance by the State of \$3.4 billion and \$5.4 billion, respectively, of its general obligation bonds for water projects. Types of water projects eligible for funding under Propositions 13, 50, and 84 include water conservation, groundwater storage, water treatment, water quality, water security and Colorado River water management projects, many of which are within the scope of the California Plan.

5.1 Metropolitan Water District of Southern California

Metropolitan was formed in the late 1920's. Collectively, charter members recognized the limited water supplies available within the region, and realized that continued prosperity and economic development of Southern California depended upon the acquisition and careful management of an adequate supplemental water supply. This foresight made the continued development of Southern California possible.

Metropolitan acquires water from Northern California via the State Water Project (SWP) and from the Colorado River to supply water to most of Southern California. As discussed above, as a wholesaler, Metropolitan has no retail customers, and distributes treated and untreated water directly to its 26 member agencies. One such member agency is the Municipal Water District of Orange County (MWDOC), of which the City of Garden Grove is one of its 30 member agencies.

Through a series of Integrated Resources Plans initiated in 1996 and most recently updated in 2010, Metropolitan has worked toward identifying and developing water supplies to provide 100 percent reliability. Due to competing needs and uses for all of the water sources and regional water operational issues, Metropolitan undertook a number of planning processes: the Integrated Resources Planning (IRP) Process, the Water Surplus and Drought Management Plan, the Strategic Planning Process, the Report on MWDSC Water Supplies: A Blueprint for Water Reliability, and most recently, the October 2010 IRP update and the November 2010 Regional Urban Water Management Plan. Combined, these documents provide a framework and guidelines for optimum water planning into the future.

The dry hydrology experienced in California in the last few years has diminished snowmelt and runoff levels as well as resulted in environmental restrictions being imposed on water imports from the San Francisco Bay/Sacramento-San Joaquin Delta (Bay-Delta). Other extraordinary events added to the stressed conditions of Southern California water supply including record-dry hydrology in Southern California causing groundwater basins and local reservoirs to drop to very low operating levels; restrictions of SWP deliveries by federal court orders to protect endangered Delta smelt and salmon; and environmental issues related to Owens Lake and Lower Owens River affecting supply availability in the Los Angeles Aqueduct system. SWP delivery restrictions due to the biological opinions resulted in a combined loss of about 700 TAF of the available SWP supplies in 2008 and 2009, reducing the likelihood that regional storage can be refilled in the near-term.

Moreover, the Colorado River watershed is experiencing an extended decade of drought. In the effort to increase supply reliability from this source, Metropolitan has implemented various programs over the years to facilitate the transfer of water from agricultural agencies to urban uses.

The reliability and operational issues related to Metropolitan's various sources of supply are discussed in detail by major source in the subsequent sections. It should be noted that some of the recent issues surrounding operational limitations in supply related to species protection and Delta issues are considered by Metropolitan to be somewhat short-term in nature and are not affecting the overall 20-year planning period that is being considered in this WSA.

5.1.1 State Water Project

The SWP is owned and operated by the California Department of Water Resources (DWR). The reliability of the SWP impacts Metropolitan's member agencies' ability to plan for future growth and supply. On an annual basis, each of the 29 SWP contractors, including Metropolitan, request an amount of SWP water based on their anticipated yearly demand. In most cases, Metropolitan's requested supply is equivalent to its full Table A Amount,¹³ currently at 1,911,500 AFY, and in certain wetter years additional supply may be made available. The full Table A amount is defined as the maximum amount of imported water to be delivered and is specified in the contract between the DWR and the contractor. After receiving the requests, DWR assesses the amount of water supply available based on precipitation, snow pack on northern California watersheds, volume of water in storage, projected carry over storage, and Sacramento-San Joaquin Bay Delta regulatory requirements.

Due to the uncertainty in water supply, contractors are not typically guaranteed their full Table A Amount, but instead a percentage of that amount based on the available supply. Table 5-1, *SWP Deliveries to Metropolitan*, lists the historical SWP deliveries to Metropolitan and the delivery's percentage compared to the full Table A amount. Once the percentage is set early in the water year, the agency can count on that amount of supply or more in the coming year. The percentage is typically set conservative and then held or adjusted upwards later in the year based on a reassessment of precipitation, snow pack, etc.

Litigation filed by several environmental interest groups (NRDC v. Kempthorne (Case No. 05CV01207-OWW-GSA); Pacific Coast Federation of Fishermen's Associations v. Gutierrez (Case No. 06CV00245-OWW)) has alleged that certain biological opinions and incidental take permits granted by state and federal agencies for water permits in the Sacramento-San Joaquin Bay Delta inadequately analyzed impacts on species listed as endangered under the Federal Endangered Species Act (ESA). In 2007, Federal District Judge Wanger issued a decision, finding the United States Fish and Wildlife Service's biological opinion for Delta smelt to be invalid. Judge Wanger issued an Interim Remedial Order and Findings of Fact and Conclusions of Law requiring that the SWP and Central Valley Project (CVP) operate according to certain specified criteria until a new biological opinion for the Delta smelt was issued by the United States Fish and Wildlife Service.

¹³ Two types of deliveries are assumed for the SWP contractors: Table A and Article 21. Table A Amount is the contractual amount of allocated SWP supply, set by percentage amount annually by DWR; it is scheduled and uninterruptible. Article 21 water refers to the SWP contract provision defining this supply as water that may be made available by DWR when excess flows area available in the Delta (i.e., Delta outflow requirements have been met, SWP storage south of the Delta is full, and conveyance capacity is available beyond that being used for SWP operations and delivery of allocated and scheduled Table A supplies). Article 21 water is made available on an unscheduled and interruptible basis and is typically available only in average to wet years, generally only for a limited time in the later winter.

Table 5.1
SWP Deliveries to Metropolitan
(AF)

Year	SWP Delivery	% of Full Table A Amount
1981	826,951	43%
1982	856,996	45%
1983	385,308	20%
1984	501,682	26%
1985	740,410	39%
1986	756,142	40%
1987	769,603	40%
1988	957,276	50%
1989	1,215,139	64%
1990	1,457,676	76%
1991	624,861	33%
1992	746,991	39%
1993	663,390	35%
1994	845,305	44%
1995	451,305	24%
1996	642,871	34%
1997	724,393	38%
1998	521,255	27%
1999	790,538	41%
2000	1,442,615	75%
2001	1,119,408	59%
2002	1,413,745	74%
2003	1,560,569	82%
2004	1,792,246	94%
2005	1,720,350	90%
2006	1,911,500	100%
2007	1,146,900	60%
2008	669,025	35%
2009	764,600	40%
2010	955,750	50%
2011	1,338,050	80%

Source: Table A data extracted from DWR Website; 2011 data represents the initial allocation of 25% plus the subsequent notices to SWP Contractors in December 2010, January 2011, and April 2011, increasing the allocation to 50%, 60%, and 80%, respectively. Metropolitan's full Table A amount is 1,911,500 AFY

DWR bi-annually prepares a report on the current and future for SWP water supply conditions. The 2009 State Water Project Delivery Report (2009 Report) is the most current of these reports dated August 2010. The 2009 Report shows a continuing erosion of the ability of the SWP to deliver water. For current conditions, the dominant factor for these reductions is the restrictive operational requirements contained in the federal biological opinions. For future conditions, it is these requirements combined with the forecasted effects of climate change.

Deliveries estimated for the 2009 Report are reduced by the operational restrictions of the biological opinions issued by the U.S. Fish and Wildlife Service in December 2008 and the National Marine Fisheries Service in June 2009 governing the SWP and CVP operations. To illustrate the effect of these operational restrictions, the median value estimated for the primary component of SWP Table A deliveries for Current Conditions in the 2005 Report is 3,170 thousand acre feet (taf); in the 2007 Report is 2,980 taf; and in the 2009 Report is 2,680 taf; for a reduction of almost 500 taf. For the 2009 studies, the changes in run-off patterns and amounts are included along with a potential rise in sea level. Sea level rise has the potential to require more water to be released to repel salinity from entering the Delta in order to meet water quality objectives established for the Delta. The effect of the operational restrictions in addition to the incorporation of potential climate change impacts amounts to an estimated reduction of 970 taf when the median value for annual SWP deliveries for Future Conditions in the 2005 Report (3,750 taf) is compared to the updated value in the 2009 Report (2,600 taf).

The DWR has altered the operations of the SWP to accommodate species of fish listed under the Federal and California Endangered Species Acts (ESAs). These changes in project operations have influenced the manner in which water is diverted from the Bay-Delta and SWP deliveries to the southern part of the State. Restrictions on Bay-Delta pumping beginning in 2008 under the Interim Remedial Order in *NRDC v. Kempthorne* have resulted in reduced deliveries of SWP water to Metropolitan.

Based on DWR estimates of SWP deliveries under the Interim Remedial Order, and assuming an equal division of curtailments between the SWP and CVP,¹⁴ Metropolitan has met firm demands in calendar years 2008, 2009 and 2010. However, Metropolitan has been withdrawing supplies from surface and groundwater storage to meet current demands. Anticipating that storage could be significantly reduced by the end of 2010, Metropolitan and its member agencies are calling for voluntary water conservation to lower demands and reduce drawdown from water storage. In fact on April 14, 2009, Metropolitan adopted a Level 2 Allocation, which equates to a 10 percent reduction in regional water supplies. Based on similar water supply conditions, this same level of allocation was adopted on April 13, 2010 for this current fiscal year by Metropolitan. If

¹⁴ Assuming an equal division of curtailments between the SWP and the CVP is conservative and may have the effect of overstating the amount of SWP curtailment. As an example, in January of 2009, the Bureau of Reclamation, which operates the CVP, provided notice to agricultural customers that it intended to not provide any water deliveries to agricultural customers in 2009. Thus, in the short term it appears as though agricultural users which receive water through the CVP may suffer deeper water cuts as compared to water purveyors which receive water from the SWP.

necessary, mandatory water allocations could be imposed in the future to cause further reductions in water use and reduce drawdown from water storage reserves. Metropolitan's member agencies and retail water suppliers in Metropolitan's service area also have the ability to implement water conservation and allocation programs, and some of the retail suppliers in Metropolitan's service area have initiated conservation measures.

To create a systemic solution to the issues facing the Delta (which have existed since the 1970's), Governor Schwarzenegger created the Delta Vision process, which is aimed at identifying long-term solutions to the conflicts in the Bay-Delta, including natural resource, infrastructure, land use and governance issues. The Delta Vision Blue Ribbon Task Force presented findings and recommendations for a sustainable Delta as a healthy ecosystem and water supply source on January 17, 2008. In addition, state and federal resource agencies and various environmental and water user entities are currently engaged in the development of the Bay-Delta Conservation Plan (BDCP), which is aimed at addressing ecosystem needs and securing long-term operating permits for the SWP. On November 18, 2010 the BDCP Steering Committee released a Working Draft of all Plan components completed to date. A public draft BDCP is expected to be completed and available for public review in 2011. Following a public review period, a final BDCP is expected before the end of 2012. Recently, statewide officials have expressed support for the construction of the peripheral canal, which would alleviate some of the delta species considerations by transferring river water south before it reaches the Bay Delta.

The issues, such as the recent decline of some fish species in the Delta and surrounding regions and certain operational actions in the Delta, may impact Metropolitan's water supply from the Delta. SWP operational requirements may be further modified through the consultation process for new biological opinions for listed species under the Federal ESA or from the California Department of Fish and Game's actions regarding the California ESA. Decisions in current or future litigation, listings of additional species (such as the longfin smelt), or new regulatory requirements could adversely affect SWP operations in the future by requiring additional export reductions, releases of additional water from storage, or other operational changes impacting water supply operations. However, based on information provided by DWR and Metropolitan, a 22 to 30 percent cutback in SWP deliveries to the south could be foreseeable in the future years until statewide systemic solutions are provided.¹⁵

5.1.2 Colorado River Aqueduct

The Colorado River was Metropolitan's original source of water after Metropolitan's establishment in 1928. Metropolitan has a legal entitlement to receive water from the Colorado River under a permanent service contract with the Secretary of the Interior. Water from the Colorado River or its tributaries is also available to other users in California, as well as to users in the states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming (the "Colorado River Basin States"), resulting in both competition

¹⁵ Metropolitan Water District of Southern California, 2007 IRP, October 2007, and Metropolitan Water District of Southern California, Appendix A, Water Revenue Refunding Bonds 2008, Series C, July 10, 2008.

and the need for cooperation among these holders of Colorado River entitlements. In addition, under a 1944 treaty, Mexico has an allotment of 1.5 million acre-feet of Colorado River water annually, except in the event of extraordinary drought or serious accident to the delivery system in the United States, when the water allotted to Mexico would be curtailed. Mexico also can schedule delivery of an additional 200,000 acre-feet of Colorado River water per year if water is available in excess of the requirements in the United States and the 1.5 million acre-feet allotted to Mexico.

The Colorado River Aqueduct (CRA), which is owned and operated by Metropolitan, transports water from the Colorado River approximately 242 miles to its terminus at Lake Mathews in Riverside County. After deducting for conveyance losses and considering maintenance requirements, up to 1.2 million acre-feet of water a year may be conveyed through the CRA to Metropolitan's member agencies, subject to availability of Colorado River water for delivery to Metropolitan as described below.

California is apportioned the use of 4.4 million acre-feet of water from the Colorado River each year plus one-half of any surplus that may be available for use collectively in Arizona, California and Nevada. In addition, California has historically been allowed to use Colorado River water apportioned to, but not used by, Arizona and Nevada when such supplies have been requested for use in California. Under the 1931 priority system that has formed the basis for the distribution of Colorado River water made available to California, Metropolitan holds the fourth priority right to 550,000 acre-feet per year. This is the last priority within California's basic apportionment of 4.4 million acre-feet. In addition, Metropolitan holds the fifth priority right to 662,000 acre-feet of water, which is in excess of California's basic apportionment.

Until 2002, Metropolitan had been able to take full advantage of its fifth priority right as a result of the availability of surplus water and apportioned but unused water. However, Arizona and Nevada increased their use of water from the Colorado River, leaving no unused apportionment available for California since the late 1990s. In addition, a severe drought in the Colorado River Basin has reduced storage in system reservoirs, resulting in no surplus water being available since 2002. Prior to 2002, Metropolitan could divert over 1.2 million acre-feet in any year, but since that time, Metropolitan's deliveries of Colorado River water varied from a low of 535,000 acre-feet in 2006 to a projected high of 1,150,000 acre-feet in 2010.

Metropolitan has taken steps to augment its share of Colorado River water through agreements with other agencies that have rights to use such water. Under a 1988 water conservation agreement (the "1988 Conservation Agreement") between Metropolitan and the Imperial Irrigation District (IID), IID has constructed and is operating a number of conservation projects that are currently conserving 105,000 acre-feet of water per year. In 2007, the conserved water augmented the amount of water available to Metropolitan by 85,000 acre-feet and, by prior agreement, to the Coachella Valley Water District (CVWD) by 20,000 acre-feet.

In 1992, Metropolitan entered into an agreement with the Central Arizona Water Conservation District (CAWCD) to demonstrate the feasibility of CAWCD storing Colorado River water in central Arizona for the benefit of an entity outside of the State of Arizona. Pursuant to this agreement, CAWCD created 80,909 acre-feet of long-term storage credits that may be recovered by CAWCD for Metropolitan. Metropolitan, the Arizona Water Banking Authority, and CAWCD executed an amended agreement for recovery of these storage credits in December 2007. In 2007, 16,804 acre-feet were recovered. Metropolitan has requested that 25,000 acre-feet be recovered in 2008, and expects to request the balance of the storage credits over the next several years. Water recovered by CAWCD under the terms of the 1992 agreement allows CAWCD to reduce its use of Colorado River water, resulting in Arizona having an unused apportionment. The Secretary of the Interior is making this unused apportionment available to Metropolitan under its Colorado River water delivery contract.

In April 2008, Metropolitan's Board authorized the expenditure of \$28.7 million to join the CAWCD and the Southern Nevada Water Authority (SNWA) in funding the construction by the Bureau of Reclamation of the new 8,000 acre-foot off-stream regulating reservoir near Drop 2 of the All-American Canal in Imperial County. The Drop 2 Reservoir is expected to save up to 70,000 acre-feet of water per year by capturing and storing water that would otherwise be lost. In return for its funding, Metropolitan received 100,000 acre-feet of water that is stored in Lake Mead until recovered. Besides the additional water supply, the new reservoir will add to the flexibility of Colorado River operations.

Metropolitan and the Palo Verde Irrigation District (PVID) signed the program agreement for a Land Management, Crop Rotation and Water Supply Program in August 2004. This program provides up to 133,000 acre-feet of water available to Metropolitan in certain years. The term of the program is 35 years. Fallowing of approximately 20,000 acres of land began on January 1, 2005. In 2005, 2006, 2007, 2008 and 2009 approximately 108,700, 105,000, 72,300, 94,300 and 102,200 acre-feet, respectively, of water were saved through these programs.¹⁶

With Arizona's and Nevada's increasing use of their respective apportionments and the uncertainty of continued Colorado River surpluses, in 1997 the Colorado River Board of California, in consultation with Metropolitan, IID, PVID, CVWD, the Los Angeles Department of Water and Power and the San Diego County Water Authority (SDCWA), embarked on the development of a plan for reducing California's use of Colorado River water to its basic apportionment of 4.4 million acre-feet when use of that basic allotment is necessary (California Plan). In 1999, IID, CVWD, Metropolitan and the State of California agreed to a set of Key Terms aimed at managing California's Colorado River supply. These Key Terms were incorporated into the Colorado River Board's May 2000 California Plan that proposed to optimize the use of the available Colorado River supply through water conservation, transfers from higher priority agricultural users to Metropolitan's service area and storage programs.

¹⁶ Metropolitan Water District of Southern California, Regional Urban Water Management Plan, November 2010.

To implement these plans, a number of agreements have been executed. One such agreement, the Quantification Settlement Agreement (QSA), is a landmark agreement signed by the four California Colorado River water use agencies and the U.S. Secretary of the Interior, which will guide reasonable and fair use of the Colorado River by California through the year 2037. The QSA was authorized in October 2003 and defined Colorado River water deliveries to the four California agencies as well as facilitated transfers from agricultural agencies to urban users. The QSA is a critical component of the California's Colorado River Water Use Plan.

5.1.3 Water Transfer and Exchange Programs

California's agricultural activities consume approximately 34 million acre-feet of water annually, which is 80 percent of the total water used for agricultural and urban uses and 40 percent of the water used for all consumptive uses. Voluntary water transfers and exchanges can make a portion of this agricultural water supply available to support the State's urban areas. Such existing and potential water transfers and exchanges are an important element for improving the water supply reliability within Metropolitan's service area and accomplishing the reliability goal set by Metropolitan's Board of Directors. Metropolitan is currently pursuing voluntary water transfer and exchange programs with state, federal, public and private water districts and individuals. The following information on these programs has been extracted from Metropolitan's 2010 Regional UWMP:

- **Semitropic Storage Program:** Metropolitan has a groundwater storage program with Semitropic Water Storage District located in the southern part of the San Joaquin Valley. The maximum storage capacity of the program is 350 TAF. The specific amount of water Metropolitan can store in and subsequently expect to receive from the programs depends upon hydrologic conditions, any regulatory requirements restricting Metropolitan's ability to export water for storage, and the demands placed on the Semitropic Program by other program participants. During the recent dry year of 2008, the storage program delivered 125 TAF to Metropolitan. During wet years, Metropolitan has the discretion to use the program to store portions of its SWP entitlement water that are in excess of the amounts needed to meet Metropolitan's service area demand. In Semitropic, the water is delivered to district farmers who use the water in-lieu of pumping groundwater. During dry years, the districts return Metropolitan's previously stored water to Metropolitan by direct groundwater pump-in return and the exchange of State Water Project entitlement water.
- **Arvin-Edison Storage Program:** Metropolitan amended the groundwater storage program with Arvin-Edison Water Storage District in 2008 to include the South Canal Improvement Project. The project increases the reliability of Arvin-Edison returning higher water quality to the California Aqueduct. The program storage capacity is 350 TAF. The specific amount of water Metropolitan can expect to store in and subsequently receive from the programs depends upon hydrologic conditions and any regulatory requirements restricting Metropolitan's ability to

export water for storage. The storage program is estimated to deliver 75 TAF. During wet years, Metropolitan has the discretion to use the program to store portions of its SWP Table A supplies which are in excess of the amounts needed to meet Metropolitan's service area demand. The water can be either directly recharged into the groundwater basin or delivered to district farmers who use the water in-lieu of pumping groundwater. During dry years, the district returns Metropolitan's previously stored water to Metropolitan by direct groundwater pumping in return or by exchange of surface water supplies.

- ***San Bernardino Valley MWD Storage Program:*** The San Bernardino Valley MWD Storage program allows for the purchase of a portion of San Bernardino Valley Municipal Water District's State Water Project supply. The program includes a minimum purchase provision of 20 TAF and the option of purchasing additional supplies when available. This program can deliver between 20 TAF and 70 TAF in dry years, depending on hydrologic conditions. The expected delivery for a single dry year similar to 1977 is 70 TAF. The agreement with San Bernardino Valley MWD also allows Metropolitan to store up to 50 TAF of transfer water for use in dry years.
- ***Kern-Delta Water District Storage Program:*** This groundwater storage program has 250 TAF of storage capacity. When fully developed, it will be capable of providing 50 TAF of dry-year supply. The water can be either directly recharged into the groundwater basin or delivered to district farmers who use the water in-lieu of pumping groundwater. During dry years, the district returns Metropolitan's previously stored water to Metropolitan by direct groundwater pumping in return or by exchange of surface water supplies.
- ***Mojave Storage Program:*** Currently operated as a demonstration program, the program will store SWP supply delivered in wet years for subsequent withdrawal during dry years. When fully developed, the program is expected to have a dry-year yield of 35 TAF depending on hydrologic conditions.
- ***Central Valley Transfer Programs:*** Metropolitan expects to secure Central Valley water transfer supplies via spot markets and option contracts to meet its service area demands when necessary. Hydrologic and market conditions, and regulatory measures governing Delta pumping plant operations will determine the amount of water transfer activity occurring in any year. Transfer market activity in 2003, 2005, 2008, and 2009 provide examples of how Metropolitan has secured water transfer supplies as a resource to fill anticipated supply shortfalls needed to meet Metropolitan's service area demands.
 - In 2003, Metropolitan secured options to purchase approximately 145 TAF of water from willing sellers in the Sacramento Valley during the irrigation season. These options protected against potential shortages of up to 650 TAF within Metropolitan's service area that might have arisen from a decrease in Colorado River supply or as a result of drier than expected hydrologic conditions. Using these options, Metropolitan purchased approximately 125 TAF of water for delivery to the California Aqueduct.

- In 2005, Metropolitan, in partnership with seven other State Water Contractors, secured options to purchase approximately 130 TAF of water from willing sellers in the Sacramento Valley, of which Metropolitan's share was 113 TAF. Metropolitan also had the right to assume the options of the other State Water Contractors if they chose not to purchase the transfer water. Due to improved hydrologic conditions, Metropolitan and the other State Water Contractors did not exercise these options.
- In 2008, Metropolitan in partnership with seven other State Water Contractors, secured approximately 40 TAF of water from willing sellers in the Sacramento Valley, of which Metropolitan's share was approximately 27 TAF.
- In 2009, Metropolitan in partnership with eight other buyers and 21 sellers participated in a statewide Drought Water Bank, which secured approximately 74 TAF, of which Metropolitan's share was approximately 37 TAF.

Metropolitan's recent water transfer activities have demonstrated its ability to develop and negotiate water transfer agreements either working directly with the agricultural districts who are selling the water or through a statewide Drought Water Bank. Because of the complexity of cross-Delta transfers and the need to optimize the use of both CVP and SWP facilities, DWR and USBR are critical players in the water transfer process, especially when shortage conditions increase the general level of demand for transfers and amplify ecosystem and water quality issues associated with through-Delta conveyance of water. Therefore, Metropolitan views state and federal cooperation to facilitate voluntary, market-based exchanges and sales of water as a critical component of its overall water transfer strategy.

In addition to the previously mentioned programs, Metropolitan also manages or participates in the following existing SWP programs located outside of its service area:

- ***Sacramento Valley Water Management Agreement (Phase 8 Settlement):*** Metropolitan is a signatory to the Sacramento Valley Water Management Agreement (Phase 8 Settlement) that includes work plans to develop and manage water resources to meet Sacramento Valley in-basin needs, environmental needs under the SWRCB's Water Quality Control Plan, and export supply needs for both water demands and water quality. The agreement specifies about 60 water supply and system improvement projects by 16 different entities in the Sacramento Valley.
- ***Monterey Amendment:*** Metropolitan was a signatory to the 1994 Monterey Amendment to resolve disputes between the urban and agricultural SWP contractors over how contract supplies are to be allocated in times of shortage by amending certain provisions of the long-term water supply contracts with DWR. The Monterey Amendment altered the water allocation procedures such that both shortages and surpluses would be shared in the same manner for all contractors, eliminating the prior "agriculture first" shortage provision. In turn, the agricultural

contractors agreed to permanently transfer 130,000 AF to urban contractors and permanently retire 45,000 AF of their contracted supply.

- **SWP Terminal Storage:** Metropolitan has contractual rights to 65,000 AF of flexible storage at Lake Perris (East Branch terminal reservoir) and 153,940 AF of flexible storage at Castaic Lake (West Branch terminal reservoir). This storage provides Metropolitan with additional options for managing SWP deliveries to maximize yield from the project.
- **Yuba Dry-year Water Purchase Program:** In December 2007, Metropolitan entered into an agreement with DWR providing for Metropolitan's participation in the Yuba Dry Year Water Purchase Program between Yuba County Water Agency and DWR through 2025.
- **Desert Water Agency/Coachella Valley Water District (DWCV) SWP Table A Transfer:** Under the transfer agreement, Metropolitan transferred 100,000 AF of its SWP Table A amount to DWCV effective January 1, 2005. DWCV pays all SWP charges for this water, including capital costs associated with capacity in the SWP to transport this water to Perris Reservoir as well as the associated variable costs. The amount of water actually delivered in any given year depends on that year's SWP allocation. Water is delivered through the existing exchange agreements between Metropolitan and DWCV. While Metropolitan transferred 100,000 AF of its Table A amount, it retained other rights, including interruptible water service, its full carryover amounts in San Luis Reservoir, its full use of flexible storage in Castaic and Perris Reservoirs, and any rate-management credits associated with the 100,000 AF. In addition, Metropolitan is able to recall the SWP transfer water in years in which Metropolitan determines it needs the water to meet its water management goals. The main benefit of the agreement is to reduce Metropolitan's SWP fixed costs in wetter years when there are more than sufficient supplies to meet Metropolitan's water management goals, while at the same time preserving its dry-year SWP supply.
- **DWCV Advance Delivery Program:** Under this program, Metropolitan delivers Colorado River water to DWCV in advance of the exchange for their SWP Contract Table A allocations. By delivering enough water in advance to cover Metropolitan's exchange obligations, Metropolitan is able to receive DWCV's available SWP supplies in years in which Metropolitan's supplies are insufficient without having to deliver an equivalent amount of Colorado River water.
- **DWCV Other SWP Deliveries:** Since 2008, Metropolitan has provided DWCV's written consent to take delivery from the SWP facilities non-SWP supplies separately acquired by each agency. These deliveries include water acquired from the Yuba Dry Year Water Purchase Program and the 2009 Drought Water Bank.

5.1.4 Supply Management Strategies

On the regional level, Metropolitan has taken a number of actions to secure a reliable water source for its member agencies. Metropolitan recently adopted a water supply allocation plan for dealing with potential shortages that takes into consideration the impact on retail customers and the economy, changes and losses in local supplies, the investment in and development of local resources, and conservation achievements.¹⁷ Additional actions taken by Metropolitan during the first half of 2008 include the adoption of a \$1.9 billion spending plan, increased rates and charges,¹⁸ and the funding of a new reservoir to benefit Colorado River supply capabilities.¹⁹ Metropolitan's approved budget for 2010/11 included rate increases of 7.5 percent with another 7.5 percent increase planned for 2011/12 to maintain these this spending for the improvement of water conveyance facilities, water transfers, and providing financial assistance to member agency's local conservation, recycling, and groundwater clean-up efforts²⁰.

5.1.5 Metropolitan Conjunctive Use Program

Since 2004, OCWD, MWDOC, and participating producers have participated in Metropolitan's Conjunctive Use Program (known as the MWD Long-Term Groundwater Storage Program or MWD CUP). This program allows for the storage of Metropolitan water in the Orange County groundwater basin. The existing Metropolitan storage program provides for Metropolitan to store 66,000 AF of water in the basin in exchange for Metropolitan's contribution to improvements in basin management facilities. These improvements include eight new groundwater production wells, improvements to the seawater intrusion barrier, construction of the Diemer Bypass Pipeline. This water can be withdrawn over a three-year time period. The preferred means to store water in the Metropolitan storage account has been through the in-lieu deliveries to participating groundwater producers.

5.1.6 Metropolitan Groundwater Replenishment Program

OCWD, MWDOC, and Metropolitan have developed a successful and efficient groundwater replenishment program (in-lieu program) to increase storage in the Orange County Groundwater Basin. The Groundwater Replenishment Program allows Metropolitan to sell groundwater replenishment water to OCWD and make direct deliveries to the City's distribution system in lieu of producing water from the groundwater basin when surplus water is available. This in-lieu program indirectly replenishes the basin by avoiding pumping. In the in-lieu program, OCWD requests the City to halt pumping from specified wells. The City then takes replacement water through its import connections, which is purchased by OCWD from Metropolitan (through MWDOC). OCWD purchases the water at a reduced rate, and then bills the City the

¹⁷ Metropolitan Water District Press Release dated February 12, 2008.

¹⁸ Metropolitan Water District Board Meeting, March 11, 2008, and Press Release of same date, regarding spending plan and adoption of rates and charges.

¹⁹ Metropolitan Water District Board Meeting, April 8, 2008, and Press Release of same date, regarding new reservoir.

²⁰ Metropolitan Water District, Annual Budget, website mwdh2o.com.

amount it would have had to pay for energy and the Replenishment Assessment (RA) if it had produced the water from its wells. The deferred local production results in water being left in local storage for future use. In 2008, 2009, and 2010 OCWD did not utilize in-lieu water because such water was not available to purchase from Metropolitan.

5.2 Municipal Water District of Orange County

To assure an adequate water supply, MWDOC works with its member agencies each year to develop a forecast of future water demands and local supplies. With the aid of a computer model, MWDOC forecasts the imported demand by subtracting total demand from available local supplies. MWDOC then advises Metropolitan annually of how much water MWDOC anticipates to purchase during the next five-year period. To supply water, MWDOC enters into a written service agreement with each member agency; in turn, MWDOC then contracts with Metropolitan to provide water for the member agencies' demand.

It is important to note that MWDOC does not currently provide any source of water other than imported supplies from Metropolitan. In its Regional Urban Water Management Plan (RUWMP), Metropolitan presents its supply availability at the regional level, rather than at the member-agency level. This approach does not enable MWDOC to quantify the availability of imported supply from Metropolitan specific to MWDOC. However, because Metropolitan is able to demonstrate 100% reliability in meeting demands through 2035. With the addition of planned supplies under development, Metropolitan's 2010 RUWMP finds that Metropolitan will be able to meet full-service demands from 2015 through 2035, even under a repeat of the worst drought. In addition to meeting full-service demands from 2015 through 2035, Metropolitan projects reserve and replenishment supplies to refill system storage. MWDOC has determined that the availability of its imported supply should equate to its projected imported demand. MWDOC's 2010 UWMP states that it will meet full-service demands to its customers from 2015 through 2035.²¹ Based on the data compiled in the MWDOC plan, MWDOC expects full reliability for normal, single dry-years, and multiple dry-years for the next 25-year period.

Although Metropolitan will meet all of its member agencies' demands, MWDOC is working with its member agencies to decrease dependence on imported water by encouraging further development of local supplies. In addition, MWDOC assists its member agencies with various programs designed to improve water service reliability including water conservation programs and water recycling projects.

5.3 Orange County Water District

The mission of the OCWD is to provide local water retailers with a reliable, adequate, high quality water supply at the lowest reasonable cost in an environmentally responsible manner. Efforts have been made to develop and secure new supplies. Also in December 2008, OCWD secured the rights to divert and use up to 362,000 AFY of Santa Ana River

²¹ City of Garden Grove 2010 UWMP, June 2011.

water through a decision of the State Water Resources Control Board. Description to other recent OCWD projects can be found in OCWD's 2009 GWMP.

As has been discussed previously throughout this WSA, the primary source of water for the City is the Orange County Groundwater Basin (Basin). OCWD is responsible for the protection of water rights to the Santa Ana River in Orange County as well as the management and replenishment of the Basin.²² OCWD replenishes and maintains the Basin at safe levels while significantly increasing the Basin's annual yield by utilization of the best available technology. Other than recycled water, OCWD primarily recharges the Basin with water from the Santa Ana River and to a lesser extent with imported raw water purchased from Metropolitan. According to the OCWD's Groundwater Management Plan Update 2009 dated July 9, 2009, natural recharge accounted for 69,000 acre-feet and artificial recycled water injection and recharge accounted for 272,000 acre-feet in 2008.

As of January 2008, OCWD began recharging recycled water from the Groundwater Replenishment System (GWRS). The GWRS, the largest water purification project of its kind in the world, can currently produce up to 72,000 AFY of recycled water, and has increased Orange County's water independence by providing a locally controlled, drought-proof supply of safe, high-quality water. The EIR has been completed and design commenced for a GWRS Expansion Project to increase production to over 90,000 acre-feet per year. Other processes such as recycling of wastewater, conservation and water use efficiency programs, and creative water purchases have aided in replenishing the basin to desired levels to meet required demands.

As discussed previously, OCWD establishes the Basin Production Percentage (BPP) each water year. The BPP is set based on groundwater conditions, availability of imported water supplies, anticipated precipitation, Santa Ana River runoff, and basin management objectives. The BPP was initially established in 1969 and has ranged from 62 to 89 percent. The average BPP over its 42-year history is 71.1 percent. Based on discussions with OCWD staff and background analysis provided by OCWD dated September 2010, as well as MWDOC's 2010 UWMP, the current sustainable BPP was determined to be 62%. The current BPP could increase by approximately 4 percent as a result of the GWRS Expansion Project discussed above. Due to the continuing drought conditions and declining groundwater levels, OCWD adopted a 62% BPP for 2009/10 and again for 2010/11. It was noted that the 2035 estimate could be plus or minus 5% based on a myriad of factors and an average projected BPP between 62% and 65% was recommended for agency use in long-term planning.

As discussed previously, the BPP is a major factor for the City in determining the cost of groundwater production. For groundwater production equal to or less than the BPP, groundwater producers, including Garden Grove, pay a replenishment assessment. If groundwater production greater than the BPP occurs, a Basin Equity Assessment (BEA) will be assessed. The BEA is an additional fee paid on each acre foot (AF) of water pumped above the BPP, making the total cost of that water to Garden Grove equal to the cost of Tier 2 imported water from Metropolitan.

²² OCWD Groundwater Management Plan, 2004.

Total water demand within Orange County Water District (OCWD) was 428,720 AF for the 2009-10 water year (beginning July 1, 2008 and ending June 30, 2009)²³. In the same period, groundwater production (excluding groundwater production used to supply the Talbert Barrier) for the water year totaled 285,575 AF.²⁴ For the water year, a total of 22,141 AF of supplemental water was used for the purpose of groundwater replenishment and barrier maintenance to prevent seawater intrusion from occurring in areas of the groundwater basin adjacent to the Pacific Ocean in Huntington Beach, Costa Mesa, and Fountain Valley.²⁵

For the water year ending June 30, 2010, the “annual overdraft” (annual basin storage decrease without supplemental replenishment water) was 64,060 AF.²⁶ The accumulated basin overdraft on June 30, 2010 was 323,000 AF.²⁷ Average precipitation within the basin was 117 percent of normal during the water year, totaling 15.71 inches.²⁸

Based on the groundwater basin conditions for the water year ending June 30, 2010, OCWD may purchase up to 134,000 AF of water for groundwater replenishment during the ensuing year, under provisions of the District Act. Since the formation of OCWD in 1933, OCWD has made substantial investment in facilities, basin management and water rights protection, resulting in the elimination and prevention of adverse long-term “mining” overdraft conditions. OCWD continues to develop new replenishment supplies, recharge capacity and basin protection measures to meet projected production from the basin during average/normal rainfall and drought periods. OCWD has invested in seawater intrusion control (injection barriers), recharge facilities, laboratories and basin monitoring to effectively manage the basin. Some of these programs include:

Recharge Facilities - OCWD currently owns and operates approximately 1,000 acres of recharge spreading facilities located in cities of Anaheim and Orange adjacent to the SAR and Santiago Creek. OCWD has built a recharge system that provides the majority of water supplied by the District. The 17 major facilities in the Anaheim/Orange area are grouped into four major components: the Main River System, the Off-River System, the Deep Basin System, and the Burris Pit/Santiago System. Each system has a series of percolation spreading basins, either shallow or deep, whose sidewalls and bottoms allow for percolation into the underlying aquifer.

Seawater Intrusion Barriers - OCWD’s Talbert Barrier is composed of a series of injection wells that span the 2.5-mile-wide Talbert Gap between the Newport and Huntington mesas. The Talbert Barrier wells can inject approximately 42 mgd of water into four aquifer zones. Injecting water through the wells forms a hydraulic barrier to seawater that would otherwise migrate inland toward areas of groundwater production.

²³ Orange County Water District, 2009-2010 Engineer’s Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, February 2011.

²⁴ Orange County Water District, 2009-2010 Engineer’s Report, February 2011.

²⁵ Orange County Water District, 2009-2010 Engineer’s Report, February 2011.

²⁶ Orange County Water District, 2009-2010 Engineer’s Report, February 2011.

²⁷ Orange County Water District, 2009-2010 Engineer’s Report, February 2011.

²⁸ Orange County Water District, 2009-2010 Engineer’s Report, February 2011.

The Alamitos seawater intrusion barrier is composed of a series of injection wells that span the Los Angeles/Orange County line in the Seal Beach-Long Beach area. It is operated by the Los Angeles County Department of Public Works (LACDPW) in cooperation with OCWD and the Water Replenishment District (WRD). The source of this water is a blend of purified wastewater from WRD and potable supplies from Metropolitan. Also, the Alamitos Barrier System includes four extraction wells located seaward of the injection barrier to create a pumping trough to remove the degraded brackish groundwater.

Groundwater Monitoring – OCWD has one of the most sophisticated groundwater monitoring programs in the country. The District runs more than 350,000 analyses of water from more than 650 wells every year. OCWD performs nearly 50 percent more water quality tests than it is required to do in order to ensure the highest water quality possible. In 2004, OCWD completed a 10-year, \$10 million Santa Ana River Water Quality and Health Effects Study, which demonstrated the safety of SAR water as a source for recharging the groundwater basin. A panel of nationally recognized experts provided an independent review of the study and validated its positive results.

5.3.1 OCWD Long Term Facilities Plan (LTFP)

OCWD has prepared a LTFP to evaluate potential basin and water quality enhancement projects that may be implemented in the 20-year planning period. The LTFP was proposed to do the following:

- Evaluate projects to cost effectively increase the amount of sustainable basin production and protect water quality
- Develop an implementation program for the recommended projects
- Establish the basin's future maximum (target) annual production amount and correspondingly how much new recharge capacity would be required
- Estimate impacts to potential future RA rates and long-term BPPs

The LTFP utilizes information developed in OCWD's Groundwater Management Plan. The LTFP includes a master list of developed and proposed projects. The various projects are grouped into five categories: (1) recharge facilities, (2) water source facilities, (3) basin management facilities, (4) water quality management facilities, and (5) operational improvements facilities. Each project is evaluated using criteria such as technical feasibility, cost, institutional support, functional feasibility, and environmental compliance. The LTFP includes an implementation plan for recommended projects over the 20 year planning period.

5.3.2 OCWD Groundwater Management Plan (GMP)

OCWD recently published its GMP, 2009 Update. The 2009 GMP updates an earlier version, finalized in March 2004. The GMP 2009 Update provides information on District operations, lists projects completed since publication of the 2004 report, and

discusses plans for future projects and operations. Over fifteen major projects completed between 2004 and 2008 have improved District operations, increased groundwater recharge capacity, and improved water quality.²⁹ The GMP complies with SB 1938, passed in 2002, which includes a list of items to be included in a GMP. The GMP's objectives include (1) protecting and enhancing groundwater quality, (2) cost-effectively protecting and increasing the basin's sustainable yield, and (3) to increase the efficiency of OCWD's operations.³⁰ Various programs, policies, goals, and projects are defined in the GMP to assist OCWD staff in meeting these objectives. The potential projects described in the GMP are discussed in further detail in the LTFP. The GMP describes the following:

- Background and purpose of the GMP
- Hydrogeology of the basin
- Range of activities and management programs, including groundwater monitoring, groundwater quality management, production management, recharge water supply, and improvement projects
- Historical and future water demands and integrated demand/supply management strategies
- Financial management programs
- Recommendations for continued proactive basin management

5.4 City of Garden Grove

5.4.1 Water System

Today, the City of Garden Grove's Water Services Division provides water service to approximately 177,000 persons within its 18.2-square mile service area. The service area and City boundary are generally contiguous. A map of the City's service area is shown in Figure 5.1. The City's basic water services include single family residential, multi-family residential and general services (i.e., commercial, industrial, municipal, and institutional consumers).

Today the Water Services Division has 433 miles of transmission and distribution mains, 8 reservoirs with a capacity of 53 million gallons, 11 active groundwater wells with a combined production capacity of about 30,400 gallons per minute (gpm), 5 booster pumping stations, 2 pressure regulating stations, and 4 imported water connections, where the City receives water from MWDOC. A distribution map from the City's 2008 Water Master Plan showing key transmission mains, wells, reservoirs, and pumping stations is also shown in Figure 5.1.

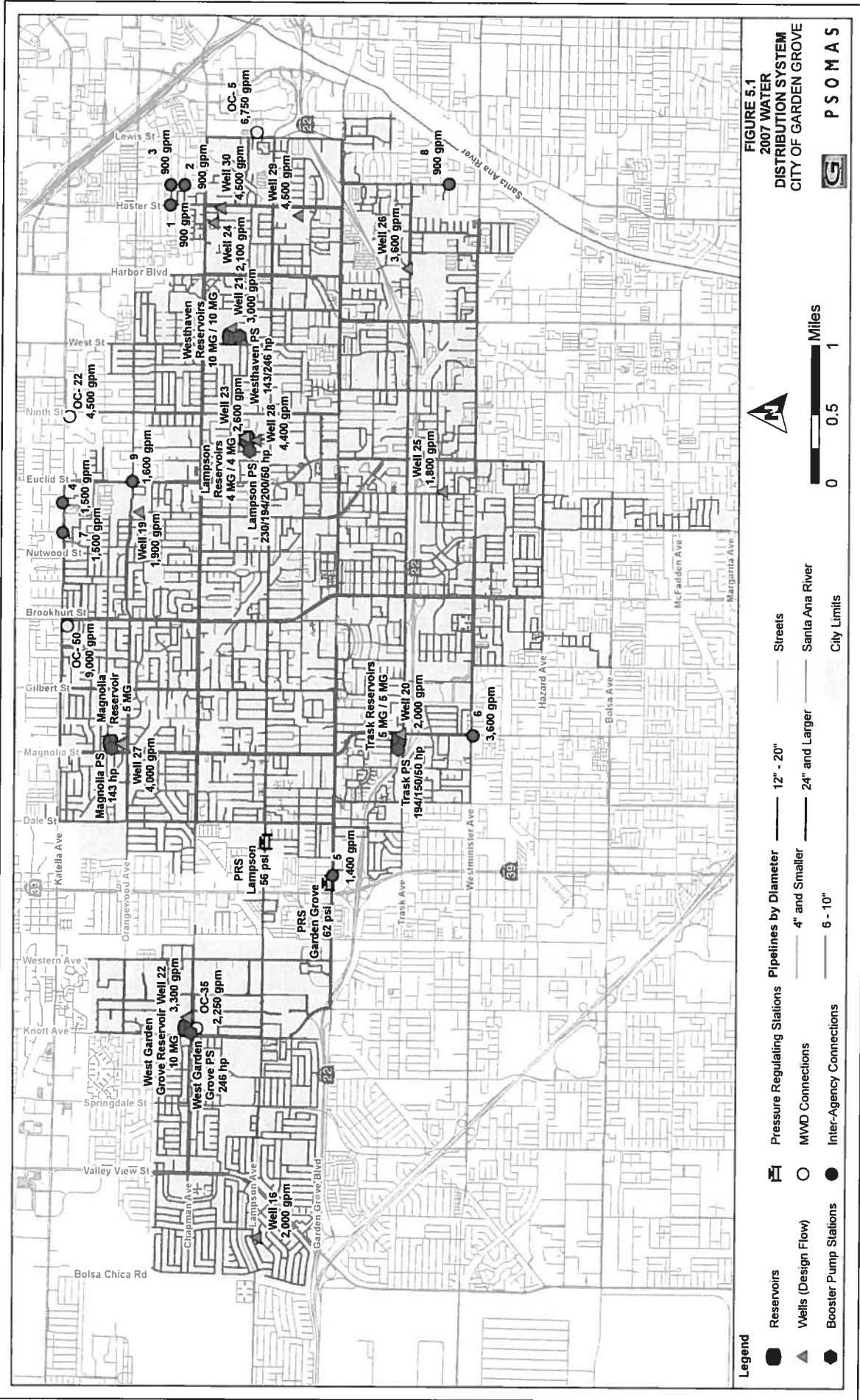
The water system service area has elevations ranging from 25 feet above mean sea level (MSL) in the west portion of the City to 130 feet above MSL. To provide appropriate operation pressures for this range of elevations, the water system is divided into two

²⁹ Orange County Water District, Groundwater Management Plan Update, July 9, 2009.

³⁰ Orange County Water District, Groundwater Management Plan Update, July 9, 2009.

pressure zones. The lowest pressure zone operates at a static hydraulic grade line (HGL) elevation of 200 feet above MSL and the highest pressure zone has a static HGL elevation of 220 feet above MSL.

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5.4.2 Past and Current Efforts

Reliability is a measure of a water system's expected success in managing water shortages. The City has strategies to manage water demand with respect to frequency and magnitude of supply deficiencies. The City recognizes water conservation as a priority in its water use planning. The long-term goal of the City's water conservation program is to achieve and maintain water use efficiency in the City of Garden Grove Water Services Division's service area. Specific objectives for achieving this goal include the following:

- Elimination of wasteful practices in water use;
- Continued development of information on both current and potential water conservation practices; and
- Ongoing implementation of conservation practices

The City participates in a number of conservation activities in southern California on a regional level. Municipal Water District of Orange County (MWDOC) implements regional conservation programs, such as school education programs, on behalf of the City. Additionally, the City recently completed a program to install Evapotranspiration (ET) irrigation controllers, or weather-based controllers, at a number of City parks and plans to install drought tolerant landscaping and a more efficient irrigation system in the Brookhust Street median in 2010/2011.

On December 11, 1991, an agreement known as the "Memorandum of Understanding Regarding Water Conservation in California" (MOU) was signed in Sacramento. This agreement mandated the implementation of water conservation programs throughout the state known as Urban Water Conservation Best Management Practices (BMPs). Currently, there are 14 BMP's. The City became a signatory to the agreement in December 2000. One of the City's obligations as a signatory to the MOU is to submit a BMP Retail Water Agency Report filing to the California Urban Water Conservation Council (CUWCC) every two years. The City's most recent BMP Summary Report filing with CUWCC for 2009-2010 is included in Appendix C.

The City passed Ordinance No. 2751 on July 14, 2009, which amended and updated the City's water conservation program to add additional water conservation measures mandated by Metropolitan. The purpose of this ordinance is to provide a permanent mechanism that allows the City to deal with extended water shortages in a timely, systematic way. On February 9, 2010, the City passed Ordinance No. 2769, which amended Title 9 (Zoning Ordinance) of the Municipal Code to incorporate landscape water efficiency requirements into Title 9. And on March 23, 2010, the City passed Ordinance No. 2770, which extended the authorization for the use of artificial turf from strictly residential to all zoning categories subject to specified standards. All of these actions have, and will continue to provide for the more efficient use of water within the City's service area.

Another method of increasing water reliability is Metropolitan's Long-Term In-Lieu Groundwater Storage Program, which the City has consistently participated in when this

water has been made available by Metropolitan. With the drought of the past few years this program was discontinued by Metropolitan, but following the wet water year of 2009/10, it was recently reinstated. The major goals of this program include the following: (1) achievement of greater water supply reliability through increased conjunctive use of imported and local water supplies; and (2) reduction of member agencies' dependence on deliveries from Metropolitan during times of shortage. The Long-Term Storage credits apply to water that is imported in-lieu of groundwater pumping. For each acre-foot of Long-Term Storage water claimed, the City is provided discounts from Metropolitan and OCWD, resulting in a unit cost of Long-Term Storage water approximately equivalent to the unit cost of pumped groundwater. But, this provides significant benefits to the Orange County Groundwater Basin as overall water levels are increased, thus enhancing regional water supply reliability.

The City has the ability to certify for Groundwater Seasonal Shift Storage (SSS) and Groundwater Long-Term Storage credits. The following describes these programs the City participates in:

- Groundwater Seasonal Shift Storage credits are received when the City pumps additional groundwater during the summer months (May through September) and, correspondingly, imports from Metropolitan an identical quantity during the winter months (October through April), within a 12-month period. Metropolitan charges the City a discounted unit cost for the "shifted" imported quantity.
- The Long-Term Storage credit applies to water that is imported in lieu of groundwater pumping. For each acre-foot of Long-Term Storage water claimed, the City is provided discounts from Metropolitan and OCWD, resulting in a unit cost of Long-Term Storage water approximately equivalent to the unit cost of pumped groundwater. Although the Long-Term Storage Program is essentially cost-neutral for the City, it provides the following benefits: (1) water is imported when Metropolitan has an abundant supply; and (2) groundwater resources are conserved (i.e. the long-term import quantity would have been pumped from the groundwater if the City did not participate).

BEA Exempt-Nitrate Blending Project

Between the years of 1990 and 2005, the City participated in a blending agreement with OCWD where they were allowed to pump above the BPP, but would pay an adjusted BEA. The adjusted BEA allowed the City to deduct the additional expenses that were incurred from the blending project. The Lampson Well Nitrate Blending Project is not only beneficial to the City, but also benefits the overall Orange County Basin by cleaning the Talbert Aquifer of nitrates. Under the agreement, the City was allowed to extract 4,000 AFY from wells containing high nitrate concentrations. Currently, OCWD considers the City's BEA-exempt agreement to be expired.

The Garden Grove Nitrate Blending Project is located at the City's Lampson Reservoir site. Groundwater pumped from two wells, No. 28 (high nitrate concentration) and Well

No. 23 (low nitrate concentration) were blended in order to meet the maximum contaminant level (MCL) for nitrate. The blending project has been shut down since 2005 due to a three-year period of higher nitrate concentration content in Well 28. Well 28 was operated on a constant speed pump, requiring the City to pinch the discharge valve, thus making it very inefficient to operate. The City is currently retrofitting Well 28 with a variable frequency drive and intends to reinstate the blending operation between Wells 23 and 28 in 2012.

The City is also drilling a new well (Well 31). The addition of Well 31 and the retrofitting of Well 28 will bring the City's production capacity to 13 active-operating wells and a total system capacity of 39,000 gpm. Another recent addition is Well 30 which was constructed under the Orange County Groundwater Conjunctive Use Program (CUP) and activated in July 2008. The addition of Well 30 enables the City to pump stored water during dry periods. The City actually pumped CUP water for a two-year period during 2008 and 2009.

Huntington Beach Sea Water Desalination Project

As technology progresses, additional water supplies and facilities are being brought on line to further assure water supply reliability well into the future.

One recent example is the proposal by Poseidon Resources, Inc. to build a 50 million gallon per day (50 MGD) (56,000 AFY) seawater desalination project in Huntington Beach called the Huntington Beach Sea Water Desalination Facility. Poseidon Resources is working with local and state agencies to obtain the required permits to ensure proper safeguards to the community and environment. On September 7, 2010, a revised EIR was approved and on September 20, 2010, a Coastal Development Permit and Tentative Parcel Map for the project were approved by the Huntington Beach City Council. The Project also has an approved National Pollutant Discharge Elimination System (NPDES) Permit issued by the Santa Ana Regional Water Quality Control Board in 2006, an approved lease amendment from the California State Lands Commission authorizing Poseidon to use existing offshore seawater intake and discharge facilities utilized by the Huntington Beach Generating Station, and a conditional approval from the Department of Public Health. The project still needs approval from the California Coastal Commission prior to commencing construction, which could begin in 2011 and the facility could be operational in 2013.

The City of Garden Grove has been participating in the Poseidon workshops since October 2009. In January 2010, the City Council approved signing a Letter of Intent, a Confidentiality Agreement, and signing a Memorandum of Understanding between the Orange County retailers and Poseidon. All three of these documents are non-binding. The City has told Poseidon that they would consider an agreement to purchase 5,000 to 10,000 acre-feet annually, from the seawater desalination plant to be constructed at their site in Huntington Beach. This water would be provided to Garden Grove either by direct

delivery or by exchanges with another retailer, involving groundwater and/or imported water.

5.5 Dry Year Reliability Comparison

Metropolitan Supplies and Demands

As previously noted, Garden Grove obtains its imported water from MWDOC who is their Metropolitan member agency. As a part of its Integrated Water Resources Plan Implementation Report process (IRP)³¹, and more recently in its 2010 RUWMP, November 2010, Metropolitan chose the year 1977 as the single driest year since 1922, and the years 1990-1992 as the driest multiple (3) years over that same period. These years were selected because they represent the timing of the least amount of available water resources from the SWP, a major source of Metropolitan's supply.

Concurrently and following the preparation of its 2010 RUWMP, Metropolitan has prepared a 2010 IRP Update, which was adopted by the Metropolitan Board of Directors on October 12, 2010.

Based on Metropolitan's 2010 RUWMP and 2010 IRP, Table 5.2, *Metropolitan's Regional Water Supply/Demand Reliability Projections*, summarizes Metropolitan's current imported supply availability and demand projections for average year, single dry year, and multiple dry years over the 20-year period beginning in 2015 and ending in 2035. The supply projections include current programs and programs under development as well as in-region storage and programs. Reference is made to Metropolitan's 2010 RUWMP for a description of these programs under development, but they include only programs Metropolitan is confident can be implemented and do not include other more speculative programs, like the Poseidon Huntington Beach desalination plant. Even if the programs under development are removed, there are surpluses in all years and scenarios listed below. Demands are firm demands on Metropolitan and also include commitments for IID-SDCWA transfers and canal lining.

³¹ Metropolitan develops Integrated Water Resources Plans (IRPs), which lay out how Metropolitan will secure and provide water to its customer base. These IRPs utilize hydrological and other data provided by DWR and are updated periodically through IRP Report Updates to reflect changing conditions.

**Table 5.2
Metropolitan's Regional
Water Supply/Demand Reliability Projections (AFY)**

Region Wide Projections	2015	2020	2025	2030	2035
Supply Information					
Projected Supply During an Average Year ^[1]	4,073,000	4,499,000	5,140,000	4,998,000	4,865,000
Projected Supply During a Single Dry Year ^[1]	3,219,000	3,644,000	4,013,000	3,859,000	3,726,000
Projected Supply During Average of Multiple 3 Dry Year Period ^[1]	2,652,000	2,970,000	3,253,000	3,214,000	3,170,000
Demand Information					
Projected Demand During an Average Year ^[2]	2,006,000	1,933,000	1,985,000	2,049,000	2,106,000
Projected Demand During a Single Dry Year ^[2]	2,171,000	2,162,000	2,201,000	2,254,000	2,319,000
Projected Demand During Average of Multiple 3 Dry Year Period ^[2]	2,236,000	2,188,000	2,283,000	2,339,000	2,399,000
Surplus Information					
Projected Surplus During an Average Year	2,067,000	2,566,000	3,155,000	2,949,000	2,759,000
Projected Surplus During a Single Dry Year	1,048,000	1,482,000	1,812,000	1,605,000	1,407,000
Projected Surplus During Average of Multiple 3 Dry Year Period	416,000	782,000	970,000	875,000	771,000

[1] Projected supplies include current supplies and supplies under development. This data was obtained from Metropolitan's 2010 RUWMP, adopted by the Board on November 9, 2010 (Tables 2-9 through 2-11).

[2] Demand data obtained from Metropolitan's 2010 RUWMP, adopted by the Board on November 9, 2010 (Tables 2-9 through 2-11).

Metropolitan has had a long and successful track record in implementing resource management actions and measures to allow for consistency in available water supply in dry years. Some of these programs, segregated by category, have included the following:

Conservation

- Providing incentives to facilitate the installation of water conserving devices. Metropolitan is also looking at refining their current incentive program to include more options, streamlined administrative processes, and more standardization across programs to increase participation. Total incentive payments for FY 2006/07 were \$15.4 million and for FY 2007/08 were \$18.1 million, which created 8,300 AF and 7,400 AF of new conserved water savings, respectively, bringing the total to 120,000 AF of conserved annual water savings, since 1991.

- Promoting water savings through legislative measures.
- Pursuing specific implementation strategies outlined in Metropolitan's Conservation Strategy Plan, jointly developed with its member agencies.

Local Resources Programs (LRP)

- Providing incentives of up to \$250 per acre-foot to expand water recycling and groundwater recovery programs. Eighty-six participating water recycling and groundwater recovery projects are expected to collectively produce about 363,000 AFY once fully implemented. Since inception of the LRP in 1982, Metropolitan has provided more than \$244 million for the production of about 1.3 MAF of recycled water and recovered groundwater.
- Encouraging development of seawater desalination by promoting improved regional facilitation and funding. Additional information on desalination is included later in this section.
- Updating policies to allow for an open process to accept and view project applications on a continuous basis, with a goal of development of an additional 174,000 acre-feet per year of local water resources.

In-Basin Groundwater Storage

- Promoting dry-year conjunctive use programs with member and retail agencies, which provide more than 415,000 AF of additional storage within Metropolitan's service area with a contractual yield of more than 115,000 AF during dry conditions. Metropolitan has allocated \$52.4 million to these programs to date. Metropolitan also has about 63,000 AF in local supplemental storage through agreements with several member agencies.

In-Basin Surface Water Storage

- Providing storage in Metropolitan's Diamond Valley, Lake Mathews and Lake Skinner Reservoirs.
- Providing flexible storage in DWR's Castaic Lake and Lake Perris Reservoirs.
- Plan process.

City of Garden Grove

The City's water demand in fiscal year 2009/10 was 28,792 AF including unaccounted-for-water. Based on the City's 2010 UWMP, water demand for year 2035 is projected to be 30,907 AFY, including the Proposed Project. Table 4.2, shown previously, depicts the projected water demands for the City based on the 2010 UWMP and used in this section to evaluate future water supply reliability. Additional water demands generated by the Proposed Project are also considered in this analysis. As shown in the water supply and demand tables below (Tables 5.4 through 5.10), all projected Project demands can be met with estimated supply.

Reliability of a supply is impacted by climatic variation. To analyze the changes of reliability due to climate, in its 2010 UWMP the City has documented that it is 100% reliable for single dry and multi-dry year demands through 2035 with an increase of 5.6% above normal year demands using FY 2003-04 as the base year.

Based on the annual MWDOC survey completed by each Producer in the spring of 2008, the estimated demand for groundwater in the OCWD boundary will increase from 519,000 AFY in 2015 to 558,000 AFY in 2035 representing a 7.5 percent increase over a 20 year period. OCWD's estimated total annual groundwater production for the water year 2010-2011 is 295,000 AF based on a BPP of 62 percent and includes 22,000 AF of production from water quality improvement projects.

The OCWD Basin Production Percentage (BPP) is calculated by dividing groundwater basin pumping by total water demands. The BPP was initially established in 1969 and has ranged from a current low of 62 percent to 89 percent. For fiscal year 2008/09 the BPP was established at 69 percent. The BPP for 2009/10 and 2010/11 has been established at 62 percent, the lowest in its 42-year history (1976/77 was also 62 percent) primarily due to the fact that seven out of the past nine years have been drier than normal resulting in low groundwater levels. The average BPP for the past twenty years is 73 percent. A conservative BPP of 62 percent is assumed in the City's 2010 UWMP to be a reasonable estimate for normal, single dry, and multiple dry years. However, during wet and normal years a higher BPP could be used, or the basin could be over pumped in dry years and recharged in wet years to even out drought conditions. The 62 percent BPP assumption for all conditions is thought to be reasonable and conservative.

The City or any producer can always pump groundwater above the BPP. If this occurs, the producer pays the BEA pump tax which is a higher payment, as compared to the RA, than is paid by a producer for groundwater produced within the BPP limits. Because the BEA exemption agreement between the City and OCWD has expired, it is assumed here that OCWD will disallow the agreement to continue and the City's groundwater production will stay within the BPP without the BEA adjustment. However, the City is making improvements to the blending facilities and is planning to appeal the BEA exemption once the interim blending system is in place.

Demand on imported supply typically increases during dry years when the weather is hot and there is a decrease in local runoff. As discussed previously in this section, Metropolitan demonstrated it has developed flexible water supplies through transfers and storage programs designed to increase its resources during dry water year conditions. Table 5.3 above shows Metropolitan has projected sufficient supplies to meet demands within its service area through year 2035. Imported water supply to the City as set forth in Tables 5.4 through 5.10 is calculated as the difference of total demand less local groundwater supplies. Analysis shows that long-term groundwater and imported water are anticipated to remain stable to the City, based on OCWD and Metropolitan studies and reports.

Table 5.4 presents future normal year water demands based on growth factors developed in Section 4 of this WSA. Table 5.5 shows single-dry water year supply and demand projections and Tables 5.6 through 5.9 shows the multiple-dry water years projected supply and demand. In the multiple dry year scenarios, the first two years of each five-year period are assumed to be a normal years with the three dry years occurring in years three, four and five.

Table 5.3
City of Garden Grove
Projected Water Supply and Demand
Normal Year (AFY)

Water Sources	2015	2020	2025	2030	2035
Supply	Normal Water Years				
Imported ^[1]	11,111	11,281	11,409	11,579	11,745
Local (Groundwater) ^[2]	18,129	18,407	18,615	18,893	19,162
Total Supply	29,240	29,688	30,024	30,472	30,907
Demand					
Total Demand without the Proposed Project ^[3]	29,066	29,514	29,850	30,298	30,733
Net Proposed Project Demand ^{[4][5]}	174	174	174	174	174
Total Demand	29,240	29,688	30,024	30,472	30,907
Supply/ Demand Difference	0	0	0	0	0

[1] Equal to Total Demand minus Local Groundwater Supply.

[2] This figure represents 62% of total Garden Grove water demand based on the anticipated BPP forecasts as discussed previously in this WSA.

[3] This figure represents normal year demand based on the City of Garden Grove's 2010 UWMP and excludes Net Proposed Project Demand.

[4] This figure represents net demand for the Proposed Project (total Project normal year demand minus existing project site demand).

[5] Proposed Project is assumed to be built out by 2014.

Table 5.4
City of Garden Grove
Projected Water Supply and Demand
Single Dry Year (AFY)

Water Sources	2015	2020	2025	2030	2035
Supply	Single Dry Years				
Imported ^[1]	12,748	12,944	13,090	13,285	13,476
Local (Groundwater) ^[2]	18,129	18,407	18,615	18,893	19,162
Total Supply	30,877	31,351	31,705	32,178	32,638
Demand					
Total Demand without the Proposed Project ^[3]	30,694	31,167	31,522	31,995	32,454
Net Proposed Project Demand ^{[3][4][5]}	184	184	184	184	184
Total Demand	30,877	31,351	31,705	32,178	32,638
Supply/ Demand Difference	0	0	0	0	0

[1] Equal to Total Demand minus Local Groundwater Supply.

[2] This figure represents 62% of total Garden Grove normal year water demand based on the anticipated BPP forecasts as discussed previously in this WSA.

[3] Single Dry Year Demand = Normal Year Demand x 1.056 (5.6% increase).

[4] This figure represents net demand for the Proposed Project (Total Project normal year demand minus existing project site demand).

[5] Proposed Project is assumed to be built out by 2014.

Table 5.5
City of Garden Grove
Projected Water Supply and Demand
Multiple Dry Water Years 2011-2015 (AFY)

Water Sources	2011	2012	2013	2014	2015
Supply	Normal Years		Multiple Dry Years		
Imported ^[1]	10,975	11,009	12,671	12,710	12,749
Local (Groundwater) ^[2]	17,907	17,962	18,018	18,073	18,129
Total Supply	28,882	28,971	30,688	30,783	30,877
Demand					
Total Demand without the Proposed Project ^[3]	28,882	28,971	30,688	30,599	30,694
Net Proposed Project Demand ^{[3][4][5]}	0	0	0	184	184
Total Demand	28,882	28,971	30,688	30,783	30,877
Supply/ Demand Difference	0	0	0	0	0

[1] Equal to Total Demand minus Local Groundwater Supply.

[2] This figure represents 62% of total Garden Grove normal year water demand based on the anticipated BPP forecasts as discussed previously in this WSA.

[3] Multiple Dry Year Demand = Normal Year Demand x 1.056 (5.6% increase).

[4] This figure represents net demand for the Proposed Project (total Project normal year demand minus existing project site demand).

[5] Proposed Project is assumed to be built out by 2014 and therefore included in 2014 and beyond.

**Table 5.6
City of Garden Grove
Projected Water Supply and Demand
Multiple Dry Water Years 2016-2020 (AFY)**

Water Sources	2016	2017	2018	2019	2020
Supply	Normal Years		Multiple Dry Years		
Imported ^[1]	11,145	11,179	12,866	12,905	12,944
Local (Groundwater) ^[2]	18,184	18,240	18,295	18,351	18,407
Total Supply	29,330	29,419	31,161	31,256	31,351
Demand					
Total Demand without the Proposed Project ^[3]	29,156	29,245	30,978	31,072	31,167
Net Proposed Project Demand ^{[3][4][5]}	174	174	184	184	184
Total Demand	29,330	29,419	31,161	31,256	31,351
Supply/ Demand Difference	0	0	0	0	0

[1] Equal to Total Demand minus Local Groundwater Supply.

[2] This figure represents 62% of total Garden Grove normal year water demand based on the anticipated BPP forecasts as discussed previously in this WSA.

[3] Multiple Dry Year Demand = Normal Year Demand x 1.056 (5.6% increase).

[4] This figure represents net demand for the Proposed Project (Total Project normal year demand minus existing project site demand).

[5] Proposed Project is assumed to be built out by 2014 and therefore included in 2014 and beyond.

Table 5.7
City of Garden Grove
Projected Water Supply and Demand
Multiple Dry Water Years 2021-2025 (AFY)

Water Sources	2021	2022	2023	2024	2025
Supply	Normal Years		Multiple Dry Years		
Imported ^[1]	11,307	11,333	13,032	13,061	13,090
Local (Groundwater) ^[2]	18,448	18,490	18,532	18,573	18,615
Total Supply	29,755	29,822	31,563	31,634	31,705
Demand					
Total Demand without the Proposed Project ^[3]	29,581	29,648	31,380	31,451	31,522
Net Proposed Project Demand ^{[3][4][5]}	174	174	184	184	184
Total Demand	29,755	29,822	31,563	31,634	31,705
Supply/ Demand Difference	0	0	0	0	0

[1] Equal to Total Demand minus Local Groundwater Supply.

[2] This figure represents 62% of total Garden Grove normal year water demand based on the anticipated BPP forecasts as discussed previously in this WSA.

[3] Multiple Dry Year Demand = Normal Year Demand x 1.056 (5.6% increase).

[4] This figure represents net demand for the Proposed Project (total Project normal year demand minus existing project site demand).

[5] Proposed Project is assumed to be built out by 2014 and therefore included in 2014 and beyond.

Table 5.8
City of Garden Grove
Projected Water Supply and Demand
Multiple Dry Water Years 2026-2030 (AFY)

Water Sources	2026	2027	2028	2029	2030
Supply	Normal Years		Multiple Dry Years		
Imported ^[1]	11,443	11,477	13,208	13,247	13,286
Local (Groundwater) ^[2]	18,670	18,726	18,782	18,837	18,893
Total Supply	30,114	30,203	31,989	32,084	32,178
Demand					
Total Demand without the Proposed Project ^[3]	29,940	30,029	31,805	31,900	31,995
Net Proposed Project Demand ^{[3][4][5]}	174	174	184	184	184
Total Demand	30,114	30,203	31,989	32,084	32,178
Supply/ Demand Difference	0	0	0	0	0

[1] Equal to Total Demand minus Local Groundwater Supply.

[2] This figure represents 62% of total Garden Grove normal year water demand based on the anticipated BPP forecasts as discussed previously in this WSA.

[3] Multiple Dry Year Demand = Normal Year Demand x 1.056 (5.6% increase).

[4] This figure represents net demand for the Proposed Project (total Project normal year demand minus existing project site demand).

[5] Proposed Project is assumed to be built out by 2014 and therefore included in 2014 and beyond.



Table 5.9
City of Garden Grove
Projected Water Supply and Demand
Multiple Dry Water Years 2031-2035 (AFY)

Water Sources	2031	2032	2033	2034	2035
Supply	Normal Years		Multiple Dry Years		
Imported ^[1]	11,612	11,645	13,400	13,438	13,475
Local (Groundwater) ^[2]	18,947	19,001	19,054	19,108	19,162
Total Supply	30,559	30,646	32,454	32,546	32,638
Demand					
Total Demand without the Proposed Project ^[3]	30,385	30,472	32,270	32,362	32,454
Net Proposed Project Demand ^{[3][4][5]}	174	174	184	184	184
Total Demand	30,559	30,646	32,454	32,546	32,638
Supply/ Demand Difference	0	0	0	0	0

[1] Equal to Total Demand minus Local Groundwater Supply.

[2] This figure represents 62% of total Garden Grove normal year water demand based on the anticipated BPP forecasts as discussed previously in this WSA.

[3] Multiple Dry Year Demand = Normal Year Demand x 1.056 (5.6% increase).

[4] This figure represents net demand for the Proposed Project (total Project normal year demand minus existing project site demand).

[5] Proposed Project is assumed to be built out by 2014 and therefore included in 2014 and beyond.

6.0 CONCLUSION

Currently, the total water demand for retail customers served by the City is approximately 27,500 acre-feet annually consisting entirely of potable water. In the last five years, the City's water demand has decreased by about 5 percent while population has increased by 2.5%. Some of this was due to water conservation efforts of the City (park irrigation reductions) and its residents due to the water allocation program under effect from MWDOC and Metropolitan going into its second straight year. Some of this conservation could subside and per capita use could rise slightly above its current low now that the statewide drought has officially been declared over and the water allocation has been lifted. Per capita use could also rise with improvements in the economic picture. With its diligence in the promotion of water conservation as well as financial incentives to customers to retrofit their homes and businesses with water efficient devices and appliances, the City is projecting a 7% demand increase in the next 25 years despite a projected 10% population growth.

Since the Proposed Project was a part of the Harbor Boulevard Development Area, which was included in the land use projections of the 2008 Water Master, it can be considered as included in the water demand projections of the City's 2010 UWMP. The Proposed Project's estimated net additional demand of 174 AFY can then be subtracted from the 30,472 AFY generating a total 2030 demand without the Proposed Project of 30,298 AFY. It should be noted that the additional net demand for the Proposed Project is less than 0.6 percent of the total projected City-wide demand at the end of the 20-year planning period required to be analyzed for WSA purposes.

Analysis of water supply projections for the City demonstrates that projected supplies will meet demands through fiscal year 2035. These projections consider water development programs and projects as well as water conservation, as described in the City's 2010 UWMP, June 2011 and Metropolitan's 2010 RUWMP, November 2010. Metropolitan's 2010 RUWMP projects significant surplus supply conditions in all normal, single dry, and multiple dry year scenarios. Since the City's original demand projections that were provided to MWDOC, and in turn Metropolitan, were higher than the revised projections, their demand projections should be overstated and also included the Proposed Project demands. The City's groundwater and imported water supplies are anticipated to remain stable based on OCWD and Metropolitan studies and reports.

The City's water supply projection is based on utilizing up to 62 percent groundwater (normal, single dry and multiple dry years) based on an expected average long-term Basin Production Percentage, and its share of imported water is confirmed reliable by Metropolitan. Analysis of normal, single dry, and multiple dry year scenarios also demonstrate the City's ability to meet demand during the 20-year planning period.

Additionally, if extraordinary circumstances require, the City can meet its water demand by (1) increasing production of groundwater beyond the BPP up to the basin safe yield, (2) increasing imported water purchases, and/or (3) decreasing demand through water

conservation measures, which has proved to be extremely effective over the past couple of years under Metropolitan's recently lifted Water Allocation Plan.

Reliability of future water supplies to the region will be ensured through continued implementation of the OCWD Groundwater Management Plan, OCWD's Long Term Facilities Plan, local agency programs, and the combined efforts and programs among member and cooperative agencies of Metropolitan. These agencies include all water wholesalers and retailers, the Orange County Sanitation District, the Santa Ana Regional Water Quality Control Board, and the Santa Ana Watershed Project Authority.

Collectively, the information included in this WSA identifies a sufficient and reliable water supply for the City, now and into the future, including a sufficient water supply for the Proposed Project.

7.0 REFERENCES

The following documents were used, in conjunction with discussions with the City of Garden Grove staff, in preparing this water supply assessment:

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APPENDIX A
EXISTING WATER USE ON PROJECT SITE
(included in 2008 Water Master Plan & 2010 UWMP as existing)

Existing Water Use Summary (from meter reads)

Address	Years	Units (100 ft³)	Units/yr (100 ft³/yr)	Units/yr (AFY)
12252 Harbor Boulevard	4.01	1,324	330.3	0.8
12272 Harbor Boulevard	4.01	1,517	378.5	0.9
12292 Harbor Boulevard	4.01	1,454	362.8	0.8
12302 Harbor Boulevard	4.01	881	219.8	0.5
Subtotal Residential				3.0
12511 Twintree Lane	4.01	974	243.2	0.6
12531 Twintree Lane	4.01	652	162.7	0.4
12551 Twintree Lane	4.01	524	130.7	0.3
12571 Twintree Lane	4.01	913	227.8	0.5
Subtotal Residential				1.8
TOTAL				4.8



Water Billing System

[Main](#) [Search](#) [Calc](#) [Reports](#) [jeffku](#) [logout](#) Thursday, March 31, 2011

[calculator](#) | [print customer copy](#) | [email bill notice](#) | [print current bill](#) | [edit customer](#) | [close](#) | [GGCF](#) | [suppress lates](#) | [grant extensions](#)

Customer

Name: CITY OF GARDEN
 GROVE - ACCTS
 PYBL (373474010)
 11222 ACACIA PKWY,
Address: GARDEN GROVE, CA
 92840
Email: DL: NA
Phones: NA
Credit Issues:

billing date	issue
03/02/2010	LATE

Account

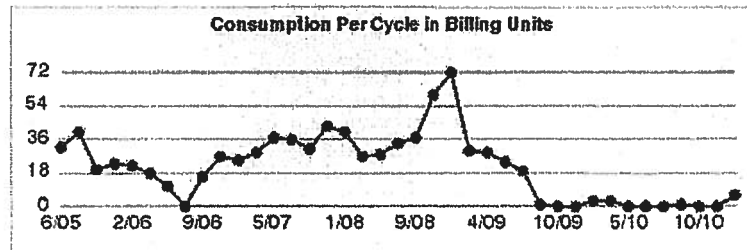
balance: \$0.00
status: 2, 03/25/2010 to current ,
Owner
status: 1, 02/04/2010 to 03/25/2010 ,
Owner

Remarks: [add remark](#) | [edit remarks](#)
 03/26/2010 romp WAIVE DEP CITY OWNED NOT RQRD
 02/04/2010 romp RP- PER BOB MILLS THROUGH MIKE GRAY, SIGN UP CITY OWNED PROPERTY

date	type	amount	balance
03/29/11	PAYMENT	-40.89	0.00
03/14/11	Sewer Maintenance Fee	8.60	40.89
03/14/11	Water Service Charge	30.35	32.29
03/14/11	Water Capital Improvement	1.94	1.94
03/14/11	Imported Water Fee	0.00	0.00
03/14/11	Water Tier 1 Use	0.00	0.00
03/14/11	BILLING	40.89	
02/01/11	PAYMENT	-40.89	0.00
01/14/11	Sewer Maintenance	8.60	40.89

Service

Estimated Next Read: 05/06/2011
Service at: 12252 HARBOR BLVD [Map](#) **Loc:** 23
Service id: 37347401 **Housing units:** 1
Current read: 9083 **Service type:** commercial
Rate type: Metered **Meter size:** 1"
Meter serial: 51427821 **Meter installed:** 10/01/1996
Meter remarks: None.



Base Cons:

year	cons
2010	1
2009	59
2008	58
2007	61
2006	62
2005	53

[adjust](#) | [new](#)

Consumption Summary:

start	end	days	read	units	avg/per day
01/10/11	03/09/11	58	9083	0	0.00
11/03/10	01/10/11	68	9083	0	0.00
09/09/10	11/03/10	55	9083	0	0.00
07/15/10	09/09/10	56	9083	0	0.00
05/18/10	07/15/10	58	9083	0	0.00
03/23/10	05/18/10	56	9083	0	0.00
01/26/10	03/23/10	56	9083	0	0.00
11/20/09	01/26/10	67	9083	0	0.00
09/24/09	11/20/09	57	~9083	0	0.00
09/01/09	09/24/09	23	~9083	1	0.04
07/29/09	09/01/09	34	~9082	28	0.82
06/03/09	07/29/09	56	~9054	65	1.16
04/07/09	06/03/09	57	~8989	57	1.00
02/09/09	04/07/09	57	~8932	48	0.84
12/04/08	02/09/09	67	~8884	61	0.91
10/08/08	12/04/08	57	~8823	72	1.26
08/12/08	10/08/08	57	~8751	222	3.89
06/16/08	08/12/08	57	~8529	267	4.68
04/18/08	06/16/08	59	~8262	59	1.00
02/22/08	04/18/08	56	~8203	60	1.07
12/18/07	02/22/08	66	~8143	58	0.88
10/22/07	12/18/07	57	~8085	72	1.26
08/24/07	10/22/07	59	~8013	74	1.25

	Fee		
01/14/11	Water Service Charge	30.35	32.25
01/14/11	Water Capital Improvement	1.94	1.94
01/14/11	Imported Water Fee	0.00	0.00
01/14/11	Water Tier 1 Use	0.00	0.00
01/14/11	<u>BILLING</u>	40.89	
12/01/10	PAYMENT	-40.89	0.00
11/09/10	Sewer Maintenance Fee	8.60	40.89
11/09/10	Water Service Charge	30.35	32.25
11/09/10	Water Capital Improvement	1.94	1.94
11/09/10	Imported Water Fee	0.00	0.00
11/09/10	Water Tier 1 Use	0.00	0.00
11/09/10	<u>BILLING</u>	40.89	
09/22/10	PAYMENT	-40.89	0.00
09/14/10	Sewer Maintenance Fee	8.60	40.89
09/14/10	Water Service Charge	30.35	32.25
09/14/10	Water Capital Improvement	1.94	1.94
09/14/10	Imported Water Fee	0.00	0.00
09/14/10	Water Tier 1 Use	0.00	0.00
09/14/10	<u>BILLING</u>	40.89	
08/04/10	PAYMENT	-40.89	0.00
07/19/10	Sewer Maintenance Fee	8.60	40.89
07/19/10	Water Service Charge	30.35	32.25
07/19/10	Water Capital Improvement	1.94	1.94
	Imported		

06/28/07	08/24/07	57	~7939	94	1.65
05/02/07	06/28/07	57	~7845	86	1.51
03/07/07	05/02/07	56	~7759	85	1.52
01/09/07	03/07/07	57	~7674	65	1.14
11/02/06	01/09/07	68	~7609	70	1.03
09/07/06	11/02/06	56	~7539	61	1.09
07/12/06	09/07/06	57	~7478	99	1.74
05/12/06	07/12/06	61	~7379	96	1.57
03/17/06	05/12/06	56	~7283	71	1.27
01/19/06	03/17/06	57	~7212	82	1.44
11/14/05	01/19/06	66	~7130	100	1.52
09/19/05	11/14/05	56	~7030	99	1.77
07/22/05	09/19/05	59	~6931	128	2.17
05/25/05	07/22/05	58	~6803	72	1.24

07/19/10	Water Fee	0.00	0.00
07/19/10	Water Tier 1 Use	0.00	0.00
07/19/10	<u>BILLING</u>	40.89	
06/14/10	PAYMENT	-26.56	0.00
05/20/10	Beginning Balance	-85.00	
05/20/10	Pre-paid Sewer Maintenance	80.72	26.56
05/20/10	Water Service Charge	28.90	-54.16
05/20/10	Water Capital Improvement	1.94	-83.00
05/20/10	Imported Water Fee	0.00	-85.00
05/20/10	Water Tier 1 Use	0.00	-85.00
05/20/10	<u>BILLING</u>	111.56	
04/28/10	PAYMENT	178.64	-85.00
03/26/10	Deposit	-85.00	93.64
03/25/10	Beginning Balance	85.00	
03/25/10	Sewer Maintenance Fee	67.75	178.64
03/25/10	Water Service Charge	24.26	110.89
03/25/10	Water Capital Improvement	1.63	86.63
03/25/10	Imported Water Fee	0.00	85.00
03/25/10	Water Tier 1 Use	0.00	85.00
03/25/10	<u>BILLING</u>	93.64	
02/04/10	Deposit	85.00	85.00

[Back](#)



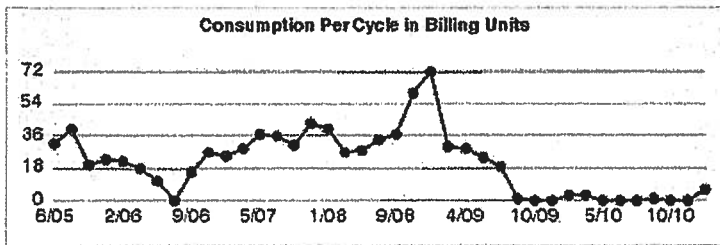
Water Billing System

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Customer
 CC
 Name: CAMPERLAND/RICHARD
 KIL (373474015)
 Address: 3850 TIFFANY LN, TORRANCE,
 CA 90505
 Email: DL: E0418458/560920260
 Phones: 7506747
 Credit None.
 Issues:

Service
 Estimated Next Read: 05/06/2011
 Service at: 12252 HARBOR BLVD Map Loc: 23
 Service id: 37347401 Housing units: 1
 Current read: 9083 Service type: commercial
 Rate type: Metered Meter size: 1"
 Meter serial: 51427821 Meter installed: 10/01/1996
 Meter remarks: None.



Account
 balance: \$0.00
 status: 5 , 09/01/2009 to current
 Remarks: [add remark](#) | [edit remarks](#)
 U/U 1 PER PRELIM LFT 48HR NTC
 09/23/09 RP
 R/R 5129 PER PRELIM RD OK 11/21/01
 AM
 R/R 8577 PER PRELIM LFI MVNG FAST
 POSS LK OR POOL?08/12/08RP

Base Cons:

year	cons
2010	1
2009	59
2008	58
2007	61
2006	62
2005	53

Consumption Summary:

start	end	days	read	units	avg/per day
01/10/11	03/09/11	58	9083	0	0.00
11/03/10	01/10/11	68	9083	0	0.00
09/09/10	11/03/10	55	9083	0	0.00
07/15/10	09/09/10	56	9083	0	0.00
05/18/10	07/15/10	58	9083	0	0.00
03/23/10	05/18/10	56	9083	0	0.00
01/26/10	03/23/10	56	9083	0	0.00
11/20/09	01/26/10	67	9083	0	0.00
09/24/09	11/20/09	57	~9083	0	0.00
09/01/09	09/24/09	23	~9083	1	0.04
07/29/09	09/01/09	34	~9082	28	0.82
06/03/09	07/29/09	56	~9054	65	1.16
04/07/09	06/03/09	57	~8989	57	1.00
02/09/09	04/07/09	57	~8932	48	0.84
12/04/08	02/09/09	67	~8884	61	0.91
10/08/08	12/04/08	57	~8823	72	1.26
08/12/08	10/08/08	57	~8751	222	3.89
06/16/08	08/12/08	57	~8529	267	4.68
04/18/08	06/16/08	59	~8262	59	1.00
02/22/08	04/18/08	56	~8203	60	1.07
12/18/07	02/22/08	66	~8143	58	0.88
10/22/07	12/18/07	57	~8085	72	1.26
08/24/07	10/22/07	59	~8013	74	1.25
06/28/07	08/24/07	57	~7939	94	1.65
05/02/07	06/28/07	57	~7845	86	1.51
03/07/07	05/02/07	56	~7759	85	1.52

date	type	amount	balance
09/28/09	PAYMENT	128.75	0.00
09/02/09	Closing Bill	79.75	128.75
09/02/09	Deposit Refund	0.00	49.00
09/02/09	Sewer Billing	49.00	49.00
09/02/09	BILLING	49.00	
08/31/09	PAYMENT	255.58	0.00
07/29/09	Water Billing	155.37	255.58
07/29/09	Capital Improvement	1.94	100.21
07/29/09	Increased Cost	17.55	98.27
07/29/09	Sewer Billing	80.72	80.72
07/29/09	BILLING	255.58	
07/03/09	PAYMENT	222.36	0.00
06/03/09	Water Billing	129.81	222.36
06/03/09	Capital Improvement	1.94	92.55
06/03/09	Increased Cost	15.39	90.61
06/03/09	Sewer Billing	75.22	75.22
06/03/09	BILLING	222.36	
05/11/09	PAYMENT	203.28	0.00

[adjust](#) | [new](#)

04/07/09	Water Billing	113.16	203.28
04/07/09	Capital Improvement	1.94	90.12
04/07/09	Increased Cost	12.96	88.18
04/07/09	Sewer Billing	75.22	75.22
04/07/09	<u>BILLING</u>	203.28	
03/03/09	PAYMENT	-	0.00
02/09/09	Water Billing	137.21	230.84
02/09/09	Capital Improvement	1.94	93.63
02/09/09	Increased Cost	16.47	91.69
02/09/09	Sewer Billing	75.22	75.22
02/09/09	<u>BILLING</u>	230.84	
01/02/09	PAYMENT	-	0.00
12/04/08	Water Billing	157.56	254.16
12/04/08	Capital Improvement	1.94	96.60
12/04/08	Increased Cost	19.44	94.66
12/04/08	Sewer Billing	75.22	75.22
12/04/08	<u>BILLING</u>	254.16	
11/07/08	PAYMENT	-	0.00
10/08/08	Water Billing	566.63	566.63
10/08/08	Capital Improvement	1.94	131.57
10/08/08	Increased Cost	59.94	129.63
10/08/08	Pre-paid Sewer Billing Cost	5.53	69.69
10/08/08	Sewer Billing	69.69	64.16
10/08/08	<u>BILLING</u>	572.16	
09/08/08	PAYMENT	-	-5.53
08/21/08	Sewer Billing	673.09	667.56
08/21/08	<u>BILLING</u>	-5.53	
08/12/08	Water Billing	518.31	673.09
08/12/08	Capital Improvement	1.94	154.78
08/12/08	Increased Cost	72.09	152.84
08/12/08	Sewer Billing	80.75	80.75
08/12/08	<u>BILLING</u>	673.09	
07/09/08	PAYMENT	-	0.00
06/16/08	Water Billing	204.68	204.68
06/16/08	Capital Improvement	1.94	93.58
06/16/08	Increased Cost	15.93	91.64
06/16/08	Sewer Billing	75.71	75.71
06/16/08	<u>BILLING</u>	204.68	
05/14/08	PAYMENT	-	0.00
		206.49	

01/09/07	03/07/07	57	~7674	65	1.14
11/02/06	01/09/07	68	~7609	70	1.03
09/07/06	11/02/06	56	~7539	61	1.09
07/12/06	09/07/06	57	~7478	99	1.74
05/12/06	07/12/06	61	~7379	96	1.57
03/17/06	05/12/06	56	~7283	71	1.27
01/19/06	03/17/06	57	~7212	82	1.44
11/14/05	01/19/06	66	~7130	100	1.52
09/19/05	11/14/05	56	~7030	99	1.77
07/22/05	09/19/05	59	~6931	128	2.17
05/25/05	07/22/05	58	~6803	72	1.24

04/18/08	Water Billing	112.64	206.49
04/18/08	Capital Improvement	1.94	93.85
04/18/08	Increased Cost	16.20	91.91
04/18/08	Sewer Billing	75.71	75.71
04/18/08	<u>BILLING</u>	206.49	
03/20/08	PAYMENT	-	0.00
02/22/08	Water Billing	109.56	202.87
02/22/08	Capital Improvement	1.94	93.31
02/22/08	Increased Cost	15.66	91.37
02/22/08	Sewer Billing	75.71	75.71
02/22/08	<u>BILLING</u>	202.87	
01/07/08	PAYMENT	-	0.00
12/18/07	Water Billing	131.12	228.21
12/18/07	Capital Improvement	1.94	97.09
12/18/07	Increased Cost	19.44	95.15
12/18/07	Sewer Billing	75.71	75.71
12/18/07	<u>BILLING</u>	228.21	
11/14/07	PAYMENT	-	0.00
10/22/07	Water Billing	231.83	231.83
10/22/07	Capital Improvement	1.94	97.63
10/22/07	Increased Cost	19.98	95.69
10/22/07	Sewer Billing	75.71	75.71
10/22/07	<u>BILLING</u>	231.83	
09/17/07	PAYMENT	-	0.00
08/24/07	Water Billing	268.03	268.03
08/24/07	Capital Improvement	1.94	103.03
08/24/07	Increased Cost	25.38	101.09
08/24/07	Sewer Billing	75.71	75.71
08/24/07	<u>BILLING</u>	268.03	
07/23/07	PAYMENT	-	0.00
06/28/07	Water Billing	206.80	206.80
06/28/07	Capital Improvement	1.94	97.64
06/28/07	Increased Cost	23.22	95.70
06/28/07	Sewer Billing	72.48	72.48
06/28/07	<u>BILLING</u>	206.80	
05/29/07	PAYMENT	-	0.00
05/02/07	Water Billing	205.43	205.43
05/02/07	Capital Improvement	1.94	97.37
05/02/07	Increased Cost	22.95	95.43

05/02/07	Sewer Billing	72.48	72.48
05/02/07	<u>BILLING</u>	205.43	
04/02/07	PAYMENT	-	0.00
		178.03	
03/07/07	Water Billing	86.06	178.03
03/07/07	Capital Improvement	1.94	91.97
03/07/07	Increased Cost	17.55	90.03
03/07/07	Sewer Billing	72.48	72.48
03/07/07	<u>BILLING</u>	178.03	
01/23/07	PAYMENT	-	0.00
		184.88	
01/09/07	Water Billing	91.56	184.88
01/09/07	Capital Improvement	1.94	93.32
01/09/07	Increased Cost	18.90	91.38
01/09/07	Sewer Billing	72.48	72.48
01/09/07	<u>BILLING</u>	184.88	
11/14/06	PAYMENT	-	0.00
		172.55	
11/02/06	Water Billing	81.66	172.55
11/02/06	Capital Improvement	1.94	90.89
11/02/06	Increased Cost	16.47	88.95
11/02/06	Sewer Billing	72.48	72.48
11/02/06	<u>BILLING</u>	172.55	
09/18/06	PAYMENT	-	0.00
		224.61	
09/07/06	Water Billing	123.46	224.61
09/07/06	Capital Improvement	1.94	101.15
09/07/06	Increased Cost	26.73	99.21
09/07/06	Sewer Billing	72.48	72.48
09/07/06	<u>BILLING</u>	224.61	
07/20/06	PAYMENT	-	0.00
		220.50	
07/12/06	Water Billing	120.16	220.50
07/12/06	Capital Improvement	1.94	100.34
07/12/06	Increased Cost	25.92	98.40
07/12/06	Sewer Billing	72.48	72.48
07/12/06	<u>BILLING</u>	220.50	
05/31/06	PAYMENT	-	0.00
		175.45	
05/12/06	Water Billing	92.66	175.45
05/12/06	Capital Improvement	1.94	82.79
05/12/06	Increased Cost	17.75	80.85
05/12/06	Sewer Billing	63.10	63.10
05/12/06	<u>BILLING</u>	175.45	
03/28/06	PAYMENT	-	0.00
		190.84	

03/17/06	Water Billing	104.76	190.84
03/17/06	Capital Improvement	1.94	86.08
03/17/06	Increased Cost	20.50	84.14
03/17/06	Sewer Billing	63.10	63.64
03/17/06	<u>BILLING</u>	190.30	
02/02/06	PAYMENT	-	0.54
01/19/06	Water Billing	214.06	214.60
01/19/06	Capital Improvement	1.94	90.04
01/19/06	Increased Cost	25.00	88.10
01/19/06	Sewer Billing	63.10	63.10
01/19/06	<u>BILLING</u>	214.60	
11/29/05	PAYMENT	-	0.00
11/14/05	Water Billing	161.55	161.55
11/14/05	Capital Improvement	1.94	38.09
11/14/05	Increased Cost	24.75	36.15
11/14/05	Sewer Billing	11.40	11.40
11/14/05	<u>BILLING</u>	161.55	
10/13/05	PAYMENT	-	0.00
09/19/05	Water Billing	200.70	200.70
09/19/05	Capital Improvement	155.36	45.34
09/19/05	Increased Cost	1.94	43.40
09/19/05	Sewer Billing	32.00	11.40
09/19/05	<u>BILLING</u>	11.40	200.70
08/15/05	PAYMENT	-	0.00
07/22/05	Water Billing	125.10	125.10
07/22/05	Capital Improvement	93.76	31.34
07/22/05	Increased Cost	1.94	29.40
07/22/05	Sewer Billing	18.00	11.40
07/22/05	<u>BILLING</u>	11.40	125.10
06/13/05	PAYMENT	-	0.00
05/25/05	Water Billing	107.26	107.26
05/25/05	Capital Improvement	82.76	24.50
05/25/05	Increased Cost	1.94	22.56
05/25/05	Sewer Billing	11.16	11.40
05/25/05	<u>BILLING</u>	11.40	107.26
04/07/05	PAYMENT	-	0.00
03/30/05	Water Billing	150.12	150.12
03/30/05	Capital Improvement	121.26	28.86
03/30/05	Increased Cost	1.94	26.92

03/30/05	Sewer Billing	11.40	11.40
03/30/05	<u>BILLING</u>	150.12	
02/09/05	PAYMENT	-	0.00
		121.14	
02/01/05	Water Billing	95.96	121.14
02/01/05	Capital Improvement	1.94	25.18
02/01/05	Increased Cost	11.84	23.24
02/01/05	Sewer Billing	11.40	11.40
02/01/05	<u>BILLING</u>	121.14	
12/21/04	PAYMENT	-	0.00
		107.28	
11/29/04	Water Billing	83.86	107.28
11/29/04	Capital Improvement	1.94	23.42
11/29/04	Increased Cost	10.08	21.48
11/29/04	Sewer Billing	11.40	11.40
11/29/04	<u>BILLING</u>	107.28	
10/28/04	PAYMENT	-94.68	0.00
10/01/04	Water Billing	72.86	94.68
10/01/04	Capital Improvement	1.94	21.82
10/01/04	Increased Cost	8.48	19.88
10/01/04	Sewer Billing	11.40	11.40
10/01/04	<u>BILLING</u>	94.68	
08/31/04	PAYMENT	-	0.00
		152.64	
08/05/04	Water Billing	123.46	152.64
08/05/04	Capital Improvement	1.94	29.18
08/05/04	Increased Cost	15.84	27.24
08/05/04	Sewer Billing	11.40	11.40
08/05/04	<u>BILLING</u>	152.64	
07/12/04	PAYMENT	-	0.00
		103.54	
06/10/04	Water Billing	82.76	103.54
06/10/04	Capital Improvement	1.94	20.78
06/10/04	Increased Cost	7.44	18.84
06/10/04	Sewer Billing	11.40	11.40
06/10/04	<u>BILLING</u>	103.54	
05/03/04	PAYMENT	-91.34	0.00
04/14/04	Water Billing	71.76	91.34
04/14/04	Capital Improvement	1.94	19.58
04/14/04	Increased Cost	6.24	17.64
04/14/04	Sewer Billing	11.40	11.40
04/14/04	<u>BILLING</u>	91.34	
03/25/04	PAYMENT	-	0.00
		115.74	
02/18/04	Water Billing	93.76	115.74

02/18/04	Capital Improvement	1.94	21.98
02/18/04	Increased Cost	8.64	20.04
02/18/04	Sewer Billing	11.40	11.40
02/18/04	<u>BILLING</u>	115.74	
01/08/04	PAYMENT	-	0.00
		104.76	
12/15/03	Water Billing	83.86	104.76
12/15/03	Capital Improvement	1.94	20.90
12/15/03	Increased Cost	7.56	18.96
12/15/03	Sewer Billing	11.40	11.40
12/15/03	<u>BILLING</u>	104.76	
11/10/03	PAYMENT	-	0.00
		127.94	
10/17/03	Water Billing	104.76	127.94
10/17/03	Capital Improvement	1.94	23.18
10/17/03	Increased Cost	9.84	21.24
10/17/03	Sewer Billing	11.40	11.40
10/17/03	<u>BILLING</u>	127.94	
09/02/03	PAYMENT	-	0.00
		131.40	
08/21/03	Water Billing	110.26	131.40
08/21/03	Capital Improvement	1.94	21.14
08/21/03	Increased Cost	10.44	19.20
08/21/03	Sewer Billing	8.76	8.76
08/21/03	<u>BILLING</u>	131.40	
07/29/03	PAYMENT	-	0.00
		102.10	
06/25/03	Water Billing	89.36	102.10
06/25/03	Capital Improvement	1.94	12.74
06/25/03	Increased Cost	2.04	10.80
06/25/03	Sewer Billing	8.76	8.76
06/25/03	<u>BILLING</u>	102.10	
05/07/03	PAYMENT	-	0.00
		100.97	
04/29/03	Water Billing	88.26	100.97
04/29/03	Capital Improvement	1.94	12.71
04/29/03	Increased Cost	2.01	10.77
04/29/03	Sewer Billing	8.76	8.76
04/29/03	<u>BILLING</u>	100.97	
03/31/03	PAYMENT	-	0.00
		106.62	
03/04/03	Water Billing	93.76	106.62
03/04/03	Capital Improvement	1.94	12.86
03/04/03	Increased Cost	2.16	10.92
03/04/03	Sewer Billing	8.76	8.76

03/04/03	BILLING	106.62	
02/06/03	PAYMENT	126.96	0.00
01/06/03	Water Billing	113.56	126.96
01/06/03	Capital Improvement	1.94	13.40
01/06/03	Increased Cost	2.70	11.46
01/06/03	Sewer Billing	8.76	8.76
01/06/03	BILLING	126.96	
12/03/02	PAYMENT	104.36	0.00
10/31/02	Water Billing	91.56	104.36
10/31/02	Capital Improvement	1.94	12.80
10/31/02	Increased Cost	2.10	10.86
10/31/02	Sewer Billing	8.76	8.76
10/31/02	BILLING	104.36	
10/01/02	PAYMENT	111.14	0.00
09/05/02	Water Billing	98.16	111.14
09/05/02	Capital Improvement	1.94	12.98
09/05/02	Increased Cost	2.28	11.04
09/05/02	Sewer Billing	8.76	8.76
09/05/02	BILLING	111.14	
08/29/02	Late Penalty	-10.00	0.00
08/29/02	PAYMENT	121.31	10.00
08/28/02	Late Penalty	10.00	131.31
07/11/02	Water Billing	108.06	121.31
07/11/02	Capital Improvement	1.94	13.25
07/11/02	Increased Cost	2.55	11.31
07/11/02	Sewer Billing	8.76	8.76
07/11/02	BILLING	121.31	
07/01/02	PAYMENT	119.86	0.00
05/16/02	Water Billing	109.16	119.86
05/16/02	Capital Improvement	1.94	10.70
05/16/02	Sewer Billing	8.76	8.76
05/16/02	BILLING	119.86	
04/09/02	PAYMENT	-95.66	0.00
03/21/02	Water Billing	84.96	95.66
03/21/02	Capital Improvement	1.94	10.70
03/21/02	Sewer Billing	8.76	8.76
03/21/02	BILLING	95.66	
02/19/02	PAYMENT	-92.36	0.00
01/24/02	Water Billing	81.66	92.36
01/24/02	Capital Improvement	1.94	10.70

01/24/02	Sewer Billing	8.76	8.76
01/24/02	<u>BILLING</u>	92.36	
12/11/01	PAYMENT	-	0.00
		103.36	
11/19/01	Water Billing	92.66	103.36
11/19/01	Capital Improvement	1.94	10.70
11/19/01	Sewer Billing	8.76	8.76
11/19/01	<u>BILLING</u>	103.36	
10/10/01	PAYMENT	-	0.00
		148.46	
09/24/01	Water Billing	137.76	148.46
09/24/01	Capital Improvement	1.94	10.70
09/24/01	Sewer Billing	8.76	8.76
09/24/01	<u>BILLING</u>	148.46	
08/08/01	PAYMENT	-	0.00
		148.02	
07/27/01	Water Billing	119.96	148.02
07/27/01	Capital Improvement	1.94	28.06
07/27/01	Increased Cost	17.36	26.12
07/27/01	Sewer Billing	8.76	8.76
07/27/01	<u>BILLING</u>	148.02	
07/02/01	PAYMENT	-	0.00
		117.33	
05/31/01	Water Billing	93.61	117.33
05/31/01	Capital Improvement	1.94	23.72
05/31/01	Increased Cost	13.02	21.78
05/31/01	Sewer Billing	8.76	8.76
05/31/01	<u>BILLING</u>	117.33	
05/09/01	PAYMENT	-	0.00
		125.25	
04/04/01	Water Billing	100.41	125.25
04/04/01	Capital Improvement	1.94	24.84
04/04/01	Increased Cost	14.14	22.90
04/04/01	Sewer Billing	8.76	8.76
04/04/01	<u>BILLING</u>	125.25	
03/05/01	PAYMENT	-	0.00
		206.43	
02/06/01	Water Billing	170.11	206.43
02/06/01	Capital Improvement	1.94	36.32
02/06/01	Increased Cost	25.62	34.38
02/06/01	Sewer Billing	8.76	8.76
02/06/01	<u>BILLING</u>	206.43	
01/09/01	PAYMENT	-	0.00
		187.62	
12/01/00	Water Billing	153.96	187.62
	Capital		

12/01/00	Improvement	1.94	33.66
12/01/00	Increased Cost	22.96	31.72
12/01/00	Sewer Billing	8.76	8.76
12/01/00	<u>BILLING</u>	187.62	
11/07/00	PAYMENT	-	0.00
		260.88	
10/03/00	Water Billing	216.86	260.88
10/03/00	Capital Improvement	-1.94	44.02
10/03/00	Increased Cost	33.32	42.08
10/03/00	Sewer Billing	8.76	8.76
10/03/00	<u>BILLING</u>	260.88	
09/11/00	PAYMENT	-	0.00
		219.30	
08/08/00	Water Billing	181.16	219.30
08/08/00	Capital Improvement	1.94	38.14
08/08/00	Increased Cost	27.44	36.20
08/08/00	Sewer Billing	8.76	8.76
08/08/00	<u>BILLING</u>	219.30	
07/11/00	PAYMENT	-	0.00
		238.68	
06/12/00	Water Billing	199.86	238.68
06/12/00	Capital Improvement	1.94	38.82
06/12/00	Increased Cost	28.12	36.88
06/12/00	Sewer Billing	8.76	8.76
06/12/00	<u>BILLING</u>	238.68	
05/23/00	PAYMENT	-	0.00
		120.22	
04/14/00	Water Billing	97.01	120.22
04/14/00	Capital Improvement	1.94	23.21
04/14/00	Increased Cost	12.51	21.27
04/14/00	Sewer Billing	8.76	8.76
04/14/00	<u>BILLING</u>	120.22	
03/15/00	PAYMENT	-	0.00
		135.88	
02/18/00	Water Billing	110.61	135.88
02/18/00	Capital Improvement	1.94	25.27
02/18/00	Increased Cost	14.57	23.33
02/18/00	Sewer Billing	8.76	8.76
02/18/00	<u>BILLING</u>	135.88	
01/17/00	PAYMENT	-	0.00
		164.27	
12/16/99	Water Billing	135.26	164.27
12/16/99	Capital Improvement	1.94	29.01
12/16/99	Increased Cost	18.31	27.07
12/16/99	Sewer Billing	8.76	8.76
12/16/99	<u>BILLING</u>	164.27	

11/15/99	PAYMENT	-	0.00
10/19/99	Water Billing	175.21	210.29
10/19/99	Capital Improvement	1.94	35.08
10/19/99	Increased Cost	24.38	33.14
10/19/99	Sewer Billing	8.76	8.76
10/19/99	<u>BILLING</u>	210.29	
09/07/99	PAYMENT	-	0.00
08/23/99	Water Billing	232.85	232.85
08/23/99	Capital Improvement	202.41	30.44
08/23/99	Increased Cost	1.94	28.50
08/23/99	<u>BILLING</u>	28.50	232.85
08/05/99	PAYMENT	-	0.00
06/28/99	Water Billing	230.97	230.97
06/28/99	Capital Improvement	206.66	24.31
06/28/99	Increased Cost	1.94	22.37
06/28/99	<u>BILLING</u>	22.37	230.97
06/02/99	PAYMENT	-	0.00
04/30/99	Water Billing	240.46	240.46
04/30/99	Capital Improvement	215.16	25.30
04/30/99	Increased Cost	1.94	23.36
04/30/99	<u>BILLING</u>	23.36	240.46
03/29/99	Starting Balance	240.46	0.00
03/29/99	PAYMENT	-	
		236.66	

[Back](#)



Water Billing System

[Main](#) [Search](#) [Calc](#) [Reports](#) [jeffku](#) [logout](#) Thursday, March 31, 2011

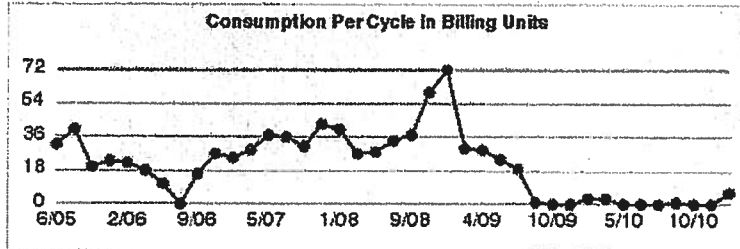
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Customer

Name: **GARDEN GROVE**
AGENCY COM DEV
(373471522)
 Address: 11222 ACACIA AVE
 ATTN: GREG BROWN,
 GARDEN GROVE, CA
 92842
 Email: DL: NA
 Phones: 714-741-5131 CARLOS
 Credit: None.
 Issues:

Service

Estimated Next Read: 05/06/2011
 Service at: 12272 HARBOR BLVD Map Loc: 23
 Service id: 37347152 Housing units: 1
 Current read: 20720 Service type: commercial
 Rate type: Metered Meter size: 1 1/2"
 Meter serial: 22099865 Meter installed: 08/01/1985
 Meter remarks: None.



Account

balance: **\$0.00**
 status: 2, 11/09/2010 to current
 status: 1, 10/08/2010 to 11/09/2010

Remarks: [add remark](#) | [edit remarks](#)
 None.

date	type	amount	balance
03/29/11	PAYMENT	148.73	0.00
03/14/11	Sewer Maintenance Fee	72.22	148.73
03/14/11	Water Service Charge	58.79	76.51
03/14/11	Water Capital Improvement	2.48	17.73
03/14/11	Imported Water Fee 6@0.53	3.18	15.24
03/14/11	Water Tier 1 Use 6@2.01	12.06	12.00
03/14/11	BILLING	148.73	-
02/01/11	PAYMENT	148.31	0.00
01/14/11	Sewer Maintenance Fee	72.22	148.31
01/14/11	Water Service Charge	58.79	76.00

Base Cons:

year	cons
2010	49
2009	73
2008	71
2007	71
2006	83
2005	56

[adjust](#) | [new](#)

Consumption Summary:

start	end	days	read	units	avg/per day
01/10/11	03/09/11	58	20720	6	0.10
11/03/10	01/10/11	68	20714	6	0.09
10/08/10	11/03/10	26	20708	66	2.54
09/09/10	10/08/10	29	20642	8	0.28
07/15/10	09/09/10	56	20634	40	0.71
05/18/10	07/15/10	58	20594	51	0.88
03/23/10	05/18/10	56	20543	50	0.89
01/26/10	03/23/10	56	20493	50	0.89
11/20/09	01/26/10	67	20443	63	0.94
09/24/09	11/20/09	57	~20380	58	1.02
07/29/09	09/24/09	57	~20322	61	1.07
06/03/09	07/29/09	56	~20261	53	0.95
04/07/09	06/03/09	57	~20208	61	1.07
02/09/09	04/07/09	57	~20147	49	0.86
12/04/08	02/09/09	67	~20098	82	1.22
10/08/08	12/04/08	57	~20016	77	1.35
08/12/08	10/08/08	57	~19939	97	1.70
06/16/08	08/12/08	57	~19842	83	1.46
04/18/08	06/16/08	59	~19759	73	1.24
02/22/08	04/18/08	56	~19686	85	1.52
12/18/07	02/22/08	66	~19601	83	1.26
10/22/07	12/18/07	57	~19518	76	1.33
08/24/07	10/22/07	59	~19442	73	1.24

01/14/11	Water Capital Improvement Imported	2.48	17.30
01/14/11	Water Fee 6@0.46	2.76	14.82
01/14/11	Water Tier 1 Use 6@2.01	12.06	12.06
01/14/11	BILLING	148.31	
12/16/10	PAYMENT	227.40	0.00
11/09/10	Sewer Maintenance Fee	33.53	227.40
11/09/10	Water Service Charge	27.30	193.87
11/09/10	Water Capital Improvement Imported	1.15	166.57
11/09/10	Water Fee 6@0.46	30.36	165.42
11/09/10	Water Tier 1 Use 36@2.01	72.36	135.06
11/09/10	Water Tier 2 Use 30@2.09	62.70	62.70
11/09/10	BILLING	227.40	

06/28/07	08/24/07	57	~19369	94	1.65
05/02/07	06/28/07	57	~19275	72	1.26
03/07/07	05/02/07	56	~19203	79	1.41
01/09/07	03/07/07	57	~19124	71	1.25
11/02/06	01/09/07	68	~19053	75	1.10
09/07/06	11/02/06	56	~18978	92	1.64
07/12/06	09/07/06	57	~18886	104	1.82
05/12/06	07/12/06	61	~18782	120	1.97
03/17/06	05/12/06	56	~18662	94	1.68
01/19/06	03/17/06	57	~18568	83	1.46
11/14/05	01/19/06	66	~18485	121	1.83
09/19/05	11/14/05	56	~18364	93	1.66
07/22/05	09/19/05	59	~18271	119	2.02
05/25/05	07/22/05	58	~18152	111	1.91

[Back](#)



Water Billing System

[Main](#) [Search](#) [Calc](#) [Reports](#) [jeffku](#) [logout](#) Thursday, March 31, 2011

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Customer

Name: **CC**
CAMPERLAND/RICHARD
KIL (373471521)
 Address: 3850 TIFFANY LN, TORRANCE, CA 90505
 Email: DL: E0418458/560920260
 Phones: 7506747
 Credit: None.
 Issues:

Account

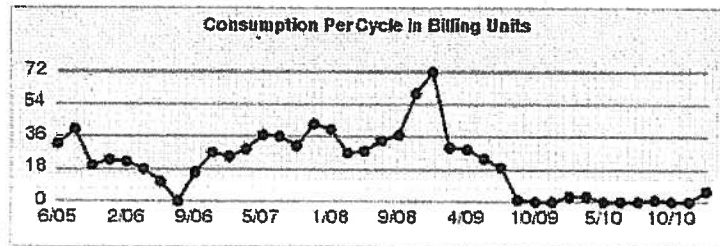
balance: \$0.00
 status: 5, 10/08/2010 to current
 status: 4, 10/08/2010 to 10/08/2010
 status: 2, 06/30/1992 to 10/08/2010

Remarks: [add remark](#) | [edit remarks](#)
 R/R PER PRELIM RD 15060 4/13/00 NO LK IND

date	type	amount	balance
10/20/10	PAYMENT	-88.88	0.00
10/08/10	Sewer Maintenance Fee	37.40	88.88
10/08/10	Water Service Charge	30.44	51.48
10/08/10	Water Capital Improvement	1.28	21.04
10/08/10	Imported Water Fee 8@0.46	3.68	19.76
10/08/10	Water Tier 1 Use 8@2.01	16.08	16.08
10/08/10	BILLING	88.88	
09/28/10	PAYMENT	232.61	0.00
09/14/10	Sewer Maintenance Fee	72.22	232.61
09/14/10	Water Service Charge	58.79	160.39
09/14/10	Water Capital Improvement	2.48	101.60
09/14/10	Imported Water Fee 40@0.46	18.40	99.12

Service

Estimated Next Read: 05/06/2011
 Service at: 12272 HARBOR BLVD [Map](#) **Loc: 23**
 Service id: 37347152 Housing units: 1
 Current read: 20720 Service type: commercial
 Rate type: Metered Meter size: 1 1/2"
 Meter serial: 22099865 Meter installed: 08/01/1985
 Meter remarks: None.



Base Cons:

year	cons
2010	49
2009	73
2008	71
2007	71
2006	83
2005	56

[adjust](#) | [new](#)

Consumption Summary:

start	end	days	read	units	avg/per day
01/10/11	03/09/11	58	20720	6	0.10
11/03/10	01/10/11	68	20714	6	0.09
10/08/10	11/03/10	26	20708	66	2.54
09/09/10	10/08/10	29	20642	8	0.28
07/15/10	09/09/10	56	20634	40	0.71
05/18/10	07/15/10	58	20594	51	0.88
03/23/10	05/18/10	56	20543	50	0.89
01/26/10	03/23/10	56	20493	50	0.89
11/20/09	01/26/10	67	20443	63	0.94
09/24/09	11/20/09	57	~20380	58	1.02
07/29/09	09/24/09	57	~20322	61	1.07
06/03/09	07/29/09	56	~20261	53	0.95
04/07/09	06/03/09	57	~20208	61	1.07
02/09/09	04/07/09	57	~20147	49	0.86
12/04/08	02/09/09	67	~20098	82	1.22
10/08/08	12/04/08	57	~20016	77	1.35
08/12/08	10/08/08	57	~19939	97	1.70
06/16/08	08/12/08	57	~19842	83	1.46
04/18/08	06/16/08	59	~19759	73	1.24
02/22/08	04/18/08	56	~19686	85	1.52
12/18/07	02/22/08	66	~19601	83	1.26
10/22/07	12/18/07	57	~19518	76	1.33
08/24/07	10/22/07	59	~19442	73	1.24
06/28/07	08/24/07	57	~19369	94	1.65
05/02/07	06/28/07	57	~19275	72	1.26

09/14/10	Water Tier 1 Use 36@2.01	72.36	80.72
09/14/10	Water Tier 2 Use 4@2.09	8.36	8.36
09/14/10	BILLING	232.61	
08/09/10	PAYMENT	260.66	0.00
07/19/10	Sewer Maintenance Fee	72.22	260.66
07/19/10	Water Service Charge	58.79	188.44
07/19/10	Water Capital Improvement	2.48	129.65
07/19/10	Imported Water Fee 51@0.46	23.46	127.17
07/19/10	Water Tier 1 Use 36@2.01	72.36	103.71
07/19/10	Water Tier 2 Use 15@2.09	31.35	31.35
07/19/10	BILLING	260.66	
06/14/10	PAYMENT	270.57	0.00
05/20/10	Sewer Maintenance Fee	92.48	270.57
05/20/10	Water Service Charge	55.99	178.09
05/20/10	Water Capital Improvement	2.48	122.10
05/20/10	Imported Water Fee 50@0.46	23.00	119.62
05/20/10	Water Tier 1 Use 36@1.91	68.76	96.62
05/20/10	Water Tier 2 Use 14@1.99	27.86	27.86
05/20/10	BILLING	270.57	
04/01/10	PAYMENT	270.57	0.00
03/25/10	Sewer Maintenance Fee	92.48	270.57
03/25/10	Water Service Charge	55.99	178.09
03/25/10	Water Capital Improvement	2.48	122.10
03/25/10	Imported Water Fee 50@0.46	23.00	119.62
03/25/10	Water Tier 1 Use 36@1.91	68.76	96.62
03/25/10	Water Tier 2 Use 14@1.99	27.86	27.86

03/07/07	05/02/07	56	~19203	79	1.41
01/09/07	03/07/07	57	~19124	71	1.25
11/02/06	01/09/07	68	~19053	75	1.10
09/07/06	11/02/06	56	~18978	92	1.64
07/12/06	09/07/06	57	~18886	104	1.82
05/12/06	07/12/06	61	~18782	120	1.97
03/17/06	05/12/06	56	~18662	94	1.68
01/19/06	03/17/06	57	~18568	83	1.46
11/14/05	01/19/06	66	~18485	121	1.83
09/19/05	11/14/05	56	~18364	93	1.66
07/22/05	09/19/05	59	~18271	119	2.02
05/25/05	07/22/05	58	~18152	111	1.91

03/25/10	<u>BILLING</u>	270.57	
02/16/10	PAYMENT	302.42	0.00
01/27/10	Sewer Maintenance Fee	92.48	302.42
01/27/10	Water Service Charge	55.99	209.94
01/27/10	Water Capital Improvement	2.48	153.95
01/27/10	Imported Water Fee 63@0.46	28.98	151.47
01/27/10	Water Tier 1 Use 36@1.91	68.76	122.49
01/27/10	Water Tier 2 Use 27@1.99	53.73	53.73
01/27/10	<u>BILLING</u>	302.42	
12/14/09	PAYMENT	-	0.00
11/20/09	Water Billing	279.15	279.15
11/20/09	Capital Improvement	168.53	110.62
11/20/09	Increased Cost	2.48	108.14
11/20/09	Sewer Billing	15.66	92.48
11/20/09	<u>BILLING</u>	92.48	279.15
10/08/09	PAYMENT	-	0.00
09/24/09	Water Billing	285.93	285.93
09/24/09	Capital Improvement	174.50	111.43
09/24/09	Increased Cost	2.48	108.95
09/24/09	Sewer Billing	16.47	92.48
09/24/09	<u>BILLING</u>	92.48	285.93
08/31/09	PAYMENT	-	0.00
07/29/09	Water Billing	267.85	267.85
07/29/09	Capital Improvement	158.58	109.27
07/29/09	Increased Cost	2.48	106.79
07/29/09	Sewer Billing	14.31	92.48
07/29/09	<u>BILLING</u>	92.48	267.85
07/03/09	PAYMENT	-	0.00
06/03/09	Water Billing	266.85	266.85
06/03/09	Capital Improvement	162.41	104.44
06/03/09	Increased Cost	2.48	101.96
06/03/09	Sewer Billing	16.47	85.49
06/03/09	<u>BILLING</u>	85.49	266.85
05/11/09	PAYMENT	-	0.00
04/07/09	Water Billing	241.41	241.41

04/07/09	Capital Improvement	2.48	101.20
04/07/09	Increased Cost	13.23	98.72
04/07/09	Sewer Billing	85.49	85.49
04/07/09	<u>BILLING</u>	241.41	
03/03/09	PAYMENT	-	0.00
		311.37	
02/09/09	Water Billing	201.26	311.37
02/09/09	Capital Improvement	2.48	110.11
02/09/09	Increased Cost	22.14	107.63
02/09/09	Sewer Billing	85.49	85.49
02/09/09	<u>BILLING</u>	311.37	
01/02/09	PAYMENT	-	0.00
		300.77	
12/04/08	Water Billing	192.01	300.77
12/04/08	Capital Improvement	2.48	108.76
12/04/08	Increased Cost	20.79	106.28
12/04/08	Sewer Billing	85.49	85.49
12/04/08	<u>BILLING</u>	300.77	
11/07/08	PAYMENT	-	0.00
		343.17	
10/08/08	Water Billing	229.01	343.17
10/08/08	Capital Improvement	2.48	114.16
10/08/08	Increased Cost	26.19	111.68
10/08/08	Sewer Billing	85.49	85.49
10/08/08	<u>BILLING</u>	343.17	
09/08/08	PAYMENT	-	0.00
		313.49	
08/12/08	Water Billing	203.11	313.49
08/12/08	Capital Improvement	2.48	110.38
08/12/08	Increased Cost	22.41	107.90
08/12/08	Sewer Billing	85.49	85.49
08/12/08	<u>BILLING</u>	313.49	
07/09/08	PAYMENT	-	0.00
		259.26	
06/16/08	Water Billing	153.66	259.26
06/16/08	Capital Improvement	2.48	105.60
06/16/08	Increased Cost	19.71	103.12
06/16/08	Sewer Billing	83.41	83.41
06/16/08	<u>BILLING</u>	259.26	
05/14/08	PAYMENT	-	0.00
		280.98	
04/18/08	Water Billing	172.14	280.98
04/18/08	Capital Improvement	2.48	108.84
04/18/08	Increased Cost	22.95	106.36
04/18/08	Sewer Billing	83.41	83.41

04/18/08	<u>BILLING</u>	280.98	
03/20/08	PAYMENT	-	0.00
		277.36	
02/22/08	Water Billing	169.06	277.36
02/22/08	Capital Improvement	2.48	108.30
02/22/08	Increased Cost	22.41	105.82
02/22/08	Sewer Billing	83.41	83.41
02/22/08	<u>BILLING</u>	277.36	
01/07/08	PAYMENT	-	0.00
		264.69	
12/18/07	Water Billing	158.28	264.69
12/18/07	Capital Improvement	2.48	106.41
12/18/07	Increased Cost	20.52	103.93
12/18/07	Sewer Billing	83.41	83.41
12/18/07	<u>BILLING</u>	264.69	
11/14/07	PAYMENT	-	0.00
		259.26	
10/22/07	Water Billing	153.66	259.26
10/22/07	Capital Improvement	2.48	105.60
10/22/07	Increased Cost	19.71	103.12
10/22/07	Sewer Billing	83.41	83.41
10/22/07	<u>BILLING</u>	259.26	
09/17/07	PAYMENT	-	0.00
		297.27	
08/24/07	Water Billing	186.00	297.27
08/24/07	Capital Improvement	2.48	111.27
08/24/07	Increased Cost	25.38	108.79
08/24/07	Sewer Billing	83.41	83.41
08/24/07	<u>BILLING</u>	297.27	
07/23/07	PAYMENT	-	0.00
		218.49	
06/28/07	Water Billing	108.76	218.49
06/28/07	Capital Improvement	2.48	109.73
06/28/07	Increased Cost	19.44	107.25
06/28/07	Sewer Billing	87.81	87.81
06/28/07	<u>BILLING</u>	218.49	
05/29/07	PAYMENT	-	0.00
		228.08	
05/02/07	Water Billing	116.46	228.08
05/02/07	Capital Improvement	2.48	111.62
05/02/07	Increased Cost	21.33	109.14
05/02/07	Sewer Billing	87.81	87.81
05/02/07	<u>BILLING</u>	228.08	
04/02/07	PAYMENT	-	0.00
		217.12	
03/07/07	Water Billing	107.66	217.12

03/07/07	Capital Improvement	2.48	109.46
03/07/07	Increased Cost	19.17	106.98
03/07/07	Sewer Billing	87.81	87.81
03/07/07	<u>BILLING</u>	217.12	
01/23/07	PAYMENT	-	0.00
01/09/07	Water Billing	222.60	222.60
01/09/07	Capital Improvement	112.06	110.54
01/09/07	Increased Cost	2.48	108.06
01/09/07	Sewer Billing	20.25	87.81
01/09/07	<u>BILLING</u>	87.81	222.60
11/14/06	PAYMENT	-	0.00
11/02/06	Water Billing	245.89	245.89
11/02/06	Capital Improvement	130.76	115.13
11/02/06	Increased Cost	2.48	112.65
11/02/06	Sewer Billing	24.84	87.81
11/02/06	<u>BILLING</u>	87.81	245.89
09/18/06	PAYMENT	-	0.00
09/07/06	Water Billing	262.33	262.33
09/07/06	Capital Improvement	143.96	118.37
09/07/06	Increased Cost	2.48	115.89
09/07/06	Sewer Billing	28.08	87.81
09/07/06	<u>BILLING</u>	87.81	262.33
07/20/06	PAYMENT	-	0.00
07/12/06	Water Billing	284.25	284.25
07/12/06	Capital Improvement	161.56	122.69
07/12/06	Increased Cost	2.48	120.21
07/12/06	Sewer Billing	32.40	87.81
07/12/06	<u>BILLING</u>	87.81	284.25
05/31/06	PAYMENT	-	0.00
05/12/06	Water Billing	224.14	224.14
05/12/06	Capital Improvement	132.96	91.18
05/12/06	Increased Cost	2.48	88.70
05/12/06	Sewer Billing	23.50	65.20
05/12/06	<u>BILLING</u>	65.20	224.14
03/28/06	PAYMENT	-	0.00
03/17/06	Water Billing	209.29	209.29
03/17/06	Capital Improvement	120.86	88.43
03/17/06	Increased Cost	2.48	85.95
03/17/06	Sewer Billing	20.75	65.20

03/17/06	<u>BILLING</u>	209.29	
02/02/06	PAYMENT	-	0.00
01/19/06	Water Billing	162.66	260.59
01/19/06	Capital Improvement	2.48	97.93
01/19/06	Increased Cost	30.25	95.45
01/19/06	Sewer Billing	65.20	65.20
01/19/06	<u>BILLING</u>	260.59	
11/29/05	PAYMENT	-	0.00
11/14/05	Water Billing	131.86	168.99
11/14/05	Capital Improvement	2.48	37.13
11/14/05	Increased Cost	23.25	34.65
11/14/05	Sewer Billing	11.40	11.40
11/14/05	<u>BILLING</u>	168.99	
10/13/05	PAYMENT	-	0.00
09/19/05	Water Billing	160.46	204.09
09/19/05	Capital Improvement	2.48	43.63
09/19/05	Increased Cost	29.75	41.15
09/19/05	Sewer Billing	11.40	11.40
09/19/05	<u>BILLING</u>	204.09	
08/15/05	PAYMENT	-	0.00
07/22/05	Water Billing	151.66	193.29
07/22/05	Capital Improvement	2.48	41.63
07/22/05	Increased Cost	27.75	39.15
07/22/05	Sewer Billing	11.40	11.40
07/22/05	<u>BILLING</u>	193.29	
06/13/05	PAYMENT	-	0.00
05/25/05	Water Billing	127.46	157.36
05/25/05	Capital Improvement	2.48	29.90
05/25/05	Increased Cost	16.02	27.42
05/25/05	Sewer Billing	11.40	11.40
05/25/05	<u>BILLING</u>	157.36	
04/07/05	PAYMENT	-	0.00
03/30/05	Water Billing	107.66	132.90
03/30/05	Capital Improvement	2.48	25.24
03/30/05	Increased Cost	11.36	22.76
03/30/05	Sewer Billing	11.40	11.40
03/30/05	<u>BILLING</u>	132.90	
02/09/05	PAYMENT	-	0.00
02/01/05	Water Billing	142.98	
02/01/05	Water Billing	116.46	142.98

02/01/05	Capital Improvement	2.48	26.52
02/01/05	Increased Cost	12.64	24.04
02/01/05	Sewer Billing	11.40	11.40
02/01/05	<u>BILLING</u>	142.98	
12/21/04	PAYMENT	-	0.00
		114.00	
11/29/04	Water Billing	91.16	114.00
11/29/04	Capital Improvement	2.48	22.84
11/29/04	Increased Cost	8.96	20.36
11/29/04	Sewer Billing	11.40	11.40
11/29/04	<u>BILLING</u>	114.00	
10/28/04	PAYMENT	-	0.00
		135.42	
10/01/04	Water Billing	109.86	135.42
10/01/04	Capital Improvement	2.48	25.56
10/01/04	Increased Cost	11.68	23.08
10/01/04	Sewer Billing	11.40	11.40
10/01/04	<u>BILLING</u>	135.42	
08/31/04	PAYMENT	-	0.00
		136.68	
08/05/04	Water Billing	110.96	136.68
08/05/04	Capital Improvement	2.48	25.72
08/05/04	Increased Cost	11.84	23.24
08/05/04	Sewer Billing	11.40	11.40
08/05/04	<u>BILLING</u>	136.68	
07/12/04	PAYMENT	-	0.00
		122.74	
06/10/04	Water Billing	101.06	122.74
06/10/04	Capital Improvement	2.48	21.68
06/10/04	Increased Cost	7.80	19.20
06/10/04	Sewer Billing	11.40	11.40
06/10/04	<u>BILLING</u>	122.74	
05/03/04	PAYMENT	-	0.00
		115.42	
04/14/04	Water Billing	94.46	115.42
04/14/04	Capital Improvement	2.48	20.96
04/14/04	Increased Cost	7.08	18.48
04/14/04	Sewer Billing	11.40	11.40
04/14/04	<u>BILLING</u>	115.42	
03/25/04	PAYMENT	-	0.00
		127.62	
02/18/04	Water Billing	105.46	127.62
02/18/04	Capital Improvement	2.48	22.16
02/18/04	Increased Cost	8.28	19.68
02/18/04	Sewer Billing	11.40	11.40

02/18/04	<u>BILLING</u>	127.62	
01/08/04	PAYMENT	-	0.00
		134.94	
12/15/03	Water Billing	112.06	134.94
12/15/03	Capital Improvement	2.48	22.88
12/15/03	Increased Cost	9.00	20.40
12/15/03	Sewer Billing	11.40	11.40
12/15/03	<u>BILLING</u>	134.94	
11/10/03	PAYMENT	-	0.00
		144.70	
10/17/03	Water Billing	120.86	144.70
10/17/03	Capital Improvement	2.48	23.84
10/17/03	Increased Cost	9.96	21.36
10/17/03	Sewer Billing	11.40	11.40
10/17/03	<u>BILLING</u>	144.70	
09/02/03	PAYMENT	-	0.00
		189.64	
08/21/03	Water Billing	163.76	189.64
08/21/03	Capital Improvement	2.48	25.88
08/21/03	Increased Cost	14.64	23.40
08/21/03	Sewer Billing	8.76	8.76
08/21/03	<u>BILLING</u>	189.64	
07/29/03	PAYMENT	-	0.00
		149.28	
06/25/03	Water Billing	135.16	149.28
06/25/03	Capital Improvement	2.48	14.12
06/25/03	Increased Cost	2.88	11.64
06/25/03	Sewer Billing	8.76	8.76
06/25/03	<u>BILLING</u>	149.28	
05/07/03	PAYMENT	-	0.00
		114.25	
04/29/03	Water Billing	101.06	114.25
04/29/03	Capital Improvement	2.48	13.19
04/29/03	Increased Cost	1.95	10.71
04/29/03	Sewer Billing	8.76	8.76
04/29/03	<u>BILLING</u>	114.25	
03/31/03	PAYMENT	-	0.00
		119.90	
03/04/03	Water Billing	106.56	119.90
03/04/03	Capital Improvement	2.48	13.34
03/04/03	Increased Cost	2.10	10.86
03/04/03	Sewer Billing	8.76	8.76
03/04/03	<u>BILLING</u>	119.90	
02/06/03	PAYMENT	-	0.00
		141.37	
01/06/03	Water Billing	127.46	141.37

01/06/03	Capital Improvement	2.48	13.91
01/06/03	Increased Cost	2.67	11.43
01/06/03	Sewer Billing	8.76	8.76
01/06/03	<u>BILLING</u>	141.37	
12/03/02	PAYMENT	-	0.00
		143.63	
10/31/02	Water Billing	129.66	143.63
10/31/02	Capital Improvement	2.48	13.97
10/31/02	Increased Cost	2.73	11.49
10/31/02	Sewer Billing	8.76	8.76
10/31/02	<u>BILLING</u>	143.63	
10/01/02	PAYMENT	-	0.00
		153.80	
09/05/02	Water Billing	139.56	153.80
09/05/02	Capital Improvement	2.48	14.24
09/05/02	Increased Cost	3.00	11.76
09/05/02	Sewer Billing	8.76	8.76
09/05/02	<u>BILLING</u>	153.80	
08/29/02	Late Penalty	-10.00	0.00
08/29/02	PAYMENT	-	10.00
		163.97	
08/28/02	Late Penalty	10.00	173.97
07/11/02	Water Billing	149.46	163.97
07/11/02	Capital Improvement	2.48	14.51
07/11/02	Increased Cost	3.27	12.03
07/11/02	Sewer Billing	8.76	8.76
07/11/02	<u>BILLING</u>	163.97	
07/01/02	PAYMENT	-	0.00
		143.10	
05/16/02	Water Billing	131.86	143.10
05/16/02	Capital Improvement	2.48	11.24
05/16/02	Sewer Billing	8.76	8.76
05/16/02	<u>BILLING</u>	143.10	
04/09/02	PAYMENT	-	0.00
		123.30	
03/21/02	Water Billing	112.06	123.30
03/21/02	Capital Improvement	2.48	11.24
03/21/02	Sewer Billing	8.76	8.76
03/21/02	<u>BILLING</u>	123.30	
02/19/02	PAYMENT	-	0.00
		156.30	
01/24/02	Water Billing	145.06	156.30
01/24/02	Capital Improvement	2.48	11.24
01/24/02	Sewer Billing	8.76	8.76
01/24/02	<u>BILLING</u>	156.30	

12/11/01	PAYMENT	-	0.00
		235.50	
11/19/01	Water Billing	224.26	235.50
11/19/01	Capital Improvement	2.48	11.24
11/19/01	Sewer Billing	8.76	8.76
11/19/01	<u>BILLING</u>	235.50	
10/10/01	PAYMENT	-	0.00
		215.70	
09/24/01	Water Billing	204.46	215.70
09/24/01	Capital Improvement	2.48	11.24
09/24/01	Sewer Billing	8.76	8.76
09/24/01	<u>BILLING</u>	215.70	
08/08/01	PAYMENT	-	0.00
		171.48	
07/27/01	Water Billing	141.76	171.48
07/27/01	Capital Improvement	2.48	29.72
07/27/01	Increased Cost	18.48	27.24
07/27/01	Sewer Billing	8.76	8.76
07/27/01	<u>BILLING</u>	171.48	
07/02/01	PAYMENT	-	0.00
		130.89	
05/31/01	Water Billing	106.91	130.89
05/31/01	Capital Improvement	2.48	23.98
05/31/01	Increased Cost	12.74	21.50
05/31/01	Sewer Billing	8.76	8.76
05/31/01	<u>BILLING</u>	130.89	
05/09/01	PAYMENT	-	0.00
		140.79	
04/04/01	Water Billing	115.41	140.79
04/04/01	Capital Improvement	2.48	25.38
04/04/01	Increased Cost	14.14	22.90
04/04/01	Sewer Billing	8.76	8.76
04/04/01	<u>BILLING</u>	140.79	
03/05/01	PAYMENT	-	0.00
		145.74	
02/06/01	Water Billing	119.66	145.74
02/06/01	Capital Improvement	2.48	26.08
02/06/01	Increased Cost	14.84	23.60
02/06/01	Sewer Billing	8.76	8.76
02/06/01	<u>BILLING</u>	145.74	
01/09/01	PAYMENT	-	0.00
		145.74	
12/01/00	Water Billing	119.66	145.74
12/01/00	Capital Improvement	2.48	26.08
12/01/00	Increased Cost	14.84	23.60

12/01/00	Sewer Billing	8.76	8.76
12/01/00	<u>BILLING</u>	145.74	
11/07/00	PAYMENT	-	0.00
10/03/00	Water Billing	130.71	158.61
10/03/00	Capital Improvement	2.48	27.90
10/03/00	Increased Cost	16.66	25.42
10/03/00	Sewer Billing	8.76	8.76
10/03/00	<u>BILLING</u>	158.61	
09/11/00	PAYMENT	-	0.00
08/08/00	Water Billing	115.41	140.79
08/08/00	Capital Improvement	2.48	25.38
08/08/00	Increased Cost	14.14	22.90
08/08/00	Sewer Billing	8.76	8.76
08/08/00	<u>BILLING</u>	140.79	
07/11/00	PAYMENT	-	0.00
06/12/00	Water Billing	120.09	120.09
06/12/00	Capital Improvement	2.48	21.68
06/12/00	Increased Cost	10.44	19.20
06/12/00	Sewer Billing	8.76	8.76
06/12/00	<u>BILLING</u>	120.09	
05/23/00	PAYMENT	-	0.00
04/14/00	Water Billing	335.06	335.06
04/14/00	Capital Improvement	2.48	49.94
04/14/00	Increased Cost	38.70	47.46
04/14/00	Sewer Billing	8.76	8.76
04/14/00	<u>BILLING</u>	335.06	
03/15/00	PAYMENT	-	0.00
02/18/00	Water Billing	216.04	216.04
02/18/00	Capital Improvement	2.48	34.33
02/18/00	Increased Cost	23.09	31.85
02/18/00	Sewer Billing	8.76	8.76
02/18/00	<u>BILLING</u>	216.04	
01/17/00	PAYMENT	-	0.00
12/16/99	Water Billing	155.34	155.34
12/16/99	Capital Improvement	2.48	26.33
12/16/99	Increased Cost	15.09	23.85
12/16/99	Sewer Billing	8.76	8.76
12/16/99	<u>BILLING</u>	155.34	
11/15/99	PAYMENT	-	0.00
		163.17	

10/19/99	Water Billing	135.81	163.17
10/19/99	Capital Improvement	2.48	27.36
10/19/99	Increased Cost	16.12	24.88
10/19/99	Sewer Billing	8.76	8.76
10/19/99	<u>BILLING</u>	163.17	
09/07/99	PAYMENT	-	0.00
08/23/99	Water Billing	116.23	116.23
08/23/99	Capital Improvement	102.66	13.57
08/23/99	Increased Cost	2.48	11.09
08/23/99	<u>BILLING</u>	11.09	116.23
08/05/99	PAYMENT	-	0.00
06/28/99	Water Billing	139.27	139.27
06/28/99	Capital Improvement	125.61	13.66
06/28/99	Increased Cost	2.48	11.18
06/28/99	<u>BILLING</u>	11.18	139.27
06/02/99	PAYMENT	-98.47	0.00
04/30/99	Water Billing	89.06	98.47
04/30/99	Capital Improvement	2.48	9.41
04/30/99	Increased Cost	6.93	6.93
04/30/99	<u>BILLING</u>	98.47	
03/29/99	Starting Balance	92.77	0.00
03/29/99	PAYMENT	-92.77	

[Back](#)



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Customer

Name: **GARDEN GROVE**
AGENCY COM DEV
 (373471072)
 11222 ACACIA AVE
 Address: **ATTN: GREG BROWN,**
GARDEN GROVE, CA
 92842
 Email: DL: NA
 Phones: 714-741-5131 CARLOS
 Credit: None.
 Issues:

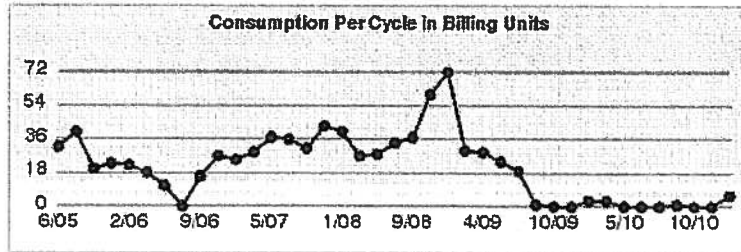
Account

balance: \$0.00
 status: 2, 11/09/2010 to current
 status: 1, 10/08/2010 to 11/09/2010
 Remarks: [add remark](#) | [edit remarks](#)
 None.

date	type	amount	balance
03/29/11	PAYMENT	-80.59	0.00
03/14/11	Sewer Maintenance Fee	20.36	80.59
03/14/11	Water Service Charge	30.35	60.24
03/14/11	Water Capital Improvement Imported	1.94	29.88
03/14/11	Water Fee 11@0.53	5.83	27.94
03/14/11	Water Tier 1 Use 11@2.01	22.11	22.11
03/14/11	BILLING	80.59	
02/01/11	PAYMENT	-84.76	0.00
01/14/11	Sewer Maintenance Fee	20.36	84.76
01/14/11	Water Service Charge	30.35	64.41
	Water		

Service

Estimated Next Read: 05/06/2011
 Service at: 12292 HARBOR BLVD Map Loc: 21
 Service id: 37347107 Housing units: 1
 Current read: 7275 Service type: commercial
 Rate type: Metered Meter size: 1"
 Meter serial: 47077011 Meter installed: 06/01/1993
 Meter remarks: None.



Base Cons:

year	cons
2010	15
2009	66
2008	83
2007	56
2006	31
2005	32

[adjust](#) | [new](#)

Consumption Summary:

start	end	days	read	units	avg/per day
01/10/11	03/09/11	58	7275	11	0.19
11/03/10	01/10/11	68	7264	13	0.19
10/08/10	11/03/10	26	7251	5	0.19
09/09/10	10/08/10	29	7246	6	0.21
07/15/10	09/09/10	56	7240	13	0.23
05/18/10	07/15/10	58	7227	22	0.38
03/23/10	05/18/10	56	7205	13	0.23
01/26/10	03/23/10	56	7192	13	0.23
11/20/09	01/26/10	67	7179	15	0.22
09/24/09	11/20/09	57	~7164	15	0.26
07/29/09	09/24/09	57	~7149	51	0.89
06/03/09	07/29/09	56	~7098	103	1.84
04/07/09	06/03/09	57	~6995	89	1.56
02/09/09	04/07/09	57	~6906	60	1.05
12/04/08	02/09/09	67	~6846	72	1.07
10/08/08	12/04/08	57	~6774	66	1.16
08/12/08	10/08/08	57	~6708	79	1.39
06/16/08	08/12/08	57	~6629	81	1.42
04/18/08	06/16/08	59	~6548	94	1.59
02/22/08	04/18/08	56	~6454	99	1.77
12/18/07	02/22/08	66	~6355	125	1.89
10/22/07	12/18/07	57	~6230	109	1.91
08/24/07	10/22/07	59	~6121	106	1.80

01/14/11	Capital Improvement	1.94	34.05
01/14/11	Imported Water Fee 13@0.46	5.98	32.11
01/14/11	Water Tier 1 Use 13@2.01	26.13	26.13
01/14/11	BILLING	84.76	
12/16/10	PAYMENT	-36.79	0.00
11/09/10	Sewer Maintenance Fee	9.45	36.79
11/09/10	Water Service Charge	14.09	27.34
11/09/10	Water Capital Improvement	0.90	13.24
11/09/10	Imported Water Fee 5@0.46	2.30	12.34
11/09/10	Water Tier 1 Use 5@2.01	10.05	10.05
11/09/10	BILLING	36.79	

06/28/07	08/24/07	57	~6015	102	1.79
05/02/07	06/28/07	57	~5913	92	1.61
03/07/07	05/02/07	56	~5821	92	1.64
01/09/07	03/07/07	57	~5729	83	1.46
11/02/06	01/09/07	68	~5646	72	1.06
09/07/06	11/02/06	56	~5574	77	1.38
07/12/06	09/07/06	57	~5497	56	0.98
05/12/06	07/12/06	61	~5441	78	1.28
03/17/06	05/12/06	56	~5363	65	1.16
01/19/06	03/17/06	57	~5298	67	1.18
11/14/05	01/19/06	66	~5231	84	1.27
09/19/05	11/14/05	56	~5147	31	0.55
07/22/05	09/19/05	59	~5116	63	1.07
05/25/05	07/22/05	58	~5053	65	1.12

[Back](#)



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Customer

CC
 Name: CAMPERLAND/RICHARD KIL (373471071)
 Address: 3850 TIFFANY LN, TORRANCE, CA 90505
 Email: DL: E0418458/560920260
 Phones: 7506747
 Credit None.
 Issues:

Account

balance: \$0.00
 status: 5, 10/08/2010 to current
 status: 4, 10/08/2010 to 10/08/2010
 status: 2, 06/30/1992 to 10/08/2010

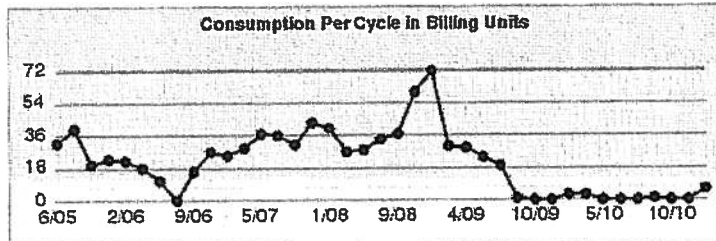
Remarks: [add remark](#) | [edit remarks](#)

01/28/2010 ronp R/R PERE PRELIM R-7179 MTR OK
 R/R PER TELE, CONS MO ON LFI, SLO BUT STEADY, IN USE OR LK, 121U/31D, 1/17/00 KB
 R/R 4331 PER PRELIM RD OK 1/6/03 AM

date	type	amount	balance
10/20/10	PAYMENT	-42.08	0.00
10/08/10	Sewer Maintenance Fee	10.54	42.08
10/08/10	Water Service Charge	15.72	31.54
10/08/10	Water Capital Improvement	1.00	15.82
10/08/10	Imported Water Fee 6@0.46	2.76	14.82
10/08/10	Water Tier 1 Use 6@2.01	12.06	12.06
10/08/10	BILLING	42.08	
09/28/10	PAYMENT	-84.76	0.00
09/14/10	Sewer Maintenance Fee	20.36	84.76
09/14/10	Water Service Charge	30.35	64.40
09/14/10	Water Capital	1.94	34.05

Service

Estimated Next Read: 05/06/2011
 Service at: 12292 HARBOR BLVD Map Loc: 21
 Service id: 37347107 Housing units: 1
 Current read: 7275 Service type: commercial
 Rate type: Metered Meter size: 1"
 Meter serial: 47077011 Meter installed: 06/01/1993
 Meter remarks: None.



Base Cons:

year	cons
2010	15
2009	66
2008	83
2007	56
2006	31
2005	32

[adjust](#) | [new](#)

Consumption Summary:

start	end	days	read	units	avg/per day
01/10/11	03/09/11	58	7275	11	0.19
11/03/10	01/10/11	68	7264	13	0.19
10/08/10	11/03/10	26	7251	5	0.19
09/09/10	10/08/10	29	7246	6	0.21
07/15/10	09/09/10	56	7240	13	0.23
05/18/10	07/15/10	58	7227	22	0.38
03/23/10	05/18/10	56	7205	13	0.23
01/26/10	03/23/10	56	7192	13	0.23
11/20/09	01/26/10	67	7179	15	0.22
09/24/09	11/20/09	57	~7164	15	0.26
07/29/09	09/24/09	57	~7149	51	0.89
06/03/09	07/29/09	56	~7098	103	1.84
04/07/09	06/03/09	57	~6995	89	1.56
02/09/09	04/07/09	57	~6906	60	1.05
12/04/08	02/09/09	67	~6846	72	1.07
10/08/08	12/04/08	57	~6774	66	1.16
08/12/08	10/08/08	57	~6708	79	1.39
06/16/08	08/12/08	57	~6629	81	1.42
04/18/08	06/16/08	59	~6548	94	1.59
02/22/08	04/18/08	56	~6454	99	1.77
12/18/07	02/22/08	66	~6355	125	1.89
10/22/07	12/18/07	57	~6230	109	1.91
08/24/07	10/22/07	59	~6121	106	1.80
06/28/07	08/24/07	57	~6015	102	1.79
05/02/07	06/28/07	57	~5913	92	1.61

	Improvement		
	Imported		
09/14/10	Water Fee 13@0.46	5.98	32.11
09/14/10	Water Tier 1 Use 13@2.01	26.13	26.13
09/14/10	<u>BILLING</u>	84.76	
08/09/10	PAYMENT	106.99	0.00
	Sewer		
07/19/10	Maintenance Fee	20.36	106.99
07/19/10	Water Service Charge	30.35	86.63
07/19/10	Water Capital Improvement	1.94	56.28
	Imported		
07/19/10	Water Fee 22@0.46	10.12	54.34
07/19/10	Water Tier 1 Use 22@2.01	44.22	44.22
07/19/10	<u>BILLING</u>	106.99	
06/14/10	PAYMENT	148.25	0.00
	Sewer		
05/20/10	Maintenance Fee	86.60	148.25
05/20/10	Water Service Charge	28.90	61.65
05/20/10	Water Capital Improvement	1.94	32.75
	Imported		
05/20/10	Water Fee 13@0.46	5.98	30.81
05/20/10	Water Tier 1 Use 13@1.91	24.83	24.83
05/20/10	<u>BILLING</u>	148.25	
04/01/10	PAYMENT	148.25	0.00
	Sewer		
03/25/10	Maintenance Fee	86.60	148.25
03/25/10	Water Service Charge	28.90	61.65
03/25/10	Water Capital Improvement	1.94	32.75
	Imported		
03/25/10	Water Fee 13@0.46	5.98	30.81
03/25/10	Water Tier 1 Use 13@1.91	24.83	24.83
03/25/10	<u>BILLING</u>	148.25	
02/16/10	PAYMENT	152.99	0.00
	Sewer		

03/07/07	05/02/07	56	~5821	92	1.64
01/09/07	03/07/07	57	~5729	83	1.46
11/02/06	01/09/07	68	~5646	72	1.06
09/07/06	11/02/06	56	~5574	77	1.38
07/12/06	09/07/06	57	~5497	56	0.98
05/12/06	07/12/06	61	~5441	78	1.28
03/17/06	05/12/06	56	~5363	65	1.16
01/19/06	03/17/06	57	~5298	67	1.18
11/14/05	01/19/06	66	~5231	84	1.27
09/19/05	11/14/05	56	~5147	31	0.55
07/22/05	09/19/05	59	~5116	63	1.07
05/25/05	07/22/05	58	~5053	65	1.12

01/27/10	Maintenance Fee	86.60	152.99
01/27/10	Water Service Charge	28.90	66.39
01/27/10	Water Capital Improvement	1.94	37.49
01/27/10	Imported Water Fee 15@0.46	6.90	35.55
01/27/10	Water Tier 1 Use 15@1.91	28.65	28.65
01/27/10	<u>BILLING</u>	152.99	
12/14/09	PAYMENT	-	0.00
11/20/09	Water Billing	150.14	150.14
11/20/09	Capital Improvement	57.55	92.59
11/20/09	Increased Cost	1.94	90.65
11/20/09	Sewer Billing	4.05	86.60
11/20/09	<u>BILLING</u>	86.60	150.14
10/08/09	PAYMENT	-	0.00
09/24/09	Water Billing	229.82	229.82
09/24/09	Capital Improvement	127.51	102.31
09/24/09	Increased Cost	1.94	100.37
09/24/09	Sewer Billing	13.77	86.60
09/24/09	<u>BILLING</u>	86.60	229.82
08/31/09	PAYMENT	-	0.00
07/29/09	Water Billing	347.34	347.34
07/29/09	Capital Improvement	230.99	116.35
07/29/09	Increased Cost	1.94	114.41
07/29/09	Sewer Billing	27.81	86.60
07/29/09	<u>BILLING</u>	86.60	347.34
07/03/09	PAYMENT	-	0.00
06/03/09	Water Billing	309.95	309.95
06/03/09	Capital Improvement	189.01	120.94
06/03/09	Increased Cost	1.94	119.00
06/03/09	Sewer Billing	24.03	94.97
06/03/09	<u>BILLING</u>	94.97	309.95
05/11/09	PAYMENT	-	0.00
04/07/09	Water Billing	248.47	248.47
04/07/09	Capital Improvement	135.36	113.11
04/07/09	Increased Cost	1.94	111.17
04/07/09	Sewer Billing	16.20	94.97
04/07/09	<u>BILLING</u>	94.97	248.47

03/03/09	PAYMENT	-	0.00
		273.91	
02/09/09	Water Billing	157.56	273.91
02/09/09	Capital Improvement	1.94	116.35
02/09/09	Increased Cost	19.44	114.41
02/09/09	Sewer Billing	94.97	94.97
02/09/09	<u>BILLING</u>	273.91	
01/02/09	PAYMENT	-	0.00
		261.19	
12/04/08	Water Billing	146.46	261.19
12/04/08	Capital Improvement	1.94	114.73
12/04/08	Increased Cost	17.82	112.79
12/04/08	Sewer Billing	94.97	94.97
12/04/08	<u>BILLING</u>	261.19	
11/07/08	PAYMENT	-	0.00
		288.75	
10/08/08	Water Billing	170.51	288.75
10/08/08	Capital Improvement	1.94	118.24
10/08/08	Increased Cost	21.33	116.30
10/08/08	Sewer Billing	94.97	94.97
10/08/08	<u>BILLING</u>	288.75	
09/08/08	PAYMENT	-	0.00
		292.99	
08/12/08	Water Billing	174.21	292.99
08/12/08	Capital Improvement	1.94	118.78
08/12/08	Increased Cost	21.87	116.84
08/12/08	Sewer Billing	94.97	94.97
08/12/08	<u>BILLING</u>	292.99	
07/09/08	PAYMENT	-	0.00
		264.18	
06/16/08	Water Billing	165.00	264.18
06/16/08	Capital Improvement	1.94	99.18
06/16/08	Increased Cost	25.38	97.24
06/16/08	Sewer Billing	71.86	71.86
06/16/08	<u>BILLING</u>	264.18	
05/14/08	PAYMENT	-	0.00
		273.23	
04/18/08	Water Billing	172.70	273.23
04/18/08	Capital Improvement	1.94	100.53
04/18/08	Increased Cost	26.73	98.59
04/18/08	Sewer Billing	71.86	71.86
04/18/08	<u>BILLING</u>	273.23	
03/20/08	PAYMENT	-	0.00
		320.29	
02/22/08	Water Billing	212.74	320.29
	Capital		

02/22/08	Improvement	1.94	107.55
02/22/08	Increased Cost	33.75	105.61
02/22/08	Sewer Billing	71.86	71.86
02/22/08	<u>BILLING</u>	320.29	
01/07/08	PAYMENT	-	0.00
		291.33	
12/18/07	Water Billing	188.10	291.33
12/18/07	Capital Improvement	1.94	103.23
12/18/07	Increased Cost	29.43	101.29
12/18/07	Sewer Billing	71.86	71.86
12/18/07	<u>BILLING</u>	291.33	
11/14/07	PAYMENT	-	0.00
		285.90	
10/22/07	Water Billing	183.48	285.90
10/22/07	Capital Improvement	1.94	102.42
10/22/07	Increased Cost	28.62	100.48
10/22/07	Sewer Billing	71.86	71.86
10/22/07	<u>BILLING</u>	285.90	
09/17/07	PAYMENT	-	0.00
		278.66	
08/24/07	Water Billing	177.32	278.66
08/24/07	Capital Improvement	1.94	101.34
08/24/07	Increased Cost	27.54	99.40
08/24/07	Sewer Billing	71.86	71.86
08/24/07	<u>BILLING</u>	278.66	
07/23/07	PAYMENT	-	0.00
		178.77	
06/28/07	Water Billing	115.76	178.77
06/28/07	Capital Improvement	1.94	63.01
06/28/07	Increased Cost	24.84	61.07
06/28/07	Sewer Billing	36.23	36.23
06/28/07	<u>BILLING</u>	178.77	
05/29/07	PAYMENT	-	0.00
		178.77	
05/02/07	Water Billing	115.76	178.77
05/02/07	Capital Improvement	1.94	63.01
05/02/07	Increased Cost	24.84	61.07
05/02/07	Sewer Billing	36.23	36.23
05/02/07	<u>BILLING</u>	178.77	
04/02/07	PAYMENT	-	0.00
		166.44	
03/07/07	Water Billing	105.86	166.44
03/07/07	Capital Improvement	1.94	60.58
03/07/07	Increased Cost	22.41	58.64
03/07/07	Sewer Billing	36.23	36.23
03/07/07	<u>BILLING</u>	166.44	

01/23/07	PAYMENT	-	0.00
		151.37	
01/09/07	Water Billing	93.76	151.37
01/09/07	Capital Improvement	1.94	57.61
01/09/07	Increased Cost	19.44	55.67
01/09/07	Sewer Billing	36.23	36.23
01/09/07	<u>BILLING</u>	151.37	
11/14/06	PAYMENT	-	0.00
		158.22	
11/02/06	Water Billing	99.26	158.22
11/02/06	Capital Improvement	1.94	58.96
11/02/06	Increased Cost	20.79	57.02
11/02/06	Sewer Billing	36.23	36.23
11/02/06	<u>BILLING</u>	158.22	
09/18/06	PAYMENT	-	0.00
		129.45	
09/07/06	Water Billing	76.16	129.45
09/07/06	Capital Improvement	1.94	53.29
09/07/06	Increased Cost	15.12	51.35
09/07/06	Sewer Billing	36.23	36.23
09/07/06	<u>BILLING</u>	129.45	
07/20/06	PAYMENT	-	0.00
		159.59	
07/12/06	Water Billing	100.36	159.59
07/12/06	Capital Improvement	1.94	59.23
07/12/06	Increased Cost	21.06	57.29
07/12/06	Sewer Billing	36.23	36.23
07/12/06	<u>BILLING</u>	159.59	
05/31/06	PAYMENT	-	0.00
		139.65	
05/12/06	Water Billing	86.06	139.65
05/12/06	Capital Improvement	1.94	53.59
05/12/06	Increased Cost	16.25	51.65
05/12/06	Sewer Billing	35.40	35.40
05/12/06	<u>BILLING</u>	139.65	
03/28/06	PAYMENT	-	0.00
		142.35	
03/17/06	Water Billing	88.26	142.35
03/17/06	Capital Improvement	1.94	54.09
03/17/06	Increased Cost	16.75	52.15
03/17/06	Sewer Billing	35.40	35.40
03/17/06	<u>BILLING</u>	142.35	
02/02/06	PAYMENT	-	0.00
		165.30	
01/19/06	Water Billing	106.96	165.30
	Capital		

01/19/06	Improvement	1.94	58.34
01/19/06	Increased Cost	21.00	56.40
01/19/06	Sewer Billing	35.40	35.40
01/19/06	<u>BILLING</u>	165.30	
11/29/05	PAYMENT	-69.95	0.00
11/14/05	Water Billing	48.86	69.95
11/14/05	Capital Improvement	1.94	21.09
11/14/05	Increased Cost	7.75	19.15
11/14/05	Sewer Billing	11.40	11.40
11/14/05	<u>BILLING</u>	69.95	
10/13/05	PAYMENT	-	0.00
		112.95	
09/19/05	Water Billing	83.86	112.95
09/19/05	Capital Improvement	1.94	29.09
09/19/05	Increased Cost	15.75	27.15
09/19/05	Sewer Billing	11.40	11.40
09/19/05	<u>BILLING</u>	112.95	
08/15/05	PAYMENT	-	0.00
		115.65	
07/22/05	Water Billing	86.06	115.65
07/22/05	Capital Improvement	1.94	29.59
07/22/05	Increased Cost	16.25	27.65
07/22/05	Sewer Billing	11.40	11.40
07/22/05	<u>BILLING</u>	115.65	
06/13/05	PAYMENT	-94.46	0.00
05/25/05	Water Billing	71.76	94.46
05/25/05	Capital Improvement	1.94	22.70
05/25/05	Increased Cost	9.36	20.76
05/25/05	Sewer Billing	11.40	11.40
05/25/05	<u>BILLING</u>	94.46	
04/07/05	PAYMENT	-92.16	0.00
03/30/05	Water Billing	70.66	92.16
03/30/05	Capital Improvement	1.94	21.50
03/30/05	Increased Cost	8.16	19.56
03/30/05	Sewer Billing	11.40	11.40
03/30/05	<u>BILLING</u>	92.16	
02/09/05	PAYMENT	-	0.00
		106.02	
02/01/05	Water Billing	82.76	106.02
02/01/05	Capital Improvement	1.94	23.26
02/01/05	Increased Cost	9.92	21.32
02/01/05	Sewer Billing	11.40	11.40
02/01/05	<u>BILLING</u>	106.02	
12/21/04	PAYMENT	-68.38	0.00
11/29/04	Water Billing	49.92	68.38

11/29/04	Capital Improvement	1.94	18.46
11/29/04	Increased Cost	5.12	16.52
11/29/04	Sewer Billing	11.40	11.40
11/29/04	<u>BILLING</u>	68.38	
10/28/04	PAYMENT	-83.34	0.00
10/01/04	Water Billing	62.96	83.34
10/01/04	Capital Improvement	1.94	20.38
10/01/04	Increased Cost	7.04	18.44
10/01/04	Sewer Billing	11.40	11.40
10/01/04	<u>BILLING</u>	83.34	
08/31/04	PAYMENT	-93.42	0.00
08/05/04	Water Billing	71.76	93.42
08/05/04	Capital Improvement	1.94	21.66
08/05/04	Increased Cost	8.32	19.72
08/05/04	Sewer Billing	11.40	11.40
08/05/04	<u>BILLING</u>	93.42	
07/12/04	PAYMENT	-	0.00
		101.10	
06/10/04	Water Billing	80.56	101.10
06/10/04	Capital Improvement	1.94	20.54
06/10/04	Increased Cost	7.20	18.60
06/10/04	Sewer Billing	11.40	11.40
06/10/04	<u>BILLING</u>	101.10	
05/03/04	PAYMENT	-88.90	0.00
04/14/04	Water Billing	69.56	88.90
04/14/04	Capital Improvement	1.94	19.34
04/14/04	Increased Cost	6.00	17.40
04/14/04	Sewer Billing	11.40	11.40
04/14/04	<u>BILLING</u>	88.90	
03/25/04	PAYMENT	-85.24	0.00
02/18/04	Water Billing	66.26	85.24
02/18/04	Capital Improvement	1.94	18.98
02/18/04	Increased Cost	5.64	17.04
02/18/04	Sewer Billing	11.40	11.40
02/18/04	<u>BILLING</u>	85.24	
01/08/04	PAYMENT	-76.70	0.00
12/15/03	Water Billing	58.56	76.70
12/15/03	Capital Improvement	1.94	18.14
12/15/03	Increased Cost	4.80	16.20
12/15/03	Sewer Billing	11.40	11.40
12/15/03	<u>BILLING</u>	76.70	
11/10/03	PAYMENT	-76.70	0.00
10/17/03	Water Billing	58.56	76.70
	Capital		

10/17/03	Improvement	1.94	18.14
10/17/03	Increased Cost	4.80	16.20
10/17/03	Sewer Billing	11.40	11.40
10/17/03	<u>BILLING</u>	76.70	
09/02/03	PAYMENT	-69.18	0.00
08/21/03	Water Billing	54.16	69.18
08/21/03	Capital Improvement	1.94	15.02
08/21/03	Increased Cost	4.32	13.08
08/21/03	Sewer Billing	8.76	8.76
08/21/03	<u>BILLING</u>	69.18	
07/29/03	PAYMENT	-61.58	0.00
06/25/03	Water Billing	49.92	61.58
06/25/03	Capital Improvement	1.94	11.66
06/25/03	Increased Cost	0.96	9.72
06/25/03	Sewer Billing	8.76	8.76
06/25/03	<u>BILLING</u>	61.58	
05/07/03	PAYMENT	-59.40	0.00
04/29/03	Water Billing	47.80	59.40
04/29/03	Capital Improvement	1.94	11.60
04/29/03	Increased Cost	0.90	9.66
04/29/03	Sewer Billing	8.76	8.76
04/29/03	<u>BILLING</u>	59.40	
03/31/03	PAYMENT	-60.49	0.00
03/04/03	Water Billing	48.86	60.49
03/04/03	Capital Improvement	1.94	11.63
03/04/03	Increased Cost	0.93	9.69
03/04/03	Sewer Billing	8.76	8.76
03/04/03	<u>BILLING</u>	60.49	
02/06/03	PAYMENT	-59.40	0.00
01/06/03	Water Billing	47.80	59.40
01/06/03	Capital Improvement	1.94	11.60
01/06/03	Increased Cost	0.90	9.66
01/06/03	Sewer Billing	8.76	8.76
01/06/03	<u>BILLING</u>	59.40	
12/03/02	PAYMENT	180.07	0.00
10/31/02	Water Billing	165.26	180.07
10/31/02	Capital Improvement	1.94	14.81
10/31/02	Increased Cost	4.11	12.87
10/31/02	Sewer Billing	8.76	8.76
10/31/02	<u>BILLING</u>	180.07	
10/01/02	PAYMENT	195.89	0.00
09/05/02	Water Billing	180.66	195.89
	Capital		

09/05/02	Improvement	1.94	15.23
09/05/02	Increased Cost	4.53	13.29
09/05/02	Sewer Billing	8.76	8.76
09/05/02	<u>BILLING</u>	195.89	
08/29/02	Late Penalty	-10.00	0.00
08/29/02	PAYMENT	-	10.00
		190.24	
08/28/02	Late Penalty	10.00	200.24
07/11/02	Water Billing	175.16	190.24
07/11/02	Capital Improvement	1.94	15.08
07/11/02	Increased Cost	4.38	13.14
07/11/02	Sewer Billing	8.76	8.76
07/11/02	<u>BILLING</u>	190.24	
07/01/02	PAYMENT	-	0.00
		164.96	
05/16/02	Water Billing	154.26	164.96
05/16/02	Capital Improvement	1.94	10.70
05/16/02	Sewer Billing	8.76	8.76
05/16/02	<u>BILLING</u>	164.96	
04/09/02	PAYMENT	-	0.00
		137.46	
03/21/02	Water Billing	126.76	137.46
03/21/02	Capital Improvement	1.94	10.70
03/21/02	Sewer Billing	8.76	8.76
03/21/02	<u>BILLING</u>	137.46	
02/19/02	PAYMENT	-	0.00
		150.66	
01/24/02	Water Billing	139.96	150.66
01/24/02	Capital Improvement	1.94	10.70
01/24/02	Sewer Billing	8.76	8.76
01/24/02	<u>BILLING</u>	150.66	
12/11/01	PAYMENT	-	0.00
		144.06	
11/19/01	Water Billing	133.36	144.06
11/19/01	Capital Improvement	1.94	10.70
11/19/01	Sewer Billing	8.76	8.76
11/19/01	<u>BILLING</u>	144.06	
10/10/01	PAYMENT	-	0.00
		129.76	
09/24/01	Water Billing	119.06	129.76
09/24/01	Capital Improvement	1.94	10.70
09/24/01	Sewer Billing	8.76	8.76
09/24/01	<u>BILLING</u>	129.76	
08/08/01	PAYMENT	-	0.00
		114.36	
07/27/01	Water Billing	91.06	114.36

07/27/01	Capital Improvement	1.94	23.30
07/27/01	Increased Cost	12.60	21.36
07/27/01	Sewer Billing	8.76	8.76
07/27/01	<u>BILLING</u>	114.36	
07/02/01	PAYMENT	-89.61	0.00
05/31/01	Water Billing	69.81	89.61
05/31/01	Capital Improvement	1.94	19.80
05/31/01	Increased Cost	9.10	17.86
05/31/01	Sewer Billing	8.76	8.76
05/31/01	<u>BILLING</u>	89.61	
05/09/01	PAYMENT	-90.60	0.00
04/04/01	Water Billing	70.66	90.60
04/04/01	Capital Improvement	1.94	19.94
04/04/01	Increased Cost	9.24	18.00
04/04/01	Sewer Billing	8.76	8.76
04/04/01	<u>BILLING</u>	90.60	
03/05/01	PAYMENT	-85.65	0.00
02/06/01	Water Billing	66.41	85.65
02/06/01	Capital Improvement	1.94	19.24
02/06/01	Increased Cost	8.54	17.30
02/06/01	Sewer Billing	8.76	8.76
02/06/01	<u>BILLING</u>	85.65	
01/09/01	PAYMENT	-63.87	0.00
12/01/00	Water Billing	47.71	63.87
12/01/00	Capital Improvement	1.94	16.16
12/01/00	Increased Cost	5.46	14.22
12/01/00	Sewer Billing	8.76	8.76
12/01/00	<u>BILLING</u>	63.87	
11/07/00	PAYMENT	-46.65	0.00
10/03/00	Water Billing	33.01	46.65
10/03/00	Capital Improvement	1.94	13.64
10/03/00	Increased Cost	2.94	11.70
10/03/00	Sewer Billing	8.76	8.76
10/03/00	<u>BILLING</u>	46.65	
09/11/00	PAYMENT	-39.05	0.00
08/08/00	Water Billing	26.53	39.05
08/08/00	Capital Improvement	1.94	12.52
08/08/00	Increased Cost	1.82	10.58
08/08/00	Sewer Billing	8.76	8.76
08/08/00	<u>BILLING</u>	39.05	
07/11/00	PAYMENT	-49.23	0.00
06/12/00	Water Billing	35.44	49.23
06/12/00	Capital Improvement	1.94	13.79

06/12/00	Increased Cost	3.09	11.85
06/12/00	Sewer Billing	8.76	8.76
06/12/00	<u>BILLING</u>	49.23	
05/23/00	PAYMENT	-46.41	0.00
04/14/00	Water Billing	33.01	46.41
04/14/00	Capital Improvement	1.94	13.40
04/14/00	Increased Cost	2.70	11.46
04/14/00	Sewer Billing	8.76	8.76
04/14/00	<u>BILLING</u>	46.41	
03/15/00	PAYMENT	-	0.00
		154.48	
02/18/00	Water Billing	126.76	154.48
02/18/00	Capital Improvement	1.94	27.72
02/18/00	Increased Cost	17.02	25.78
02/18/00	Sewer Billing	8.76	8.76
02/18/00	<u>BILLING</u>	154.48	
01/17/00	PAYMENT	-	0.00
		300.35	
12/16/99	Water Billing	253.41	300.35
12/16/99	Capital Improvement	1.94	46.94
12/16/99	Increased Cost	36.24	45.00
12/16/99	Sewer Billing	8.76	8.76
12/16/99	<u>BILLING</u>	300.35	
11/15/99	PAYMENT	-53.93	0.00
10/19/99	Water Billing	39.49	53.93
10/19/99	Capital Improvement	1.94	14.44
10/19/99	Increased Cost	3.74	12.50
10/19/99	Sewer Billing	8.76	8.76
10/19/99	<u>BILLING</u>	53.93	
09/07/99	PAYMENT	-	0.00
		104.61	
08/23/99	Water Billing	91.06	104.61
08/23/99	Capital Improvement	1.94	13.55
08/23/99	Increased Cost	11.61	11.61
08/23/99	<u>BILLING</u>	104.61	
08/05/99	PAYMENT	-63.95	0.00
06/28/99	Water Billing	57.06	63.95
06/28/99	Capital Improvement	1.94	6.89
06/28/99	Increased Cost	4.95	4.95
06/28/99	<u>BILLING</u>	63.95	
06/02/99	PAYMENT	-73.44	0.00
04/30/99	Water Billing	65.56	73.44
04/30/99	Capital Improvement	1.94	7.88
04/30/99	Increased Cost	5.94	5.94

04/30/99	BILLING	73.44	
03/29/99	Starting Balance	68.69	0.00
03/29/99	PAYMENT	-68.69	

[Back](#)



Water Billing System

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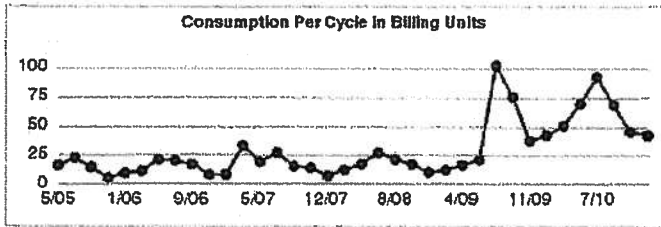
Customer
 Name: **JOE'S ITALIAN ICE (373151056)**
 Address: 12302 HARBOR BLVD, GARDEN GROVE, CA 92840
 Email: DL:
 Phones: 909-860-4988 MIKE ABEYTA 909-861-0930

billing date	issue	billing date	issue
02/26/2011	LATE	06/03/2009	LATE
10/27/2010	LATE	06/16/2008	LATE

granted on	until	by
02/28/2011	03/11/2011	shawnam

Extensions: 1 more

Service
 Estimated Next Read: 05/06/2011
 Service at: 12302 HARBOR BLVD Map Loc: 15
 Service id: 37315105 Housing units: 1
 Current read: 1653 Service type: commercial
 Rate type: Metered Meter size: 5/8"x3/4"
 Meter serial: 51797686 Meter installed: 11/01/1996
 Meter remarks: None.



Account
 balance: \$0.00 , due by: 04/25/2011
 Batched payment: \$138.70
 status: 2 , 06/07/2001 to current , Renter
 Remarks: [add remark](#) | [edit remarks](#)
 R/R PER PRELIM R-1124 MTR OK 09/23/09 RP
 TIN #95-3940070
 BLU STMT RTND(FROM:1656 LONGVIEW DR DIAMOND BAR 91765)
 NO FWD ORD ON FILE-REMAILED STMT TO SVS ADDR 12/17/04 CE
 G/C MTR LK REPLACE WASHERS FIXED 07/15/08 RP
 WAIVE LATE FEE 1 TIME, GOOD CUST SINCE 2001. 7/20/09 EM

Base Cons:

year	cons
2010	13
2009	11
2008	8
2007	9
2006	6
2005	19

[adjust](#) | [new](#)

Consumption Summary:

start	end	days	read	units	avg/per day
01/10/11	03/09/11	58	1653	43	0.74
11/03/10	01/10/11	68	1610	46	0.68
09/09/10	11/03/10	55	1564	69	1.25
07/15/10	09/09/10	56	1495	93	1.66
05/18/10	07/15/10	58	1402	70	1.21
03/23/10	05/18/10	56	1332	51	0.91
01/26/10	03/23/10	56	1281	43	0.77
11/20/09	01/26/10	67	1238	38	0.57
09/24/09	11/20/09	57	-1200	76	1.33
07/29/09	09/24/09	57	-1124	103	1.81
06/03/09	07/29/09	56	-1021	22	0.39
04/07/09	06/03/09	57	-999	17	0.30
02/09/09	04/07/09	57	-982	13	0.23
12/04/08	02/09/09	67	-969	11	0.16
10/08/08	12/04/08	57	-958	18	0.32
08/12/08	10/08/08	57	-940	22	0.39
06/16/08	08/12/08	57	-918	28	0.49
04/18/08	06/16/08	59	-890	18	0.31
02/22/08	04/18/08	56	-872	13	0.23
12/18/07	02/22/08	66	-859	8	0.12
10/22/07	12/18/07	57	-851	15	0.26
08/24/07	10/22/07	59	-836	16	0.27
06/28/07	08/24/07	57	-820	28	0.49
05/02/07	06/28/07	57	-792	20	0.35
03/07/07	05/02/07	56	-772	34	0.61
01/09/07	03/07/07	57	-738	9	0.16
11/02/06	01/09/07	68	-729	9	0.13
09/07/06	11/02/06	56	-720	18	0.32
07/12/06	09/07/06	57	-702	21	0.37
05/12/06	07/12/06	61	-681	22	0.36

date	type	amount	balance
03/14/11	Beginning Balance	-2.52	
03/14/11	Pre-paid Sewer Maintenance	2.52	138.70
03/14/11	Sewer Maintenance Fee	16.16	136.18
03/14/11	Water Service Charge	11.38	120.02
03/14/11	Water Capital Improvement	1.38	108.64
03/14/11	Imported Water Fee 43@0.53	22.79	107.26
03/14/11	Water Tier 1 Use 36@2.01	72.36	84.47
03/14/11	Water Tier 2 Use 7@2.09	14.63	12.11
03/14/11	BILLING	141.22	
03/09/11	PAYMENT	-60.00	-2.52
02/26/11	Late Fee	20.70	57.48
01/14/11	Beginning Balance		109.08
01/14/11	Pre-paid Sewer	18.68	36.78

	Maintenance		
01/14/11	Water Service Charge	11.38	18.10
01/14/11	Water Capital Improvement	1.38	6.72
01/14/11	Imported Water Fee 46@0.46	21.16	5.34
01/14/11	Water Tier 1 Use 36@2.01	72.36	-15.82
01/14/11	Water Tier 2 Use 10@2.09	20.90	-88.18
01/14/11	<u>BILLING</u>	145.86	
11/09/10	Beginning Balance	-	313.59
11/09/10	Pre-paid Sewer Maintenance	18.68	109.08
11/09/10	Water Service Charge	11.38	127.76
11/09/10	Water Capital Improvement	1.38	139.14
11/09/10	Imported Water Fee 69@0.46	31.74	140.52
11/09/10	Water Tier 1 Use 36@2.01	72.36	172.26
11/09/10	Water Tier 2 Use 33@2.09	68.97	244.62
11/09/10	<u>BILLING</u>	204.51	
11/01/10	<u>PAYMENT</u>	-	-
		600.00	313.59
10/27/10	Late Fee	20.70	286.41
09/14/10	Sewer Maintenance Fee	18.68	265.71
09/14/10	Water Service Charge	11.38	247.03
09/14/10	Water Capital Improvement	1.38	235.65
09/14/10	Imported Water Fee 93@0.46	42.78	234.27
09/14/10	Water Tier 1 Use 36@2.01	72.36	191.49
09/14/10	Water Tier 2 Use 57@2.09	119.13	119.13
09/14/10	<u>BILLING</u>	265.71	
08/24/10	<u>PAYMENT</u>	-	0.00
		206.82	
07/19/10	Beginning Balance	-0.24	
07/19/10	Pre-paid Sewer Maintenance	0.24	206.82
07/19/10	Sewer Maintenance Fee	18.44	206.58
07/19/10	Water Service Charge	11.38	188.14
07/19/10	Water Capital Improvement	1.38	176.76
07/19/10	Imported Water Fee 70@0.46	32.20	175.38
07/19/10	Water Tier 1 Use 36@2.01	72.36	143.18
07/19/10	Water Tier 2 Use 34@2.09	71.06	70.82
07/19/10	<u>BILLING</u>	207.06	
06/21/10	<u>PAYMENT</u>	-74.00	-0.24

03/17/06	05/12/06	56	~659	12	0.21
01/19/06	03/17/06	57	~647	10	0.18
11/14/05	01/19/06	66	~637	6	0.09
09/19/05	11/14/05	56	~631	15	0.27
07/22/05	09/19/05	59	~616	23	0.39
05/25/05	07/22/05	58	~593	17	0.29

05/20/10	Beginning Balance	-77.55	
05/20/10	Pre-paid Sewer Maintenance	17.02	73.76
05/20/10	Water Service Charge	10.84	56.74
05/20/10	Water Capital Improvement	1.38	45.90
05/20/10	Imported Water Fee 51@0.46	23.46	44.52
05/20/10	Water Tier 1 Use 36@1.91	68.76	21.06
05/20/10	Water Tier 2 Use 15@1.99	29.85	-47.70
05/20/10	<u>BILLING</u>	151.31	
04/21/10	PAYMENT	100.00	-77.55
03/25/10	Beginning Balance	109.26	
03/25/10	Pre-paid Sewer Maintenance	17.02	22.45
03/25/10	Water Service Charge	10.84	5.43
03/25/10	Water Capital Improvement	1.38	-5.41
03/25/10	Imported Water Fee 43@0.46	19.78	-6.79
03/25/10	Water Tier 1 Use 36@1.91	68.76	-26.57
03/25/10	Water Tier 2 Use 7@1.99	13.93	-95.33
03/25/10	<u>BILLING</u>	131.71	
01/27/10	Beginning Balance	228.72	
01/27/10	Pre-paid Sewer Maintenance	17.02	109.26
01/27/10	Water Service Charge	10.84	126.28
01/27/10	Water Capital Improvement	1.38	137.12
01/27/10	Imported Water Fee 38@0.46	17.48	138.50
01/27/10	Water Tier 1 Use 36@1.91	68.76	155.98
01/27/10	Water Tier 2 Use 2@1.99	3.98	224.74
01/27/10	<u>BILLING</u>	119.46	
12/03/09	PAYMENT	300.00	228.72
11/20/09	Water Billing	159.20	71.28
11/20/09	Capital Improvement	1.38	-87.92
11/20/09	Increased Cost	20.52	-89.30
11/20/09	Pre-paid Sewer Billing Cost	17.02	109.82
11/20/09	<u>BILLING</u>	198.12	
09/24/09	Water Billing	212.93	126.84
09/24/09	Capital Improvement	1.38	339.77
09/24/09	Increased Cost	27.81	341.15

09/24/09	Pre-paid Sewer Billing Cost	17.02	368.96
09/24/09	<u>BILLING</u>	259.14	
07/29/09	Water Billing	52.86	385.98
07/29/09	Capital Improvement	1.38	438.84
07/29/09	Increased Cost	5.94	440.22
07/29/09	Pre-paid Sewer Billing Cost	17.02	446.16
07/29/09	<u>BILLING</u>	77.20	
07/28/09	PAYMENT	500.00	463.18
07/20/09	Late Penalty	-20.70	36.82
07/17/09	Late Penalty	20.70	57.52
06/03/09	Water Billing	40.34	36.82
06/03/09	Capital Improvement	1.38	-3.52
06/03/09	Increased Cost	4.59	-4.90
06/03/09	Pre-paid Sewer Billing Cost	13.66	-9.49
06/03/09	<u>BILLING</u>	59.97	
04/07/09	Water Billing	33.22	-23.15
04/07/09	Capital Improvement	1.38	-56.37
04/07/09	Increased Cost	3.51	-57.75
04/07/09	Pre-paid Sewer Billing Cost	13.66	-61.26
04/07/09	<u>BILLING</u>	51.77	
02/09/09	Water Billing	29.66	-74.92
02/09/09	Capital Improvement	1.38	104.58
02/09/09	Increased Cost	2.97	105.96
02/09/09	Pre-paid Sewer Billing Cost	13.66	108.93
02/09/09	<u>BILLING</u>	47.67	
12/04/08	Water Billing	42.12	122.59
12/04/08	Capital Improvement	1.38	164.71
12/04/08	Increased Cost	4.86	166.09
12/04/08	Pre-paid Sewer Billing Cost	13.66	170.95
12/04/08	<u>BILLING</u>	62.02	
10/08/08	Water Billing	49.24	184.61
10/08/08	Capital Improvement	1.38	233.85
10/08/08	Increased Cost	5.94	235.23
10/08/08	Pre-paid Sewer Billing Cost	13.66	241.17
10/08/08	<u>BILLING</u>	70.22	
08/21/08	Sewer Billing	-0.79	254.83
08/21/08	<u>BILLING</u>	-0.79	

08/12/08	Water Billing	59.92	254.04
08/12/08	Capital Improvement	1.38	313.96
08/12/08	Increased Cost	7.56	315.34
08/12/08	Pre-paid Sewer Billing Cost	14.45	322.90
08/12/08	<u>BILLING</u>	83.31	
08/07/08	PAYMENT	400.00	337.35
07/31/08	Late Penalty	20.70	62.65
06/16/08	Water Billing	35.04	41.95
06/16/08	Capital Improvement	1.38	6.91
06/16/08	Increased Cost	4.86	5.53
06/16/08	Pre-paid Sewer Billing Cost	13.44	0.67
06/16/08	Sewer Billing	0.67	-12.77
06/16/08	<u>BILLING</u>	55.39	
04/18/08	Water Billing	27.64	-13.44
04/18/08	Capital Improvement	1.38	-41.08
04/18/08	Increased Cost	3.51	-42.46
04/18/08	Pre-paid Sewer Billing Cost	14.11	-45.97
04/18/08	<u>BILLING</u>	46.64	
02/22/08	Water Billing	20.24	-60.08
02/22/08	Capital Improvement	1.38	-80.32
02/22/08	Increased Cost	2.16	-81.70
02/22/08	Pre-paid Sewer Billing Cost	14.11	-83.86
02/22/08	<u>BILLING</u>	37.89	
12/18/07	Water Billing	30.60	-97.97
12/18/07	Capital Improvement	1.38	128.57
12/18/07	Increased Cost	4.05	129.95
12/18/07	Pre-paid Sewer Billing Cost	14.11	134.00
12/18/07	<u>BILLING</u>	50.14	
11/13/07	PAYMENT	200.00	148.11
10/22/07	Water Billing	32.08	51.89
10/22/07	Capital Improvement	1.38	19.81
10/22/07	Increased Cost	4.32	18.43
10/22/07	Sewer Billing	14.11	14.11
10/22/07	<u>BILLING</u>	51.89	
09/06/07	PAYMENT	-72.89	0.00
08/24/07	Water Billing	49.84	72.89
08/24/07	Capital Improvement	1.38	23.05
08/24/07	Increased Cost	7.56	21.67
08/24/07	Sewer Billing	14.11	14.11
08/24/07	<u>BILLING</u>	72.89	
07/17/07	PAYMENT	-45.16	0.00
06/28/07	Water Billing	27.20	45.16
06/28/07	Capital Improvement	1.38	17.96
06/28/07	Increased Cost	5.40	16.58

06/28/07	Sewer Billing	11.18	11.18
06/28/07	BILLING	45.16	
06/07/07	PAYMENT	-63.78	0.00
05/02/07	Water Billing	42.04	63.78
05/02/07	Capital Improvement	1.38	21.74
05/02/07	Increased Cost	9.18	20.36
05/02/07	Sewer Billing	11.18	11.18
05/02/07	BILLING	63.78	
04/02/07	PAYMENT	-30.53	0.00
03/07/07	Water Billing	15.54	30.53
03/07/07	Capital Improvement	1.38	14.99
03/07/07	Increased Cost	2.43	13.61
03/07/07	Sewer Billing	11.18	11.18
03/07/07	BILLING	30.53	
02/07/07	PAYMENT	-30.53	0.00
01/09/07	Water Billing	15.54	30.53
01/09/07	Capital Improvement	1.38	14.99
01/09/07	Increased Cost	2.43	13.61
01/09/07	Sewer Billing	11.18	11.18
01/09/07	BILLING	30.53	
12/06/06	PAYMENT	-42.50	0.00
11/02/06	Water Billing	25.08	42.50
11/02/06	Capital Improvement	1.38	17.42
11/02/06	Increased Cost	4.86	16.04
11/02/06	Sewer Billing	11.18	11.18
11/02/06	BILLING	42.50	
10/30/06	PAYMENT	-67.19	0.00
10/23/06	Late Penalty	20.70	67.19
09/07/06	Water Billing	28.26	46.49
09/07/06	Capital Improvement	1.38	18.23
09/07/06	Increased Cost	5.67	16.85
09/07/06	Sewer Billing	11.18	11.18
09/07/06	BILLING	46.49	
08/08/06	PAYMENT	-47.82	0.00
07/12/06	Water Billing	29.32	47.82
07/12/06	Capital Improvement	1.38	18.50
07/12/06	Increased Cost	5.94	17.12
07/12/06	Sewer Billing	11.18	11.18
07/12/06	BILLING	47.82	
06/02/06	PAYMENT	-42.90	0.00
05/12/06	Water Billing	18.72	42.90
05/12/06	Capital Improvement	1.38	24.18
05/12/06	Increased Cost	3.00	22.80
05/12/06	Sewer Billing	19.80	19.80
05/12/06	BILLING	42.90	
03/30/06	PAYMENT	-40.28	0.00
03/17/06	Water Billing	16.60	40.28
03/17/06	Capital Improvement	1.38	23.68
03/17/06	Increased Cost	2.50	22.30
03/17/06	Sewer Billing	19.80	19.80
03/17/06	BILLING	40.28	
02/21/06	PAYMENT	-8.25	0.00
01/19/06	Water Billing	12.36	8.25

01/19/06	Capital Improvement	1.38	-4.11
01/19/06	Increased Cost	1.50	-5.49
01/19/06	Pre-paid Sewer Billing Cost	19.80	-6.99
01/19/06	<u>BILLING</u>	35.04	
11/14/05	Water Billing	21.90	-26.79
11/14/05	Capital Improvement	1.38	-48.69
11/14/05	Increased Cost	3.75	-50.07
11/14/05	Pre-paid Sewer Billing Cost	11.40	-53.82
11/14/05	<u>BILLING</u>	38.43	
09/19/05	Water Billing	30.38	-65.22
09/19/05	Capital Improvement	1.38	-95.60
09/19/05	Increased Cost	5.75	-96.98
09/19/05	Pre-paid Sewer Billing Cost	11.40	102.73
09/19/05	<u>BILLING</u>	48.91	
07/22/05	Water Billing	24.02	114.13
07/22/05	Capital Improvement	1.38	138.15
07/22/05	Increased Cost	4.25	139.53
07/22/05	Pre-paid Sewer Billing Cost	11.40	143.78
07/22/05	<u>BILLING</u>	41.05	
05/25/05	Water Billing	28.26	155.18
05/25/05	Capital Improvement	1.38	183.44
05/25/05	Increased Cost	3.78	184.82
05/25/05	Pre-paid Sewer Billing Cost	11.40	188.60
05/25/05	<u>BILLING</u>	44.82	
05/23/05	PAYMENT	200.00	200.00
05/02/05	PAYMENT	-50.36	0.00
03/30/05	Water Billing	43.10	50.36
03/30/05	Capital Improvement	1.38	7.26
03/30/05	Increased Cost	5.60	5.88
03/30/05	Pre-paid Sewer Billing Cost	11.12	0.28
03/30/05	Sewer Billing	0.28	-10.84
03/30/05	<u>BILLING</u>	61.48	
02/01/05	Water Billing	32.50	-11.12
02/01/05	Capital Improvement	1.38	-43.62
02/01/05	Increased Cost	4.00	-45.00
02/01/05	Pre-paid Sewer Billing Cost	11.40	-49.00
02/01/05	<u>BILLING</u>	49.28	
11/29/04	Water Billing	26.14	-60.40
11/29/04	Capital Improvement	1.38	-86.54
11/29/04	Increased Cost	3.04	-87.92
11/29/04	Pre-paid Sewer Billing Cost	11.40	-90.96

11/29/04	BILLING	41.96	
10/01/04	Water Billing	34.62	102.36
10/01/04	Capital Improvement	1.38	136.98
10/01/04	Increased Cost	4.32	138.36
10/01/04	Pre-paid Sewer Billing Cost	11.40	142.68
10/01/04	BILLING	51.72	
09/27/04	PAYMENT	200.00	154.08
09/22/04	Late Penalty	10.00	45.92
08/05/04	Water Billing	33.56	35.92
08/05/04	Capital Improvement	1.38	2.36
08/05/04	Increased Cost	4.16	0.98
08/05/04	Pre-paid Sewer Billing Cost	11.40	-3.18
08/05/04	BILLING	50.50	
06/10/04	Water Billing	35.68	-14.58
06/10/04	Capital Improvement	1.38	-50.26
06/10/04	Increased Cost	3.36	-51.64
06/10/04	Pre-paid Sewer Billing Cost	11.40	-55.00
06/10/04	BILLING	51.82	
04/14/04	Water Billing	29.32	-66.40
04/14/04	Capital Improvement	1.38	-95.72
04/14/04	Increased Cost	2.64	-97.10
04/14/04	Pre-paid Sewer Billing Cost	11.40	-99.74
04/14/04	BILLING	44.74	
02/18/04	Water Billing	24.02	111.14
02/18/04	Capital Improvement	1.38	135.16
02/18/04	Increased Cost	2.04	136.54
02/18/04	Pre-paid Sewer Billing Cost	11.40	138.58
02/18/04	BILLING	38.84	
02/05/04	PAYMENT	200.00	149.98
01/29/04	Late Penalty	10.00	50.02
12/15/03	Water Billing	25.08	40.02
12/15/03	Capital Improvement	1.38	14.94
12/15/03	Increased Cost	2.16	13.56
12/15/03	Sewer Billing	11.40	11.40
12/15/03	BILLING	40.02	
11/17/03	PAYMENT	-29.14	0.00
10/17/03	Water Billing	28.26	29.14
10/17/03	Capital Improvement	1.38	0.88
10/17/03	Increased Cost	2.52	-0.50
10/17/03	Pre-paid Sewer Billing Cost	11.40	-3.02
10/17/03	BILLING	43.56	
08/21/03	Water Billing	47.46	-14.42

08/21/03	Capital Improvement	1.38	-61.88
08/21/03	Increased Cost	4.68	-63.26
08/21/03	Pre-paid Sewer Billing Cost	8.76	-67.94
08/21/03	<u>BILLING</u>	62.28	
06/25/03	Water Billing	25.08	-76.70
06/25/03	Capital Improvement	1.38	101.78
06/25/03	Deposit Refund	-55.00	103.16
06/25/03	Increased Cost	0.54	-48.16
06/25/03	Sewer Billing	8.76	-48.70
06/25/03	<u>BILLING</u>	35.76	
04/29/03	Water Billing	20.84	-57.46
04/29/03	Capital Improvement	1.38	-78.30
04/29/03	Increased Cost	0.42	-79.68
04/29/03	Pre-paid Sewer Billing Cost	8.76	-80.10
04/29/03	<u>BILLING</u>	31.40	
03/04/03	Water Billing	15.54	-88.86
03/04/03	Capital Improvement	1.38	104.40
03/04/03	Increased Cost	0.27	105.78
03/04/03	Pre-paid Sewer Billing Cost	8.76	106.05
03/04/03	<u>BILLING</u>	25.95	
01/06/03	Water Billing	14.48	114.81
01/06/03	Capital Improvement	1.38	129.29
01/06/03	Increased Cost	0.24	130.67
01/06/03	Pre-paid Sewer Billing Cost	8.76	130.91
01/06/03	<u>BILLING</u>	24.86	
10/31/02	Water Billing	26.14	139.67
10/31/02	Capital Improvement	1.38	165.81
10/31/02	Increased Cost	0.57	167.19
10/31/02	Pre-paid Sewer Billing Cost	8.76	167.76
10/31/02	<u>BILLING</u>	36.85	
09/05/02	Water Billing	32.50	176.52
09/05/02	Capital Improvement	1.38	209.02
09/05/02	Increased Cost	0.75	210.40
09/05/02	Pre-paid Sewer Billing Cost	8.76	211.15
09/05/02	<u>BILLING</u>	43.39	
07/11/02	Water Billing	26.14	219.91
07/11/02	Capital Improvement	1.38	

			246.05
07/11/02	Increased Cost	0.57	247.43
07/11/02	Pre-paid Sewer Billing Cost	8.76	248.00
07/11/02	<u>BILLING</u>	36.85	-
05/16/02	Water Billing	22.96	256.76
05/16/02	Capital Improvement	1.38	279.72
05/16/02	Pre-paid Sewer Billing Cost	8.76	-
05/16/02	<u>BILLING</u>	33.10	281.10
05/06/02	PAYMENT	300.00	289.86
03/21/02	Water Billing	8.12	10.14
03/21/02	Capital Improvement	1.38	2.02
03/21/02	Pre-paid Sewer Billing Cost	8.12	0.64
03/21/02	Sewer Billing	0.64	-7.48
03/21/02	<u>BILLING</u>	18.26	-
01/24/02	Water Billing	13.42	-8.12
01/24/02	Capital Improvement	1.38	-21.54
01/24/02	Pre-paid Sewer Billing Cost	8.76	-22.92
01/24/02	<u>BILLING</u>	23.56	-
11/19/01	Water Billing	25.08	-31.68
11/19/01	Capital Improvement	1.38	-56.76
11/19/01	Pre-paid Sewer Billing Cost	8.76	-58.14
11/19/01	<u>BILLING</u>	35.22	-
10/11/01	PAYMENT	100.00	-66.90
09/24/01	Water Billing	22.96	33.10
09/24/01	Capital Improvement	1.38	10.14
09/24/01	Sewer Billing	8.76	8.76
09/24/01	<u>BILLING</u>	33.10	-
08/28/01	PAYMENT	-88.21	0.00
07/27/01	Water Billing	21.94	88.21
07/27/01	Capital Improvement	1.13	66.27
07/27/01	Increased Cost	2.94	65.14
07/27/01	Sewer Billing	7.20	62.20
07/27/01	<u>BILLING</u>	33.21	-
06/07/01	Deposit	55.00	55.00

[Back](#)



Water Billing System

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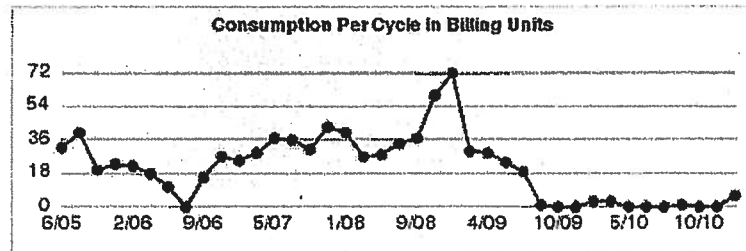
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Customer

Name: **GUTIERREZ, JAMES**
(373150075)
Address: 13392 LAMPSON AVE,
GARDEN GROVE, CA
92840
Email: DL: B2766628
Phones: 323-440-8257 714-270-8469
Credit: None.
Issues:

Service

Estimated Next Read: 05/06/2011
Service at: 12511 TWINTREE LN Map Loc: 24
Service id: 37315007 Housing units: 1
Current read: 4943 Service type: single family home
Rate type: Metered Meter size: 5/8"x3/4"
Meter serial: 51797692 Meter installed: 11/01/1996
Meter remarks: None.



Account

balance: \$0.00
status: 5, 08/19/2009 to current,
Renter
status: 4, 08/18/2009 to 08/19/2009,
Renter
status: 2, 07/31/2001 to 08/19/2009,
Renter

Remarks: [add remark](#) | [edit remarks](#)
TBO AFTR LKOFF 09.09.02 JP
LKD OFF RET CHECK 5/5/03 AM
R/R 2775 (501) INTRM MO ON LFI,
POSS T/LK OR IRR 9/23/03 CE
MAILED WTR/WZE PER CUST
REQ 9/25/03 CE
LKD OFF NON PMNT 11/14/05 RP
LKD OFF NON PMT 3/9/06 AM
R/R 3720 PER PRELIM POSS LK
MTR SHOWS USE 7/12/06 AM

date	type	amount	balance
09/23/09	PAYMENT	121.26	0.00
08/18/09	Closing Bill	34.65	121.26
08/18/09	Deposit Refund	-55.00	86.61
08/18/09	Sewer Billing	8.31	141.61
08/18/09	BILLING	8.31	
07/29/09	Water Billing	95.52	133.30
07/29/09	Capital Improvement	1.38	37.78
07/29/09	Increased	11.88	36.40

Base Cons:

year	cons
2010	10
2009	42
2008	28
2007	28
2006	30
2005	38

[adjust](#) | [new](#)

Consumption Summary:

start	end	days	read	units	avg/per day
01/10/11	03/09/11	58	4943	26	0.45
11/03/10	01/10/11	68	4917	19	0.28
10/12/10	11/03/10	22	4898	0	0.00
09/09/10	10/12/10	33	4898	13	0.39
07/15/10	09/09/10	56	4885	35	0.63
06/08/10	07/15/10	37	4850	24	0.65
05/18/10	06/08/10	21	4826	13	0.62
03/23/10	05/18/10	56	4813	26	0.46
01/26/10	03/23/10	56	4787	3	0.05
11/20/09	01/26/10	67	4784	7	0.10
09/24/09	11/20/09	57	~4777	22	0.39
09/24/09	10/20/09	26	~4755	4	0.15
07/29/09	08/17/09	19	~4751	14	0.74
07/29/09	09/24/09	57	~4737	37	0.65
06/03/09	07/29/09	56	~4700	44	0.79
04/07/09	06/03/09	57	~4656	51	0.89
02/09/09	04/07/09	57	~4605	29	0.51
12/04/08	02/09/09	67	~4576	42	0.63
10/08/08	12/04/08	57	~4534	42	0.74
08/12/08	10/08/08	57	~4492	64	1.12
06/16/08	08/12/08	57	~4428	85	1.49
04/18/08	06/16/08	59	~4343	76	1.29
02/22/08	04/18/08	56	~4267	51	0.91
12/18/07	02/22/08	66	~4216	35	0.53

	Cost		
07/29/09	Sewer Billing	24.52	24.52
07/29/09	<u>BILLING</u>	133.30	
07/22/09	PAYMENT	-	0.00
07/17/09	Late Penalty	20.70	160.80
06/03/09	Water Billing	101.91	140.10
06/03/09	Capital Improvement	1.38	38.20
06/03/09	Increased Cost	13.77	36.80
06/03/09	Sewer Billing	23.10	23.10
06/03/09	<u>BILLING</u>	140.16	
05/22/09	PAYMENT	-	0.00
05/21/09	Late Penalty	20.70	114.71
04/07/09	Water Billing	61.70	94.01
04/07/09	Capital Improvement	1.38	32.31
04/07/09	Increased Cost	7.83	30.90
04/07/09	Sewer Billing	23.10	23.10
04/07/09	<u>BILLING</u>	94.01	
03/24/09	PAYMENT	-	0.00
02/09/09	Water Billing	85.26	121.08
02/09/09	Capital Improvement	1.38	35.80
02/09/09	Increased Cost	11.34	34.40
02/09/09	Sewer Billing	23.10	23.10
02/09/09	<u>BILLING</u>	121.08	
01/26/09	PAYMENT	-61.78	0.00
01/20/09	Late Penalty	20.70	61.70
12/15/08	PAYMENT	-80.00	41.00
12/04/08	Water Billing	85.26	121.08
12/04/08	Capital Improvement	1.38	35.80
12/04/08	Increased Cost	11.34	34.40
12/04/08	Sewer Billing	23.10	23.10
12/04/08	<u>BILLING</u>	121.08	

10/22/07	12/18/07	57	~4181	42	0.74
08/24/07	10/22/07	59	~4139	48	0.81
06/28/07	08/24/07	57	~4091	64	1.12
05/02/07	06/28/07	57	~4027	58	1.02
03/07/07	05/02/07	56	~3969	59	1.05
01/09/07	03/07/07	57	~3910	28	0.49
11/02/06	01/09/07	68	~3882	44	0.65
09/07/06	11/02/06	56	~3838	59	1.05
07/12/06	09/07/06	57	~3779	81	1.42
05/12/06	07/12/06	61	~3698	97	1.59
03/17/06	05/12/06	56	~3601	36	0.64
01/19/06	03/17/06	57	~3565	31	0.54
11/14/05	01/19/06	66	~3534	30	0.45
09/19/05	11/14/05	56	~3504	39	0.70
07/22/05	09/19/05	59	~3465	104	1.76
05/25/05	07/22/05	58	~3361	53	0.91

12/01/08	PAYMENT	188.42	0.00
11/21/08	Late Penalty	20.70	188.42
10/08/08	Water Billing	125.96	167.72
10/08/08	Capital Improvement	1.38	41.76
10/08/08	Increased Cost	17.28	40.38
10/08/08	Sewer Billing	23.10	23.10
10/08/08	<u>BILLING</u>	167.72	
08/29/08	PAYMENT	212.24	0.00
08/12/08	Water Billing	164.81	212.24
08/12/08	Capital Improvement	1.38	47.42
08/12/08	Increased Cost	22.95	46.02
08/12/08	Sewer Billing	23.10	23.10
08/12/08	<u>BILLING</u>	212.24	
07/03/08	PAYMENT	167.76	0.00
06/16/08	Water Billing	123.28	167.76
06/16/08	Capital Improvement	1.38	44.48
06/16/08	Increased Cost	20.52	43.10
06/16/08	Sewer Billing	22.58	22.58
06/16/08	<u>BILLING</u>	167.76	
06/02/08	PAYMENT	122.51	0.00
04/18/08	Water Billing	84.78	122.51
04/18/08	Capital Improvement	1.38	37.72
04/18/08	Increased Cost	13.77	36.34
04/18/08	Sewer Billing	22.58	22.58
04/18/08	<u>BILLING</u>	122.51	
04/10/08	PAYMENT	114.31	0.00
04/09/08	Late Penalty	20.70	114.31
02/22/08	Water Billing	60.20	93.61
02/22/08	Capital Improvement	1.38	33.41

02/22/08	Increased Cost	9.45	32.00
02/22/08	Sewer Billing	22.58	22.58
02/22/08	<u>BILLING</u>	93.61	
01/08/08	PAYMENT	-	0.00
		103.74	
12/18/07	Water Billing	70.92	103.74
12/18/07	Capital Improvement	1.38	32.82
12/18/07	Increased Cost	11.34	31.44
12/18/07	Pre-paid Sewer Billing Cost	2.48	20.10
12/18/07	Sewer Billing	20.10	17.62
12/18/07	<u>BILLING</u>	106.22	
12/11/07	PAYMENT	-	-2.48
		140.00	
12/05/07	Late Penalty	20.70	137.52
10/22/07	Water Billing	80.16	116.82
10/22/07	Capital Improvement	1.38	36.60
10/22/07	Increased Cost	12.96	35.28
10/22/07	Pre-paid Sewer Billing Cost	0.26	22.32
10/22/07	Sewer Billing	22.32	22.00
10/22/07	<u>BILLING</u>	117.08	
10/16/07	PAYMENT	-	-0.20
		167.00	
10/10/07	Late Penalty	20.70	166.72
08/24/07	Water Billing	104.80	146.04
08/24/07	Capital Improvement	1.38	41.24
08/24/07	Increased Cost	17.28	39.80
08/24/07	Sewer Billing	22.58	22.58
08/24/07	<u>BILLING</u>	146.04	
08/06/07	PAYMENT	-	0.00
		106.80	
06/28/07	Water Billing	68.36	106.80
06/28/07	Capital Improvement	1.38	38.44

06/28/07	Increased Cost	15.66	37.06
06/28/07	Sewer Billing	21.40	21.40
06/28/07	<u>BILLING</u>	106.80	
06/18/07	PAYMENT	128.87	0.00
06/15/07	Late Penalty	20.70	128.87
05/02/07	Water Billing	69.46	108.17
05/02/07	Capital Improvement	1.38	38.71
05/02/07	Increased Cost	15.93	37.35
05/02/07	Sewer Billing	21.40	21.40
05/02/07	<u>BILLING</u>	108.17	
03/29/07	PAYMENT	-66.02	0.00
03/07/07	Water Billing	35.68	66.02
03/07/07	Capital Improvement	1.38	30.34
03/07/07	Increased Cost	7.56	28.96
03/07/07	Sewer Billing	21.40	21.40
03/07/07	<u>BILLING</u>	66.02	
02/23/07	PAYMENT	108.32	0.00
02/22/07	Late Penalty	20.70	108.32
01/09/07	Water Billing	52.96	87.62
01/09/07	Capital Improvement	1.38	34.66
01/09/07	Increased Cost	11.88	33.28
01/09/07	Sewer Billing	21.40	21.40
01/09/07	<u>BILLING</u>	87.62	
12/19/06	PAYMENT	127.88	0.00
12/18/06	Late Penalty	20.70	127.88
11/02/06	Water Billing	69.46	107.18
11/02/06	Capital Improvement	1.38	37.72
11/02/06	Increased Cost	15.93	36.34
11/02/06	Pre-paid Sewer Billing Cost	0.99	20.41
	Sewer		

11/02/06	Billing	20.41	19.42
11/02/06	BILLING	108.17	
10/30/06	PAYMENT	-	-0.95
		160.00	
10/23/06	Late Penalty	20.70	159.01
09/07/06	Water Billing	93.66	138.31
09/07/06	Capital Improvement	1.38	44.62
09/07/06	Increased Cost	21.87	43.27
09/07/06	Sewer Billing	21.40	21.40
09/07/06	BILLING	138.31	
08/23/06	PAYMENT	-	0.00
		160.27	
07/12/06	Water Billing	111.26	160.27
07/12/06	Capital Improvement	1.38	49.01
07/12/06	Increased Cost	26.19	47.62
07/12/06	Sewer Billing	21.40	21.42
07/12/06	BILLING	160.23	
06/30/06	PAYMENT	-85.00	0.00
06/28/06	Late Penalty	10.00	85.00
05/12/06	Water Billing	44.16	75.00
05/12/06	Capital Improvement	1.38	30.88
05/12/06	Increased Cost	9.00	29.50
05/12/06	Sewer Billing	20.50	20.50
05/12/06	BILLING	75.04	
05/05/06	PAYMENT	-78.49	0.00
05/03/06	Late Penalty	10.00	78.49
03/17/06	Water Billing	38.86	68.49
03/17/06	Capital Improvement	1.38	29.62
03/17/06	Increased Cost	7.75	28.25
03/17/06	Sewer Billing	20.50	20.50
03/17/06	BILLING	68.49	
03/09/06	Adjustment Other	25.00	0.00
03/09/06	PAYMENT	-	-25.00
		102.18	

03/06/06	Late Penalty	10.00	77.18
01/19/06	Water Billing	37.80	67.18
01/19/06	Capital Improvement	1.38	29.38
01/19/06	Increased Cost	7.50	28.00
01/19/06	Sewer Billing	20.50	20.50
01/19/06	<u>BILLING</u>	67.18	
01/09/06	PAYMENT	-77.87	0.00
01/04/06	Late Penalty	10.00	77.87
11/14/05	Water Billing	47.46	67.87
11/14/05	Capital Improvement	1.38	20.41
11/14/05	Increased Cost	9.75	19.00
11/14/05	Sewer Billing	9.28	9.28
11/14/05	<u>BILLING</u>	67.87	
11/14/05	PAYMENT	-	0.00
		165.62	
11/03/05	Late Penalty	10.00	165.62
09/19/05	Water Billing	118.96	155.62
09/19/05	Capital Improvement	1.38	36.60
09/19/05	Increased Cost	26.00	35.28
09/19/05	Sewer Billing	9.28	9.28
09/19/05	<u>BILLING</u>	155.62	
09/09/05	PAYMENT	-96.77	0.00
09/07/05	Late Penalty	10.00	96.77
07/22/05	Water Billing	62.86	86.77
07/22/05	Capital Improvement	1.38	23.91
07/22/05	Increased Cost	13.25	22.50
07/22/05	Sewer Billing	9.28	9.28
07/22/05	<u>BILLING</u>	86.77	
07/12/05	PAYMENT	-	0.00
		112.02	
07/11/05	Late Penalty	10.00	112.02
05/25/05	Water Billing	70.56	102.02
05/25/05	Capital Improvement	1.38	31.40

05/25/05	Increased Cost	10.80	30.00
05/25/05	Sewer Billing	9.28	19.28
05/25/05	<u>BILLING</u>	92.02	
05/16/05	Late Penalty	10.00	10.00
05/16/05	PAYMENT	-63.10	0.00
03/30/05	Water Billing	46.36	63.10
03/30/05	Capital Improvement	1.38	16.72
03/30/05	Increased Cost	6.08	15.30
03/30/05	Sewer Billing	9.28	9.28
03/30/05	<u>BILLING</u>	63.10	
03/07/05	PAYMENT	-70.66	0.00
02/01/05	Water Billing	52.96	70.60
02/01/05	Capital Improvement	1.38	17.70
02/01/05	Increased Cost	7.04	16.32
02/01/05	Sewer Billing	9.28	9.28
02/01/05	<u>BILLING</u>	70.66	
01/14/05	PAYMENT	-69.04	0.00
11/29/04	Water Billing	51.86	69.00
11/29/04	Capital Improvement	1.38	17.18
11/29/04	Increased Cost	6.88	15.80
11/29/04	Pre-paid Sewer Billing Cost	0.36	8.92
11/29/04	Sewer Billing	8.92	8.50
11/29/04	<u>BILLING</u>	69.40	
11/15/04	PAYMENT	100.00	-0.30
10/01/04	Water Billing	78.26	99.60
10/01/04	Capital Improvement	1.38	21.38
10/01/04	Increased Cost	10.72	20.00
10/01/04	Sewer Billing	9.28	9.28
10/01/04	<u>BILLING</u>	99.64	
09/22/04	PAYMENT	117.90	0.00

08/05/04	Water Billing	93.66	117.90
08/05/04	Capital Improvement	1.38	24.20
08/05/04	Increased Cost	12.96	22.80
08/05/04	Sewer Billing	9.28	9.90
08/05/04	<u>BILLING</u>	117.28	
06/28/04	PAYMENT	100.00	0.60
06/10/04	Water Billing	81.56	100.60
06/10/04	Capital Improvement	1.38	19.00
06/10/04	Increased Cost	8.40	17.60
06/10/04	Sewer Billing	9.28	9.20
06/10/04	<u>BILLING</u>	100.62	
06/03/04	PAYMENT	-72.80	0.00
06/01/04	Late Penalty	10.00	72.80
04/14/04	Water Billing	47.46	62.80
04/14/04	Capital Improvement	1.38	15.30
04/14/04	Increased Cost	4.68	13.90
04/14/04	Sewer Billing	9.28	9.20
04/14/04	<u>BILLING</u>	62.80	
04/08/04	PAYMENT	-74.76	0.00
04/07/04	Late Penalty	10.00	74.70
02/18/04	Water Billing	48.56	64.70
02/18/04	Capital Improvement	1.38	16.20
02/18/04	Increased Cost	4.80	14.80
02/18/04	Sewer Billing	9.28	10.00
02/18/04	<u>BILLING</u>	64.02	
01/27/04	PAYMENT	-80.00	0.70
12/15/03	Water Billing	55.16	80.70
12/15/03	Capital Improvement	1.38	25.50
12/15/03	Increased Cost	5.52	24.20
12/15/03	Sewer Billing	9.28	18.60

12/15/03	BILLING	71.34	
12/15/03	PAYMENT	-75.00	9.40
12/09/03	PAYMENT	-25.00	84.40
12/03/03	Late Penalty	10.00	109.40
10/17/03	Water Billing	80.46	99.40
10/17/03	Capital Improvement	1.38	18.90
10/17/03	Increased Cost	8.28	17.50
10/17/03	Sewer Billing	9.28	9.28
10/17/03	BILLING	99.40	
09/24/03	PAYMENT	147.43	0.00
08/21/03	Water Billing	138.76	147.43
08/21/03	Capital Improvement	1.38	8.60
08/21/03	Increased Cost	14.64	7.20
08/21/03	Pre-paid Sewer Billing Cost	6.64	-7.30
08/21/03	BILLING	161.42	
07/18/03	PAYMENT	109.75	-13.90
06/25/03	Water Billing	85.96	95.70
06/25/03	Capital Improvement	1.38	9.80
06/25/03	Increased Cost	2.22	8.40
06/25/03	Pre-paid Sewer Billing Cost	0.44	6.20
06/25/03	Sewer Billing	6.20	5.70
06/25/03	BILLING	96.20	
05/05/03	Adjustment Other	25.00	-0.40
05/05/03	PAYMENT	200.00	-25.40
04/29/03	Water Billing	60.66	174.50
04/29/03	Capital Improvement	1.38	113.90
04/29/03	Increased Cost	1.53	112.50
04/29/03	Sewer Billing	6.64	110.90
04/29/03	BILLING	70.21	

04/28/03	Returned Check Chrg	10.00	104.35
04/28/03	Unredeemed Check	94.35	94.35
04/15/03	PAYMENT	-94.35	0.00
03/04/03	Water Billing	77.16	94.35
03/04/03	Capital Improvement	1.38	17.15
03/04/03	Increased Cost	1.98	15.81
03/04/03	Sewer Billing	6.64	13.85
03/04/03	<u>BILLING</u>	87.16	
02/24/03	PAYMENT	130.00	7.15
02/20/03	Late Penalty	10.00	137.15
01/06/03	Water Billing	107.96	127.15
01/06/03	Capital Improvement	1.38	19.25
01/06/03	Increased Cost	2.82	17.85
01/06/03	Sewer Billing	6.64	15.05
01/06/03	<u>BILLING</u>	118.80	
12/09/02	PAYMENT	105.00	8.35
11/18/02	PAYMENT	125.00	113.35
11/11/02	Returned Check Chrg	10.00	238.35
11/11/02	Unredeemed Check	124.00	228.35
10/31/02	Water Billing	93.66	104.35
10/31/02	Capital Improvement	1.38	10.75
10/31/02	Increased Cost	2.43	9.35
10/31/02	Sewer Billing	6.64	6.95
10/31/02	<u>BILLING</u>	104.11	
10/23/02	PAYMENT	124.00	0.25
10/21/02	Late Penalty	10.00	124.25
09/09/02	PAYMENT	142.36	114.25
09/05/02	Water Billing	103.56	256.65
09/05/02	Capital Improvement	1.38	153.05

09/05/02	Increased Cost	2.70	151.70
09/05/02	Sewer Billing	6.64	149.00
09/05/02	<u>BILLING</u>	114.28	
08/28/02	Late Penalty	10.00	142.30
07/11/02	Water Billing	121.16	132.30
07/11/02	Capital Improvement	1.38	11.20
07/11/02	Increased Cost	3.18	9.80
07/11/02	Sewer Billing	6.64	6.60
07/11/02	<u>BILLING</u>	132.36	
06/24/02	PAYMENT	100.22	0.00
05/16/02	Water Billing	92.56	100.20
05/16/02	Capital Improvement	1.38	7.60
05/16/02	Pre-paid Sewer Billing Cost	0.36	6.20
05/16/02	Sewer Billing	6.28	5.90
05/16/02	<u>BILLING</u>	100.58	
04/17/02	PAYMENT	-56.00	-0.30
03/21/02	Water Billing	47.46	55.60
03/21/02	Capital Improvement	1.38	8.10
03/21/02	Sewer Billing	6.64	6.80
03/21/02	<u>BILLING</u>	55.48	
03/18/02	PAYMENT	-72.00	0.10
03/11/02	Late Penalty	10.00	72.10
01/24/02	Water Billing	54.06	62.10
01/24/02	Capital Improvement	1.38	8.10
01/24/02	Sewer Billing	6.64	6.70
01/24/02	<u>BILLING</u>	62.08	
01/22/02	PAYMENT	105.00	0.00
01/08/02	Late Penalty	10.00	105.00
11/19/01	Water Billing	87.06	95.00
11/19/01	Capital Improvement	1.38	8.00

11/19/01	Sewer Billing	6.64	6.64
11/19/01	BILLING	95.08	
10/01/01	PAYMENT	135.78	0.00
09/24/01	Water Billing	72.76	135.78
09/24/01	Capital Improvement	1.38	63.02
09/24/01	Sewer Billing	6.64	61.64
09/24/01	BILLING	80.78	
08/01/01	Deposit	55.00	55.00

[Back](#)



Water Billing System

[Main](#) [Search](#) [Calc](#) [Reports](#) [jeffku](#) [logout](#) Thursday, March 31, 2011

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Customer

Name: **HERRERA, NICK (373150079)**
 Address: 12511 TWINTREE LN, GARDEN GROVE, CA 92840
 Email: DL: D1563503
 Phones: 818-919-6484

billing date	issue
02/26/2011	LATE
12/22/2010	LATE

Extensions	granted on	until	by
	12/23/2010	01/04/2011	chuongdai

Account

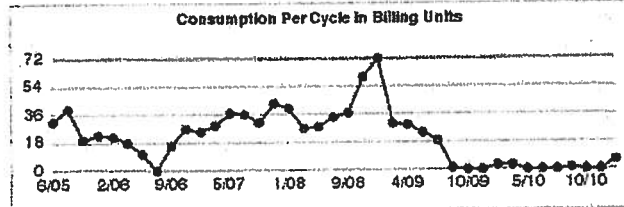
balance: **\$94.96**, due by: **04/25/2011**
 status: 2, 11/09/2010 to current, Renter
 status: 1, 11/03/2010 to 11/09/2010, Renter

Remarks: [add remark](#) | [edit remarks](#)
 11/08/2010 shawnam RR PER PRELIM, MTR OK.
 11/03/2010 shawnam SM

date	type	amount	balance
03/14/11	Sewer Maintenance Fee	16.16	94.96
03/14/11	Water Service Charge	11.38	78.80
03/14/11	Water Capital Improvement	1.38	67.42
03/14/11	Imported Water Fee 26@0.53	13.78	66.04
03/14/11	Water Tier 1 Use 26@2.01	52.26	52.26
03/14/11	BILLING	94.96	
03/01/11	PAYMENT	-96.55	0.00
02/26/11	Late Fee	20.70	96.55
01/14/11	Sewer Maintenance Fee	16.16	75.85
01/14/11	Water Service Charge	11.38	59.69
01/14/11	Water Capital Improvement	1.38	48.31
01/14/11	Imported Water Fee 19@0.46	8.74	46.93
01/14/11	Water Tier 1 Use 19@2.01	38.19	38.19
01/14/11	BILLING	75.85	
12/23/10	PAYMENT	-90.70	0.00
12/22/10	Late Fee	20.70	90.70
11/09/10	Beginning Balance	70.00	
11/09/10	Sewer Maintenance Fee	0.00	70.00
11/09/10	Water Service Charge	0.00	70.00
11/09/10	BILLING	0.00	
11/03/10	Deposit	70.00	70.00

Service

Estimated Next Read: 05/06/2011
 Service at: 12511 TWINTREE LN Map Loc: 24
 Service id: 37315007 Housing units: 1
 Current read: 4943 Service type: single family home
 Rate type: Metered Meter size: 5/8"x3/4"
 Meter serial: 51797692 Meter installed: 11/01/1996
 Meter remarks: None.



Base Cons:

year	cons
2010	10
2009	42
2008	28
2007	28
2006	30
2005	38

[adjust](#) | [new](#)

Consumption Summary:

year	start	end	days	read	units	avg/per day
2010	01/10/11	03/09/11	58	4943	26	0.45
2009	11/03/10	01/10/11	68	4917	19	0.28
2008	10/12/10	11/03/10	22	4898	0	0.00
2007	09/09/10	10/12/10	33	4898	13	0.39
2006	07/15/10	09/09/10	56	4885	35	0.63
2005	06/08/10	07/15/10	37	4850	24	0.65
	05/18/10	06/08/10	21	4826	13	0.62
	03/23/10	05/18/10	56	4813	26	0.46
	01/26/10	03/23/10	56	4787	3	0.05
	11/20/09	01/26/10	67	4784	7	0.10
	09/24/09	11/20/09	57	~4777	22	0.39
	09/24/09	10/20/09	26	~4755	4	0.15
	07/29/09	08/17/09	19	~4751	14	0.74
	07/29/09	09/24/09	57	~4737	37	0.65
	06/03/09	07/29/09	56	~4700	44	0.79
	04/07/09	06/03/09	57	~4656	51	0.89
	02/09/09	04/07/09	57	~4605	29	0.51
	12/04/08	02/09/09	67	~4576	42	0.63
	10/08/08	12/04/08	57	~4534	42	0.74
	08/12/08	10/08/08	57	~4492	64	1.12
	06/16/08	08/12/08	57	~4428	85	1.49
	04/18/08	06/16/08	59	~4343	76	1.29
	02/22/08	04/18/08	56	~4267	51	0.91
	12/18/07	02/22/08	66	~4216	35	0.53
	10/22/07	12/18/07	57	~4181	42	0.74
	08/24/07	10/22/07	59	~4139	48	0.81
	06/28/07	08/24/07	57	~4091	64	1.12
	05/02/07	06/28/07	57	~4027	58	1.02
	03/07/07	05/02/07	56	~3969	59	1.05
	01/09/07	03/07/07	57	~3910	28	0.49
	11/02/06	01/09/07	68	~3882	44	0.65
	09/07/06	11/02/06	56	~3838	59	1.05
	07/12/06	09/07/06	57	~3779	81	1.42
	05/12/06	07/12/06	61	~3698	97	1.59

03/17/06	05/12/06	56	~3601	36	0.64
01/19/06	03/17/06	57	~3565	31	0.54
11/14/05	01/19/06	66	~3534	30	0.45
09/19/05	11/14/05	56	~3504	39	0.70
07/22/05	09/19/05	59	~3465	104	1.76
05/25/05	07/22/05	58	~3361	53	0.91

[Back](#)



Water Billing System

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Customer:

Name: **MASSEY, JERRY**
(373150076)
Address: 12511 TWINTREE LN,
GARDEN GROVE, CA
92840
Email: DL: N8371266
Phones: 714-589-1534
Credit: None.
Issues:

Account:

balance: **\$0.00**
status: 5, 10/20/2009 to current,
Renter
status: 1, 08/18/2009 to 10/20/2009,
Renter

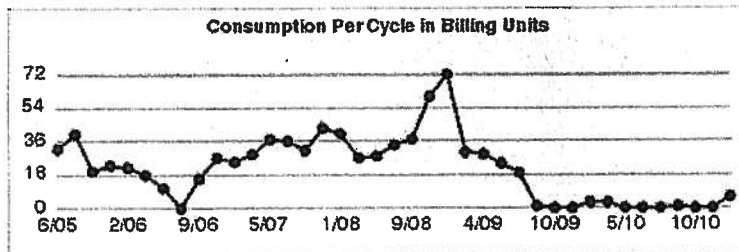
Remarks: [add remark](#) | [edit remarks](#)
8/12/09 EM
BLU BILL RTRND UNBL TO FWD
HND DLVR 10/15/09 RP
CLSNB BILL RTRND UNBL TO
FWD 11/10/09 RP

date	type	amount	balance
02/25/10	Write Off	100.82	0.00
10/22/09	Closing Bill	14.39	100.82
10/22/09	Deposit Refund	-70.00	86.43
10/22/09	Sewer Billing	11.38	156.43
10/22/09	BILLING	11.38	
09/24/09	Water Billing	51.28	145.03
09/24/09	Capital Improvement	0.93	93.77
09/24/09	Increased Cost	6.21	92.84
09/24/09	Sewer Billing	16.63	86.63
09/24/09	BILLING	75.05	
08/18/09	Deposit	70.00	70.00

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Service:

Estimated Next Read: 05/06/2011
Service at: 12511 TWINTREE LN [Map](#) **Loc: 24**
Service id: 37315007 Housing units: 1
Current read: 4943 Service type: single family home
Rate type: Metered Meter size: 5/8"x3/4"
Meter serial: 51797692 Meter installed: 11/01/1996
Meter remarks: None.



Base Cons:

year	cons
2010	10
2009	42
2008	28
2007	28
2006	30
2005	38

[adjust](#) | [new](#)

Consumption Summary:

start	end	days	read	units	avg/per day
01/10/11	03/09/11	58	4943	26	0.45
11/03/10	01/10/11	68	4917	19	0.28
10/12/10	11/03/10	22	4898	0	0.00
09/09/10	10/12/10	33	4898	13	0.39
07/15/10	09/09/10	56	4885	35	0.63
06/08/10	07/15/10	37	4850	24	0.65
05/18/10	06/08/10	21	4826	13	0.62
03/23/10	05/18/10	56	4813	26	0.46
01/26/10	03/23/10	56	4787	3	0.05
11/20/09	01/26/10	67	4784	7	0.10
09/24/09	11/20/09	57	~4777	22	0.39
09/24/09	10/20/09	26	~4755	4	0.15
07/29/09	08/17/09	19	~4751	14	0.74
07/29/09	09/24/09	57	~4737	37	0.65
06/03/09	07/29/09	56	~4700	44	0.79
04/07/09	06/03/09	57	~4656	51	0.89
02/09/09	04/07/09	57	~4605	29	0.51
12/04/08	02/09/09	67	~4576	42	0.63
10/08/08	12/04/08	57	~4534	42	0.74
08/12/08	10/08/08	57	~4492	64	1.12
06/16/08	08/12/08	57	~4428	85	1.49
04/18/08	06/16/08	59	~4343	76	1.29
02/22/08	04/18/08	56	~4267	51	0.91
12/18/07	02/22/08	66	~4216	35	0.53



Water Billing System

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Customer

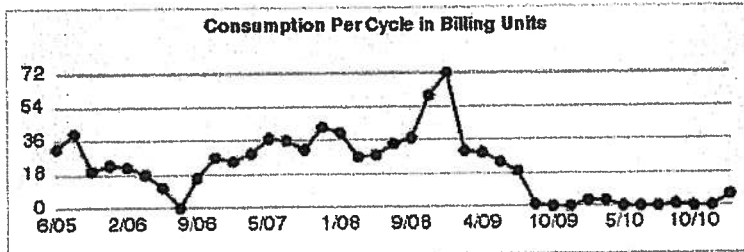
Name: **NEFF, NIDA**
(373150077)
Address: 548 MOCKINGBIRD LN,
FILLMORE, CA 93015
Email: DL:
Phones: 805-524-7330
Credit: None.
Issues:

Service

Estimated Next Read: 05/06/2011
Service at: 12511 TWINTREE LN [Map](#) Loc: 24
Service id: 37315007 Housing units: 1
Current read: 4943 Service type: single family home
Rate type: Metered Meter size: 5/8"x3/4"
Meter serial: 51797692 Meter installed: 11/01/1996
Meter remarks: None.

Account

balance: **\$0.00**
status: 5, 06/09/2010 to current
status: 4, 06/08/2010 to 06/09/2010
status: 2, 11/20/2009 to 06/08/2010
status: 1, 10/20/2009 to 11/20/2009



Remarks: [add remark](#) | [edit remarks](#)
03/25/2010 shawnam RR PER
PRELIM, MTR OKAY. PROP VAC.
10/19/09 EM

date	type	amount	balance
07/19/10	PAYMENT	-32.07	0.00
06/09/10	Beginning Balance	-12.52	
06/09/10	Deposit Refund	-70.00	32.00
06/09/10	Pre-paid Sewer Maintenance	9.19	102.00
06/09/10	Water Service Charge	4.07	92.88
06/09/10	Capital Improvement	0.52	88.81
06/09/10	Imported Water Fee 13@0.46	5.98	88.25
06/09/10	Water Tier 1 Use 13@1.91	24.83	82.31
06/09/10	BILLING	44.59	
05/20/10	Beginning Balance	-40.88	

Base Cons:

year	cons
2010	10
2009	42
2008	28
2007	28
2006	30
2005	38

[adjust](#) | [new](#)

Consumption Summary:

start	end	days	read	units	avg/per day
01/10/11	03/09/11	58	4943	26	0.45
11/03/10	01/10/11	68	4917	19	0.28
10/12/10	11/03/10	22	4898	0	0.00
09/09/10	10/12/10	33	4898	13	0.39
07/15/10	09/09/10	56	4885	35	0.63
06/08/10	07/15/10	37	4850	24	0.65
05/18/10	06/08/10	21	4826	13	0.62
03/23/10	05/18/10	56	4813	26	0.46
01/26/10	03/23/10	56	4787	3	0.05
11/20/09	01/26/10	67	4784	7	0.10
09/24/09	11/20/09	57	~4777	22	0.39
09/24/09	10/20/09	26	~4755	4	0.15
07/29/09	08/17/09	19	~4751	14	0.74
07/29/09	09/24/09	57	~4737	37	0.65
06/03/09	07/29/09	56	~4700	44	0.79
04/07/09	06/03/09	57	~4656	51	0.89
02/09/09	04/07/09	57	~4605	29	0.51
12/04/08	02/09/09	67	~4576	42	0.63
10/08/08	12/04/08	57	~4534	42	0.74
08/12/08	10/08/08	57	~4492	64	1.12
06/16/08	08/12/08	57	~4428	85	1.49
04/18/08	06/16/08	59	~4343	76	1.29
02/22/08	04/18/08	56	~4267	51	0.91

05/20/10	Pre-paid Sewer Maintenance	24.52	57.48
05/20/10	Water Service Charge	10.84	32.96
05/20/10	Water Capital Improvement	1.38	22.12
05/20/10	Imported Water Fee 26@0.46	11.96	20.72
05/20/10	Water Tier 1 Use 26@1.91	49.66	8.78
05/20/10	<u>BILLING</u>	98.36	
03/25/10	Beginning Balance	-76.24	
03/25/10	Pre-paid Sewer Maintenance	24.52	-40.88
03/25/10	Water Service Charge	10.84	-65.40
03/25/10	<u>BILLING</u>	35.36	
03/08/10	<u>PAYMENT</u>	129.57	-76.24
01/27/10	Sewer Maintenance Fee	24.52	53.35
01/27/10	Water Service Charge	10.84	28.81
01/27/10	Water Capital Improvement	1.38	17.97
01/27/10	Imported Water Fee 7@0.46	3.22	16.59
01/27/10	Water Tier 1 Use 7@1.91	13.37	13.37
01/27/10	<u>BILLING</u>	53.33	
01/04/10	<u>PAYMENT</u>	129.57	0.00
11/20/09	Water Billing	40.38	129.57
11/20/09	Capital Improvement	0.76	89.19
11/20/09	Increased Cost	4.86	88.43
11/20/09	Sewer Billing	13.57	83.57
11/20/09	<u>BILLING</u>	59.57	

12/18/07	02/22/08	66	~4216	35	0.53
10/22/07	12/18/07	57	~4181	42	0.74
08/24/07	10/22/07	59	~4139	48	0.81
06/28/07	08/24/07	57	~4091	64	1.12
05/02/07	06/28/07	57	~4027	58	1.02
03/07/07	05/02/07	56	~3969	59	1.05
01/09/07	03/07/07	57	~3910	28	0.49
11/02/06	01/09/07	68	~3882	44	0.65
09/07/06	11/02/06	56	~3838	59	1.05
07/12/06	09/07/06	57	~3779	81	1.42
05/12/06	07/12/06	61	~3698	97	1.59
03/17/06	05/12/06	56	~3601	36	0.64
01/19/06	03/17/06	57	~3565	31	0.54
11/14/05	01/19/06	66	~3534	30	0.45
09/19/05	11/14/05	56	~3504	39	0.70
07/22/05	09/19/05	59	~3465	104	1.76
05/25/05	07/22/05	58	~3361	53	0.91

10/21/09	Deposit	70.00	70.00
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[Back](#)



Water Billing System

[Main](#) [Search](#) [Calc](#) [Reports](#) [jeffku](#) [logout](#) Thursday, March 31, 2011

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Customer

Name: **BARRIGA, RAMON (373150078)**
 Address: 890 S PHILADELPHIA ST APT C,
 ANAHEIM, CA 92805
 Email: DL: A3803314
 Phones: 714-539-4060 714-720-3519

Credit Issues:

billing date	issue	billing date	issue
02/24/2011	LATE	07/14/2010	LOCK
12/18/2010	LATE	06/30/2010	LATE
10/23/2010	LATE	05/05/2010	LATE
08/31/2010	LATE	03/10/2010	LATE
08/27/2010	LATE	01/12/2010	LATE

Account

balance: **\$0.00**

status: 5, 10/12/2010 to current
 status: 4, 10/12/2010 to 10/12/2010
 status: 2, 07/19/2010 to 10/12/2010
 status: 1, 06/08/2010 to 07/19/2010

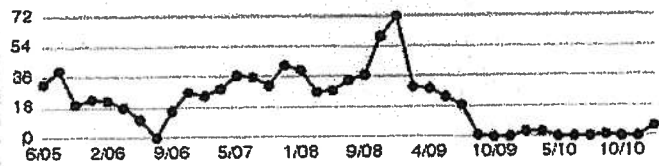
Remarks: [add remark](#) | [edit remarks](#)
 None.

date	type	amount	balance
03/31/11	Write Off	-94.52	0.00
10/12/10	Beginning Balance	45.37	
10/12/10	Deposit Refund	-70.00	94.52
10/12/10	Sewer Maintenance Fee	9.52	164.52
10/12/10	Water Service Charge	6.71	155.00
10/12/10	Water Capital Improvement	0.81	148.29
10/12/10	Imported Water Fee 13@0.46	5.98	147.48
10/12/10	Water Tier 1 Use 13@2.01	26.13	141.50
10/12/10	BILLING	49.15	
09/14/10	Sewer Maintenance Fee	16.16	115.37
09/14/10	Water Service Charge	11.38	99.21
09/14/10	Water Capital Improvement	1.38	87.83
09/14/10	Imported Water Fee 35@0.46	16.10	86.45
09/14/10	Water Tier 1 Use 35@2.01	70.35	70.35
09/14/10	BILLING	115.37	
09/01/10	PAYMENT	-	0.00
08/31/10	Late Fee	20.70	169.09
07/19/10	Beginning Balance	70.00	
07/19/10	Sewer Maintenance Fee	10.68	148.39

Service

Estimated Next Read: 05/06/2011
 Service at: 12511 TWINTREE LN Map Loc: 24
 Service id: 37315007 Housing units: 1
 Current read: 4943 Service type: single family home
 Rate type: Metered Meter size: 5/8"x3/4"
 Meter serial: 51797692 Meter installed: 11/01/1996
 Meter remarks: None.

Consumption Per Cycle in Billing Units



Base Cons:

year	cons
2010	10
2009	42
2008	28
2007	28
2006	30
2005	38

[adjust](#) | [new](#)

Consumption Summary:

start	end	days	read	units	avg/per day
01/10/11	03/09/11	58	4943	26	0.45
11/03/10	01/10/11	68	4917	19	0.28
10/12/10	11/03/10	22	4898	0	0.00
09/09/10	10/12/10	33	4898	13	0.39
07/15/10	09/09/10	56	4885	35	0.63
06/08/10	07/15/10	37	4850	24	0.65
05/18/10	06/08/10	21	4826	13	0.62
03/23/10	05/18/10	56	4813	26	0.46
01/26/10	03/23/10	56	4787	3	0.05
11/20/09	01/26/10	67	4784	7	0.10
09/24/09	11/20/09	57	~4777	22	0.39
09/24/09	10/20/09	26	~4755	4	0.15
07/29/09	08/17/09	19	~4751	14	0.74
07/29/09	09/24/09	57	~4737	37	0.65
06/03/09	07/29/09	56	~4700	44	0.79
04/07/09	06/03/09	57	~4656	51	0.89
02/09/09	04/07/09	57	~4605	29	0.51
12/04/08	02/09/09	67	~4576	42	0.63
10/08/08	12/04/08	57	~4534	42	0.74
08/12/08	10/08/08	57	~4492	64	1.12
06/16/08	08/12/08	57	~4428	85	1.49
04/18/08	06/16/08	59	~4343	76	1.29
02/22/08	04/18/08	56	~4267	51	0.91
12/18/07	02/22/08	66	~4216	35	0.53
10/22/07	12/18/07	57	~4181	42	0.74
08/24/07	10/22/07	59	~4139	48	0.81
06/28/07	08/24/07	57	~4091	64	1.12
05/02/07	06/28/07	57	~4027	58	1.02
03/07/07	05/02/07	56	~3969	59	1.05

07/19/10	Water Service Charge	7.52	137.71
07/19/10	Water Capital Improvement	0.91	130.19
07/19/10	Imported Water Fee 24@0.46	11.04	129.28
07/19/10	Water Tier 1 Use 24@2.01	48.24	118.24
07/19/10	BILLING	78.39	
06/08/10	Deposit	70.00	70.00

01/09/07	03/07/07	57	~3910	28	0.49
11/02/06	01/09/07	68	~3882	44	0.65
09/07/06	11/02/06	56	~3838	59	1.05
07/12/06	09/07/06	57	~3779	81	1.42
05/12/06	07/12/06	61	~3698	97	1.59
03/17/06	05/12/06	56	~3601	36	0.64
01/19/06	03/17/06	57	~3565	31	0.54
11/14/05	01/19/06	66	~3534	30	0.45
09/19/05	11/14/05	56	~3504	39	0.70
07/22/05	09/19/05	59	~3465	104	1.76
05/25/05	07/22/05	58	~3361	53	0.91

[Back](#)



Water Billing System

Main Search Calc Reports jeffku logout Thursday, March 31, 2011

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Customer

Name: NEFF, NIDA (373149020)
 Address: 548 MOCKINGBIRD LN, FILLMORE, CA 93015
 Email: DL: NA
 Phones: 805-524-7330
 Credit Issues:

billing date	issue
08/31/2010	LATE

 Extensions:

granted on	until	by
09/08/2010	09/10/2010	shawnam

Account

balance: \$0.00
 status: 5, 09/09/2010 to current
 status: 4, 09/09/2010 to 09/09/2010
 status: 2, 07/19/2010 to 09/09/2010
 status: 1, 05/21/2010 to 07/19/2010

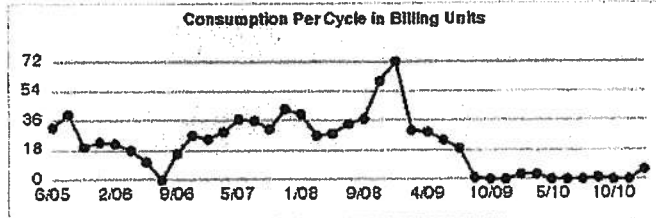
Remarks: add remark | edit remarks
 05/21/2010 shawnam SM

date	type	amount	balance
03/31/11	Write Off	196.41	0.00
09/09/10	Beginning Balance	127.08	
09/09/10	Deposit Refund	-70.00	196.41
09/09/10	Sewer Maintenance Fee	19.52	266.41
09/09/10	Water Service Charge	11.38	246.89
09/09/10	Water Capital Improvement	1.38	235.51
09/09/10	Imported Water Fee 15@0.46	6.90	234.13
09/09/10	Water Tier 1 Use 15@2.01	30.15	227.23
09/09/10	BILLING	69.33	
08/31/10	Late Fee	20.70	197.08
07/19/10	Beginning Balance	70.00	
07/19/10	Sewer Maintenance Fee	19.52	176.38
07/19/10	Water Service Charge	11.38	156.86
07/19/10	Water Capital Improvement	1.38	145.48
07/19/10	Imported Water Fee 30@0.46	13.80	144.10
07/19/10	Water Tier 1 Use 30@2.01	60.30	130.30
07/19/10	BILLING	106.38	
05/21/10	Deposit	70.00	70.00

Show all

Service

Estimated Next Read: 05/06/2011
 Service at: 12531 TWINTREE LN Map Loc: 22
 Service id: 37314902 Housing units: 1
 Current read: 1162 Service type: single family home
 Rate type: Metered Meter size: 5/8"x3/4"
 Meter serial: 63903901 Meter installed: 10/01/2004
 Meter remarks:



Base Cons:

year	cons
2010	14
2009	19
2008	14
2007	15
2006	18
2005	10

adjust | new

Consumption Summary:

start	end	days	read	units	avg/per day
01/10/11	03/09/11	58	1162	7	0.12
11/03/10	01/10/11	68	1155	30	0.44
09/09/10	11/03/10	55	1125	21	0.38
07/15/10	09/09/10	56	1104	15	0.27
05/18/10	07/15/10	58	1089	30	0.52
03/31/10	05/18/10	48	1072	13	0.27
03/23/10	03/31/10	8	1059	6	0.75
01/26/10	03/23/10	56	1053	14	0.25
11/20/09	01/26/10	67	1039	25	0.37
09/24/09	11/20/09	57	~1014	34	0.60
07/29/09	09/24/09	57	~980	45	0.79
06/03/09	07/29/09	56	~935	42	0.75
04/07/09	06/03/09	57	~893	46	0.81
02/09/09	04/07/09	57	~847	14	0.25
12/04/08	02/09/09	67	~833	19	0.28
10/08/08	12/04/08	57	~814	26	0.46
08/12/08	10/08/08	57	~788	41	0.72
06/16/08	08/12/08	57	~747	48	0.84
04/18/08	06/16/08	59	~699	28	0.47
02/22/08	04/18/08	56	~671	25	0.45
12/18/07	02/22/08	66	~646	14	0.21
10/22/07	12/18/07	57	~632	18	0.32
08/24/07	10/22/07	59	~614	20	0.34
06/28/07	08/24/07	57	~594	38	0.67
05/02/07	06/28/07	57	~556	46	0.81
03/07/07	05/02/07	56	~510	34	0.61
01/09/07	03/07/07	57	~476	15	0.26
11/02/06	01/09/07	68	~461	24	0.35
09/07/06	11/02/06	56	~437	36	0.64
07/12/06	09/07/06	57	~401	51	0.89
05/12/06	07/12/06	61	~350	71	1.16

03/17/06	05/12/06	56	~279	20	0.36
01/19/06	03/17/06	57	~259	18	0.32
11/14/05	01/19/06	66	~241	24	0.36
09/19/05	11/14/05	56	~217	50	0.89
07/22/05	09/19/05	59	~167	50	0.85
05/25/05	07/22/05	58	~117	43	0.74

[Back](#)



Water Billing System

[Main](#) [Search](#) [Calc](#) [Reports](#) [jeffku](#) [logout](#) Thursday, March 31, 2011

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Customer:

Name: TCHER, SUSAN (373149021)
 Address: 12531 TWINTREE, GARDEN GROVE, CA 92840
 Email: tchir4susan@gmail.com DL: n9239465
 Phones: 562-972-0106

Credit Issues:	billing date	issue
	02/26/2011	LATE
	12/22/2010	LATE

Extensions	granted on	until	by
	02/28/2011	03/04/2011	sueg

Account:

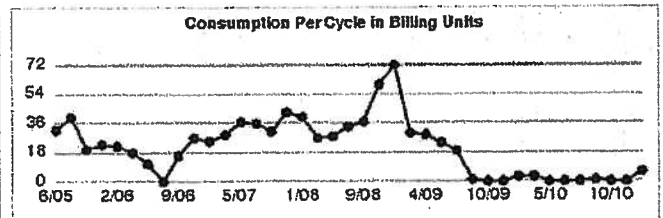
balance: \$50.06 , due by: 04/25/2011
 status: 2 , 11/09/2010 to current
 status: 1 , 09/09/2010 to 11/09/2010

Remarks: [add remark](#) | [edit remarks](#)
 None.

date	type	amount	balance
03/14/11	Sewer Maintenance Fee	19.52	50.06
03/14/11	Water Service Charge	11.38	30.54
03/14/11	Water Capital Improvement	1.38	19.16
03/14/11	Imported Water Fee 7@0.53	3.71	17.78
03/14/11	Water Tier 1 Use 7@2.01	14.07	14.07
03/14/11	BILLING	50.06	
03/02/11	PAYMENT	127.08	0.00
02/26/11	Late Fee	20.70	127.08
01/14/11	Sewer Maintenance Fee	19.52	106.38
01/14/11	Water Service Charge	11.38	86.86
01/14/11	Water Capital Improvement	1.38	75.48
01/14/11	Imported Water Fee 30@0.46	13.80	74.10
01/14/11	Water Tier 1 Use 30@2.01	60.30	60.30
01/14/11	BILLING	106.38	
12/22/10	Late Fee	20.70	0.00
12/22/10	PAYMENT	174.85	-20.70
11/09/10	Beginning Balance	70.00	
11/09/10	Sewer Maintenance Fee	19.52	154.15
11/09/10	Water Service Charge	11.38	134.63
11/09/10	Water Capital Improvement	1.38	123.25
11/09/10	Imported Water Fee 21@0.46	9.66	121.87
11/09/10	Water Tier 1 Use 21@2.01	42.21	112.21
11/09/10	BILLING	84.15	
09/09/10	Deposit	70.00	70.00

Service

Estimated Next Read: 05/06/2011
 Service at: 12531 TWINTREE LN Map Loc: 22
 Service id: 37314902 Housing units: 1
 Current read: 1162 Service type: single family home
 Rate type: Metered Meter size: 5/8"x3/4"
 Meter serial: 63903901 Meter installed: 10/01/2004
 Meter remarks:



Base Cons:

year	cons
2010	14
2009	19
2008	14
2007	15
2006	18
2005	10

[adjust](#) | [new](#)

Consumption Summary:

start	end	days	read	units	avg/per day
01/10/11	03/09/11	58	1162	7	0.12
11/03/10	01/10/11	68	1155	30	0.44
09/09/10	11/03/10	55	1125	21	0.38
07/15/10	09/09/10	56	1104	15	0.27
05/18/10	07/15/10	58	1089	30	0.52
03/31/10	05/18/10	48	1072	13	0.27
03/23/10	03/31/10	8	1059	6	0.75
01/26/10	03/23/10	56	1053	14	0.25
11/20/09	01/26/10	67	1039	25	0.37
09/24/09	11/20/09	57	~1014	34	0.60
07/29/09	09/24/09	57	~980	45	0.79
06/03/09	07/29/09	56	~935	42	0.75
04/07/09	06/03/09	57	~893	46	0.81
02/09/09	04/07/09	57	~847	14	0.25
12/04/08	02/09/09	67	~833	19	0.28
10/08/08	12/04/08	57	~814	26	0.46
08/12/08	10/08/08	57	~788	41	0.72
06/16/08	08/12/08	57	~747	48	0.84
04/18/08	06/16/08	59	~699	28	0.47
02/22/08	04/18/08	56	~671	25	0.45
12/18/07	02/22/08	66	~646	14	0.21
10/22/07	12/18/07	57	~632	18	0.32
08/24/07	10/22/07	59	~614	20	0.34
06/28/07	08/24/07	57	~594	38	0.67
05/02/07	06/28/07	57	~556	46	0.81
03/07/07	05/02/07	56	~510	34	0.61
01/09/07	03/07/07	57	~476	15	0.26
11/02/06	01/09/07	68	~461	24	0.35
09/07/06	11/02/06	56	~437	36	0.64
07/12/06	09/07/06	57	~401	51	0.89
05/12/06	07/12/06	61	~350	71	1.16
03/17/06	05/12/06	56	~279	20	0.36

01/19/06	03/17/06	57	~259	18	0.32
11/14/05	01/19/06	66	~241	24	0.36
09/19/05	11/14/05	56	~217	50	0.89
07/22/05	09/19/05	59	~167	50	0.85
05/25/05	07/22/05	58	~117	43	0.74

[Back](#)



Water Billing System

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Customer

Name: **ALVEREZ, NICOLE**
 (373149029)
 Address: 12181 ARKLEY DR, GARDEN GROVE, CA 92841
 Email: DL: A8798724
 Phones: 714-513-5531 714-621-0228

Credit Issues:	billing date	issue	billing date	issue
	12/04/2008	LATE	08/12/2008	LATE
			04/18/2008	LATE

Account

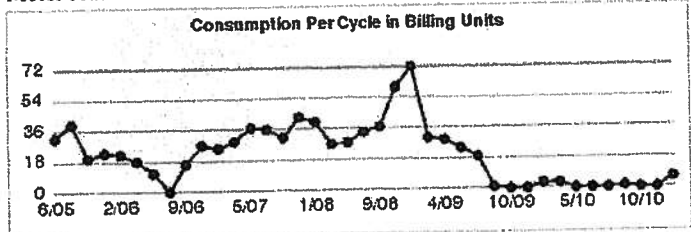
balance: **\$0.00**
 status: 5, 04/01/2010 to current
 status: 4, 03/31/2010 to 04/01/2010
 status: 2, 03/14/2003 to 03/31/2010

Remarks: [add remark](#) | [edit remarks](#)
 05/20/2010 ronp U/U 13 PER PRELIM LFT 48HR NTC
 R/R 413 PER PRELIM BILL EST MTR IS STPD 10/4/04 AM

date	type	amount	balance
04/08/10	PAYMENT	-88.50	0.00
04/01/10	Beginning Balance	69.14	
04/01/10	Sewer Maintenance Fee	3.39	88.50
04/01/10	Water Service Charge	1.55	85.11
04/01/10	Water Capital Improvement	0.20	83.56
04/01/10	Imported Water Fee 6@0.46	2.76	83.36
04/01/10	Water Tier 1 Use 6@1.91	11.46	80.60
04/01/10	BILLING	19.36	
03/25/10	Sewer Maintenance Fee	23.74	69.14
03/25/10	Water Service Charge	10.84	45.40
03/25/10	Water Capital Improvement	1.38	34.56
03/25/10	Imported Water Fee 14@0.46	6.44	33.18
03/25/10	Water Tier 1 Use 14@1.91	26.74	26.74
03/25/10	BILLING	69.14	
03/04/10	PAYMENT	-95.21	0.00
01/27/10	Sewer Maintenance Fee	23.74	95.21

Service

Estimated Next Read: 05/06/2011
 Service at: 12531 TWINTREE LN [Map](#) [Loc: 22](#)
 Service id: 37314902 Housing units: 1
 Current read: 1162 Service type: single family home
 Rate type: Metered Meter size: 5/8"x3/4"
 Meter serial: 63903901 Meter installed: 10/01/2004
 Meter remarks:



Base Cons:

year	cons
2010	14
2009	19
2008	14
2007	15
2006	18
2005	10

[adjust](#) | [new](#)

Consumption Summary:

start	end	days	read	units	avg/per day
01/10/11	03/09/11	58	1162	7	0.12
11/03/10	01/10/11	68	1155	30	0.44
09/09/10	11/03/10	55	1125	21	0.38
07/15/10	09/09/10	56	1104	15	0.27
05/18/10	07/15/10	58	1089	30	0.52
03/31/10	05/18/10	48	1072	13	0.27
03/23/10	03/31/10	8	1059	6	0.75
01/26/10	03/23/10	56	1053	14	0.25
11/20/09	01/26/10	67	1039	25	0.37
09/24/09	11/20/09	57	~1014	34	0.60
07/29/09	09/24/09	57	~980	45	0.79
06/03/09	07/29/09	56	~935	42	0.75
04/07/09	06/03/09	57	~893	46	0.81
02/09/09	04/07/09	57	~847	14	0.25
12/04/08	02/09/09	67	~833	19	0.28
10/08/08	12/04/08	57	~814	26	0.46
08/12/08	10/08/08	57	~788	41	0.72
06/16/08	08/12/08	57	~747	48	0.84
04/18/08	06/16/08	59	~699	28	0.47
02/22/08	04/18/08	56	~671	25	0.45
12/18/07	02/22/08	66	~646	14	0.21
10/22/07	12/18/07	57	~632	18	0.32
08/24/07	10/22/07	59	~614	20	0.34
06/28/07	08/24/07	57	~594	38	0.67
05/02/07	06/28/07	57	~556	46	0.81
03/07/07	05/02/07	56	~510	34	0.61
01/09/07	03/07/07	57	~476	15	0.26
11/02/06	01/09/07	68	~461	24	0.35

01/27/10	Water Service Charge	10.84	71.47
01/27/10	Water Capital Improvement	1.38	60.63
01/27/10	Imported Water Fee 25@0.46	11.50	59.25
01/27/10	Water Tier 1 Use 25@1.91	47.75	47.75
01/27/10	<u>BILLING</u>	95.21	
01/04/10	PAYMENT	-	0.00
11/20/09	Water Billing	75.78	110.08
11/20/09	Capital Improvement	1.38	34.30
11/20/09	Increased Cost	9.18	32.92
11/20/09	Sewer Billing	23.74	23.74
11/20/09	<u>BILLING</u>	110.08	
10/22/09	PAYMENT	-	0.00
09/24/09	Water Billing	97.51	134.78
09/24/09	Capital Improvement	1.38	37.27
09/24/09	Increased Cost	12.15	35.89
09/24/09	Sewer Billing	23.74	23.74
09/24/09	<u>BILLING</u>	134.78	
09/02/09	PAYMENT	-	0.00
07/29/09	Water Billing	91.54	128.00
07/29/09	Capital Improvement	1.38	36.46
07/29/09	Increased Cost	11.34	35.08
07/29/09	Sewer Billing	23.74	23.74
07/29/09	<u>BILLING</u>	128.00	
07/06/09	PAYMENT	-	0.00
06/03/09	Water Billing	92.66	124.86
06/03/09	Capital Improvement	1.38	32.20
06/03/09	Increased Cost	12.42	30.82
06/03/09	Sewer Billing	18.40	18.40
06/03/09	<u>BILLING</u>	124.86	
05/11/09	PAYMENT	-58.56	0.00
04/07/09	Water Billing	35.00	58.56
04/07/09	Capital Improvement	1.38	23.56
04/07/09	Increased Cost	3.78	22.18
04/07/09	Sewer Billing	18.40	18.40
04/07/09	<u>BILLING</u>	58.56	
03/16/09	PAYMENT	-68.81	0.00
02/09/09	Water Billing	43.90	68.81
02/09/09	Capital Improvement	1.38	24.91
02/09/09	Increased Cost	5.13	23.53
02/09/09	Sewer Billing	18.40	18.40
02/09/09	<u>BILLING</u>	68.81	
01/22/09	PAYMENT	-	0.00
01/20/09	Late Penalty	103.86	
12/04/08	Water Billing	20.70	103.86
12/04/08	Capital Improvement	56.36	83.16
12/04/08		1.38	26.80

09/07/06	11/02/06	56	~437	36	0.64
07/12/06	09/07/06	57	~401	51	0.89
05/12/06	07/12/06	61	~350	71	1.16
03/17/06	05/12/06	56	~279	20	0.36
01/19/06	03/17/06	57	~259	18	0.32
11/14/05	01/19/06	66	~241	24	0.36
09/19/05	11/14/05	56	~217	50	0.89
07/22/05	09/19/05	59	~167	50	0.85
05/25/05	07/22/05	58	~117	43	0.74

12/04/08	Increased Cost	7.02	25.42
12/04/08	Sewer Billing	18.40	18.40
12/04/08	<u>BILLING</u>	83.16	
11/12/08	PAYMENT	-	0.00
		114.26	
10/08/08	Water Billing	83.41	114.26
10/08/08	Capital Improvement	1.38	30.85
10/08/08	Increased Cost	11.07	29.47
10/08/08	Sewer Billing	18.40	18.40
10/08/08	<u>BILLING</u>	114.26	
09/30/08	PAYMENT	-	0.00
		149.80	
09/26/08	Late Penalty	20.70	149.80
08/21/08	Sewer Billing	-0.79	129.10
08/21/08	<u>BILLING</u>	-0.79	
08/12/08	Water Billing	96.36	129.89
08/12/08	Capital Improvement	1.38	33.53
08/12/08	Increased Cost	12.96	32.15
08/12/08	Sewer Billing	19.19	19.19
08/12/08	<u>BILLING</u>	129.89	
07/17/08	PAYMENT	-77.51	0.00
06/16/08	Water Billing	49.84	77.51
06/16/08	Capital Improvement	1.38	27.67
06/16/08	Increased Cost	7.56	26.29
06/16/08	Sewer Billing	18.73	18.73
06/16/08	<u>BILLING</u>	77.51	
06/06/08	PAYMENT	-92.96	0.00
06/04/08	Late Penalty	20.70	92.96
04/18/08	Water Billing	45.40	72.26
04/18/08	Capital Improvement	1.38	26.86
04/18/08	Increased Cost	6.75	25.48
04/18/08	Sewer Billing	18.73	18.73
04/18/08	<u>BILLING</u>	72.26	
04/03/08	PAYMENT	-53.01	0.00
02/22/08	Water Billing	29.12	53.01
02/22/08	Capital Improvement	1.38	23.89
02/22/08	Increased Cost	3.78	22.51
02/22/08	Sewer Billing	18.73	18.73
02/22/08	<u>BILLING</u>	53.01	
01/18/08	PAYMENT	-60.01	0.00
12/18/07	Water Billing	35.04	60.01
12/18/07	Capital Improvement	1.38	24.97
12/18/07	Increased Cost	4.86	23.59
12/18/07	Sewer Billing	18.73	18.73
12/18/07	<u>BILLING</u>	60.01	
11/26/07	PAYMENT	-63.51	0.00
10/22/07	Water Billing	38.00	63.51
10/22/07	Capital Improvement	1.38	25.51
10/22/07	Increased Cost	5.40	24.13
10/22/07	Sewer Billing	18.73	18.73
10/22/07	<u>BILLING</u>	63.51	
10/15/07	PAYMENT	-	0.00
		115.83	

10/10/07	Late Penalty	20.70	115.83
08/24/07	Water Billing	64.76	95.13
08/24/07	Capital Improvement	1.38	30.37
08/24/07	Increased Cost	10.26	28.99
08/24/07	Sewer Billing	18.73	18.73
08/24/07	<u>BILLING</u>	95.13	
08/15/07	PAYMENT	-	0.00
		109.60	
08/13/07	Late Penalty	20.70	109.60
06/28/07	Water Billing	55.16	88.90
06/28/07	Capital Improvement	1.38	33.74
06/28/07	Increased Cost	12.42	32.36
06/28/07	Sewer Billing	19.94	19.94
06/28/07	<u>BILLING</u>	88.90	
06/18/07	PAYMENT	-93.24	0.00
06/15/07	Late Penalty	20.70	93.24
05/02/07	Water Billing	42.04	72.54
05/02/07	Capital Improvement	1.38	30.50
05/02/07	Increased Cost	9.18	29.12
05/02/07	Sewer Billing	19.94	19.94
05/02/07	<u>BILLING</u>	72.54	
04/17/07	PAYMENT	-47.27	0.00
03/07/07	Water Billing	21.90	47.27
03/07/07	Capital Improvement	1.38	25.37
03/07/07	Increased Cost	4.05	23.99
03/07/07	Sewer Billing	19.94	19.94
03/07/07	<u>BILLING</u>	47.27	
02/23/07	PAYMENT	-79.94	0.00
02/22/07	Late Penalty	20.70	79.94
01/09/07	Water Billing	31.44	59.24
01/09/07	Capital Improvement	1.38	27.80
01/09/07	Increased Cost	6.48	26.42
01/09/07	Sewer Billing	19.94	19.94
01/09/07	<u>BILLING</u>	59.24	
12/19/06	PAYMENT	-95.90	0.00
12/18/06	Late Penalty	20.70	95.90
11/02/06	Water Billing	44.16	75.20
11/02/06	Capital Improvement	1.38	31.04
11/02/06	Increased Cost	9.72	29.66
11/02/06	Sewer Billing	19.94	19.94
11/02/06	<u>BILLING</u>	75.20	
10/24/06	PAYMENT	-	0.00
		116.45	
10/23/06	Late Penalty	20.70	116.45
09/07/06	Water Billing	60.66	95.75
09/07/06	Capital Improvement	1.38	35.09
09/07/06	Increased Cost	13.77	33.71
09/07/06	Sewer Billing	19.94	19.94
09/07/06	<u>BILLING</u>	95.75	
08/14/06	PAYMENT	-	0.00
		123.15	
07/12/06	Water Billing	82.66	123.15
07/12/06	Capital Improvement	1.38	40.49

07/12/06	Increased Cost	19.17	39.11
07/12/06	Sewer Billing	19.94	19.94
07/12/06	<u>BILLING</u>	123.15	
06/15/06	PAYMENT	-47.08	0.00
05/12/06	Water Billing	27.20	47.08
05/12/06	Capital Improvement	1.38	19.88
05/12/06	Increased Cost	5.00	18.50
05/12/06	Sewer Billing	13.50	13.50
05/12/06	<u>BILLING</u>	47.08	
04/27/06	PAYMENT	-44.46	0.00
03/17/06	Water Billing	25.08	44.46
03/17/06	Capital Improvement	1.38	19.38
03/17/06	Increased Cost	4.50	18.00
03/17/06	Sewer Billing	13.50	13.50
03/17/06	<u>BILLING</u>	44.46	
02/22/06	PAYMENT	-52.32	0.00
01/19/06	Water Billing	31.44	52.32
01/19/06	Capital Improvement	1.38	20.88
01/19/06	Increased Cost	6.00	19.50
01/19/06	Sewer Billing	13.50	13.50
01/19/06	<u>BILLING</u>	52.32	
01/05/06	PAYMENT	-92.72	0.00
01/04/06	Late Penalty	10.00	92.72
11/14/05	Water Billing	59.56	82.72
11/14/05	Capital Improvement	1.38	23.16
11/14/05	Increased Cost	12.50	21.78
11/14/05	Sewer Billing	9.28	9.28
11/14/05	<u>BILLING</u>	82.72	
10/25/05	PAYMENT	-82.72	0.00
09/19/05	Water Billing	59.56	82.72
09/19/05	Capital Improvement	1.38	23.16
09/19/05	Increased Cost	12.50	21.78
09/19/05	Sewer Billing	9.28	9.28
09/19/05	<u>BILLING</u>	82.72	
09/08/05	PAYMENT	-83.27	0.00
09/07/05	Late Penalty	10.00	83.27
07/22/05	Water Billing	51.86	73.27
07/22/05	Capital Improvement	1.38	21.41
07/22/05	Increased Cost	10.75	20.03
07/22/05	Sewer Billing	9.28	9.28
07/22/05	<u>BILLING</u>	73.27	
06/13/05	PAYMENT	-38.88	0.00
05/25/05	Water Billing	45.26	38.88
05/25/05	Capital Improvement	1.38	-6.38
05/25/05	Increased Cost	6.66	-7.76
05/25/05	Pre-paid Sewer Billing Cost	9.28	-14.42
05/25/05	<u>BILLING</u>	62.58	
03/30/05	Water Billing	18.72	-23.70
03/30/05	Capital Improvement	1.38	-42.42
03/30/05	Deposit Refund	-55.00	-43.80
03/30/05	Increased Cost	1.92	11.20

03/30/05	Sewer Billing	9.28	9.28
03/30/05	BILLING	31.30	
03/14/05	PAYMENT	-34.96	0.00
02/01/05	Water Billing	21.90	34.96
02/01/05	Capital Improvement	1.38	13.06
02/01/05	Increased Cost	2.40	11.68
02/01/05	Sewer Billing	9.28	9.28
02/01/05	BILLING	34.96	
12/22/04	PAYMENT	-28.86	0.00
11/29/04	Water Billing	16.60	28.86
11/29/04	Capital Improvement	1.38	12.26
11/29/04	Increased Cost	1.60	10.88
11/29/04	Sewer Billing	9.28	9.28
11/29/04	BILLING	28.86	
10/18/04	PAYMENT	-64.36	0.00
10/01/04	Water Billing	47.46	64.36
10/01/04	Capital Improvement	1.38	16.90
10/01/04	Increased Cost	6.24	15.52
10/01/04	Sewer Billing	9.28	9.28
10/01/04	BILLING	64.36	
08/23/04	PAYMENT	-78.22	0.00
08/05/04	Water Billing	59.56	78.22
08/05/04	Capital Improvement	1.38	18.66
08/05/04	Increased Cost	8.00	17.28
08/05/04	Sewer Billing	9.28	9.28
08/05/04	BILLING	78.22	
06/28/04	PAYMENT	104.28	0.00
06/10/04	Water Billing	84.86	104.28
06/10/04	Capital Improvement	1.38	19.42
06/10/04	Increased Cost	8.76	18.04
06/10/04	Sewer Billing	9.28	9.28
06/10/04	BILLING	104.28	
05/10/04	PAYMENT	-40.26	0.00
04/14/04	Water Billing	27.20	40.26
04/14/04	Capital Improvement	1.38	13.06
04/14/04	Increased Cost	2.40	11.68
04/14/04	Sewer Billing	9.28	9.28
04/14/04	BILLING	40.26	
03/22/04	PAYMENT	-37.90	0.00
02/18/04	Water Billing	25.08	37.90
02/18/04	Capital Improvement	1.38	12.82
02/18/04	Increased Cost	2.16	11.44
02/18/04	Sewer Billing	9.28	9.28
02/18/04	BILLING	37.90	
01/20/04	PAYMENT	-44.98	0.00
12/15/03	Water Billing	31.44	44.98
12/15/03	Capital Improvement	1.38	13.54
12/15/03	Increased Cost	2.88	12.16
12/15/03	Sewer Billing	9.28	9.28
12/15/03	BILLING	44.98	
11/24/03	PAYMENT	-78.66	0.00

10/17/03	Water Billing	61.76	78.66
10/17/03	Capital Improvement	1.38	16.90
10/17/03	Increased Cost	6.24	15.52
10/17/03	Sewer Billing	9.28	9.28
10/17/03	<u>BILLING</u>	78.66	
09/23/03	PAYMENT	-91.88	0.00
08/21/03	Water Billing	76.06	91.88
08/21/03	Capital Improvement	1.38	15.82
08/21/03	Increased Cost	7.80	14.44
08/21/03	Sewer Billing	6.64	6.64
08/21/03	<u>BILLING</u>	91.88	
07/21/03	PAYMENT	-56.65	0.00
06/25/03	Water Billing	47.46	56.65
06/25/03	Capital Improvement	1.38	9.19
06/25/03	Increased Cost	1.17	7.81
06/25/03	Sewer Billing	6.64	6.64
06/25/03	<u>BILLING</u>	56.65	
05/27/03	PAYMENT	-93.93	0.00
04/29/03	Water Billing	32.09	93.93
04/29/03	Capital Improvement	1.04	61.84
04/29/03	Increased Cost	0.78	60.80
04/29/03	Sewer Billing	5.02	60.02
04/29/03	<u>BILLING</u>	38.93	
03/17/03	Deposit	55.00	55.00

[Back](#)



Water Billing System

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Customer:

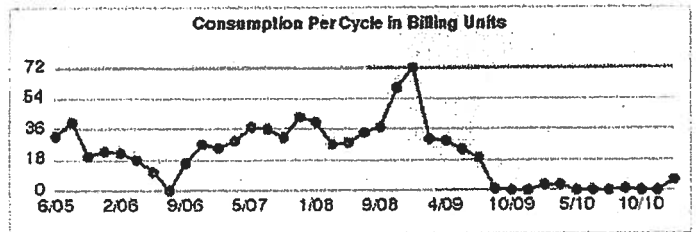
Name: **DONOVAN, ROBERT**
(373148043)
Address: 12551 TWINTREE LN, GARDEN GROVE, CA 92840
Email: mikaylaluvr@yahoo.com DL: N0861019
Phones: 9715776

Credit Issues:

billing date	issue	billing date	issue
02/26/2011	LATE	04/07/2009	LATE
12/22/2010	LATE	02/09/2009	LATE
08/31/2010	LATE	12/04/2008	LATE
05/07/2010	LATE	10/08/2008	LATE
01/14/2010	LATE	08/12/2008	LATE
09/24/2009	LATE	06/16/2008	LATE
07/29/2009	LATE	04/18/2008	LATE
06/03/2009	LATE	02/22/2008	LATE

Service:

Estimated Next Read: 05/06/2011
Service at: 12551 TWINTREE LN [Map](#) Loc: 25
Service id: 37314804 Housing units: 1
Current read: 1953 Service type: single family home
Rate type: Metered Meter size: 5/8"x3/4"
Meter serial: 51797689 Meter installed: 11/01/1996
Meter remarks: None.



Account:

balance: **\$47.56**, due by: **04/25/2011**
status: 2, 12/03/1985 to current
Remarks: [add remark](#) | [edit remarks](#)
NM CHG FROM DEBORAH TO ROBERT
CK RCD UNSND RTND 5/6/97 AB
R/R 1140 PER PRELIM NO LKS RD OK 2/1/05 AM
R/R 1149 PER PRELIM RD OK 3/30/05 AM
LKD OFF NON PMNT 07/14/05 RP

Base Cons:

year	cons
2010	8
2009	7
2008	9
2007	7
2006	12
2005	9

[adjust](#) | [new](#)

Consumption Summary:

start	end	days	read	units	avg/per day
01/10/11	03/09/11	58	1953	8	0.14
11/03/10	01/10/11	68	1945	9	0.13
09/09/10	11/03/10	55	1936	8	0.15
07/15/10	09/09/10	56	1928	12	0.21
05/18/10	07/15/10	58	1916	17	0.29
03/23/10	05/18/10	56	1899	42	0.75
01/26/10	03/23/10	56	1857	9	0.16
11/20/09	01/26/10	67	1848	11	0.16
09/24/09	11/20/09	57	~1837	8	0.14
07/29/09	09/24/09	57	~1829	11	0.19
06/03/09	07/29/09	56	~1818	15	0.27
04/07/09	06/03/09	57	~1803	19	0.33
02/09/09	04/07/09	57	~1784	8	0.14
12/04/08	02/09/09	67	~1776	7	0.10
10/08/08	12/04/08	57	~1769	16	0.28
08/12/08	10/08/08	57	~1753	42	0.74
06/16/08	08/12/08	57	~1711	59	1.04
04/18/08	06/16/08	59	~1652	36	0.61
02/22/08	04/18/08	56	~1616	25	0.45
12/18/07	02/22/08	66	~1591	18	0.27
10/22/07	12/18/07	57	~1573	30	0.53
08/24/07	10/22/07	59	~1543	39	0.66
06/28/07	08/24/07	57	~1504	48	0.84
05/02/07	06/28/07	57	~1456	27	0.47
03/07/07	05/02/07	56	~1429	29	0.52
01/09/07	03/07/07	57	~1400	9	0.16
11/02/06	01/09/07	68	~1391	15	0.22
09/07/06	11/02/06	56	~1376	14	0.25

date	type	amount	balance
03/14/11	Sewer Maintenance Fee	14.48	47.56
03/14/11	Water Service Charge	11.38	33.08
03/14/11	Water Capital Improvement	1.38	21.70
03/14/11	Imported Water Fee 8@0.53	4.24	20.32
03/14/11	Water Tier 1 Use 8@2.01	16.08	16.08
03/14/11	BILLING	47.56	
03/01/11	PAYMENT	-70.17	0.00
02/26/11	Late Fee	20.70	70.17
01/14/11	Sewer Maintenance Fee	14.48	49.47
01/14/11	Water Service Charge	11.38	34.99
01/14/11	Water Capital Improvement	1.38	23.61
01/14/11	Imported Water Fee	4.14	22.23

	9@0.46		
01/14/11	Water Tier 1 Use	18.09	18.09
	9@2.01		
01/14/11	BILLING	49.47	
12/23/10	PAYMENT	-67.70	0.00
12/22/10	Late Fee	20.70	67.70
11/09/10	Sewer Maintenance Fee	14.48	47.00
11/09/10	Water Service Charge	11.38	32.52
11/09/10	Water Capital Improvement	1.38	21.14
11/09/10	Imported Water Fee	3.68	19.76
	8@0.46		
11/09/10	Water Tier 1 Use	16.08	16.08
	8@2.01		
11/09/10	BILLING	47.00	
10/26/10	PAYMENT	-56.88	0.00
09/14/10	Sewer Maintenance Fee	14.48	56.88
09/14/10	Water Service Charge	11.38	42.40
09/14/10	Water Capital Improvement	1.38	31.02
09/14/10	Imported Water Fee	5.52	29.64
	12@0.46		
09/14/10	Water Tier 1 Use	24.12	24.12
	12@2.01		
09/14/10	BILLING	56.88	
09/01/10	PAYMENT	-89.93	0.00
08/31/10	Late Fee	20.70	89.93
07/19/10	Sewer Maintenance Fee	14.48	69.23
07/19/10	Water Service Charge	11.38	54.75
07/19/10	Water Capital Improvement	1.38	43.37
07/19/10	Imported Water Fee	7.82	41.99
	17@0.46		
07/19/10	Water Tier 1 Use	34.17	34.17
	17@2.01		
07/19/10	BILLING	69.23	
07/01/10	PAYMENT	125.90	0.00
05/20/10	Sewer Maintenance Fee	13.66	125.90
05/20/10	Water Service Charge	10.84	112.24
05/20/10	Water Capital Improvement	1.38	101.40
05/20/10	Imported Water Fee	19.32	100.02
	42@0.46		
05/20/10	Water Tier 1 Use	68.76	80.70
	36@1.91		
05/20/10	Water Tier 2 Use	11.94	11.94
	6@1.99		
05/20/10	BILLING	125.90	
05/10/10	PAYMENT	-67.91	0.00
05/07/10	Late Fee	20.70	67.91
	Sewer Maintenance		

07/12/06	09/07/06	57	~1362	17	0.30
05/12/06	07/12/06	61	~1345	48	0.79
03/17/06	05/12/06	56	~1297	7	0.13
01/19/06	03/17/06	57	~1290	17	0.30
11/14/05	01/19/06	66	~1273	28	0.42
09/19/05	11/14/05	56	~1245	24	0.43
07/22/05	09/19/05	59	~1221	48	0.81
05/25/05	07/22/05	58	~1173	13	0.22

03/25/10	Fee	13.66	47.21
03/25/10	Water Service Charge	10.84	33.55
03/25/10	Water Capital Improvement	1.38	22.71
03/25/10	Imported Water Fee 9@0.46	4.14	21.33
03/25/10	Water Tier 1 Use 9@1.91	17.19	17.19
03/25/10	<u>BILLING</u>	47.21	
03/10/10	PAYMENT	-51.95	0.00
01/27/10	Sewer Maintenance Fee	13.66	51.95
01/27/10	Water Service Charge	10.84	38.29
01/27/10	Water Capital Improvement	1.38	27.45
01/27/10	Imported Water Fee 11@0.46	5.06	26.07
01/27/10	Water Tier 1 Use 11@1.91	21.01	21.01
01/27/10	<u>BILLING</u>	51.95	
01/15/10	PAYMENT	-64.02	0.00
01/14/10	Late Fee	20.70	64.02
11/20/09	Water Billing	26.12	43.32
11/20/09	Capital Improvement	1.38	17.20
11/20/09	Increased Cost	2.16	15.82
11/20/09	Sewer Billing	13.66	13.66
11/20/09	<u>BILLING</u>	43.32	
11/10/09	PAYMENT	-70.56	0.00
11/09/09	Late Penalty	20.70	70.56
09/24/09	Water Billing	31.85	49.86
09/24/09	Capital Improvement	1.38	18.01
09/24/09	Increased Cost	2.97	16.63
09/24/09	Sewer Billing	13.66	13.66
09/24/09	<u>BILLING</u>	49.86	
09/15/09	PAYMENT	-79.28	0.00
09/11/09	Late Penalty	20.70	79.28
07/29/09	Water Billing	39.49	58.58
07/29/09	Capital Improvement	1.38	19.09
07/29/09	Increased Cost	4.05	17.71
07/29/09	Sewer Billing	13.66	13.66
07/29/09	<u>BILLING</u>	58.58	
07/21/09	PAYMENT	-85.56	0.00
07/17/09	Late Penalty	20.70	85.56
06/03/09	Water Billing	43.90	64.86
06/03/09	Capital Improvement	1.38	20.96
06/03/09	increased Cost	5.13	19.58
06/03/09	Sewer Billing	14.45	14.45
06/03/09	<u>BILLING</u>	64.86	
05/26/09	PAYMENT	-63.01	0.00
05/21/09	Late Penalty	20.70	63.01
04/07/09	Water Billing	24.32	42.31
04/07/09	Capital Improvement	1.38	17.99
04/07/09	Increased Cost	2.16	16.61

04/07/09	Sewer Billing	14.45	14.45
04/07/09	BILLING	42.31	
04/01/09	PAYMENT	-60.96	0.00
03/30/09	Late Penalty	20.70	60.96
02/09/09	Water Billing	22.54	40.26
02/09/09	Capital Improvement	1.38	17.72
02/09/09	Increased Cost	1.89	16.34
02/09/09	Sewer Billing	14.45	14.45
02/09/09	BILLING	40.26	
01/22/09	PAYMENT	-79.41	0.00
01/20/09	Late Penalty	20.70	79.41
12/04/08	Water Billing	38.56	58.71
12/04/08	Capital Improvement	1.38	20.15
12/04/08	Increased Cost	4.32	18.77
12/04/08	Sewer Billing	14.45	14.45
12/04/08	BILLING	58.71	
11/26/08	PAYMENT	-	0.00
		133.13	
11/21/08	Late Penalty	20.70	133.13
10/08/08	Water Billing	85.26	112.43
10/08/08	Capital Improvement	1.38	27.17
10/08/08	Increased Cost	11.34	25.79
10/08/08	Sewer Billing	14.45	14.45
10/08/08	BILLING	112.43	
09/30/08	PAYMENT	-	0.00
		169.17	
09/26/08	Late Penalty	20.70	169.17
08/12/08	Water Billing	116.71	148.47
08/12/08	Capital Improvement	1.38	31.76
08/12/08	Increased Cost	15.93	30.38
08/12/08	Sewer Billing	14.45	14.45
08/12/08	BILLING	148.47	
08/04/08	PAYMENT	-	0.00
		106.05	
07/31/08	Late Penalty	20.70	106.05
06/16/08	Water Billing	61.68	85.35
06/16/08	Capital Improvement	1.38	23.67
06/16/08	Increased Cost	9.72	22.29
06/16/08	Sewer Billing	12.57	12.57
06/16/08	BILLING	85.35	
06/06/08	PAYMENT	-86.80	0.00
06/04/08	Late Penalty	20.70	86.80
04/18/08	Water Billing	45.40	66.10
04/18/08	Capital Improvement	1.38	20.70
04/18/08	Increased Cost	6.75	19.32
04/18/08	Sewer Billing	12.57	12.57
04/18/08	BILLING	66.10	
04/11/08	PAYMENT	-74.55	0.00
04/09/08	Late Penalty	20.70	74.55
02/22/08	Water Billing	35.04	53.85
02/22/08	Capital Improvement	1.38	18.81
02/22/08	Increased Cost	4.86	17.43
02/22/08	Sewer Billing	12.57	12.57

02/22/08	BILLING	53.85	
02/04/08	PAYMENT	-95.55	0.00
01/31/08	Late Penalty	20.70	95.55
12/18/07	Water Billing	52.80	74.85
12/18/07	Capital Improvement	1.38	22.05
12/18/07	Increased Cost	8.10	20.67
12/18/07	Sewer Billing	12.57	12.57
12/18/07	BILLING	74.85	
12/10/07	PAYMENT	-	0.00
		111.48	
12/05/07	Late Penalty	20.70	111.48
10/22/07	Water Billing	66.30	90.78
10/22/07	Capital Improvement	1.38	24.48
10/22/07	Increased Cost	10.53	23.10
10/22/07	Sewer Billing	12.57	12.57
10/22/07	BILLING	90.78	
10/16/07	PAYMENT	-	0.00
		127.77	
10/10/07	Late Penalty	20.70	127.77
08/24/07	Water Billing	80.16	107.07
08/24/07	Capital Improvement	1.38	26.91
08/24/07	Increased Cost	12.96	25.53
08/24/07	Sewer Billing	12.57	12.57
08/24/07	BILLING	107.07	
08/15/07	PAYMENT	-79.55	0.00
08/13/07	Late Penalty	20.70	79.55
06/28/07	Water Billing	34.62	58.85
06/28/07	Capital Improvement	1.38	24.23
06/28/07	Increased Cost	7.29	22.85
06/28/07	Sewer Billing	15.56	15.56
06/28/07	BILLING	58.85	
06/19/07	PAYMENT	-82.21	0.00
06/15/07	Late Penalty	20.70	82.21
05/02/07	Water Billing	36.74	61.51
05/02/07	Capital Improvement	1.38	24.77
05/02/07	Increased Cost	7.83	23.39
05/02/07	Sewer Billing	15.56	15.56
05/02/07	BILLING	61.51	
04/24/07	PAYMENT	-55.61	0.00
04/20/07	Late Penalty	20.70	55.61
03/07/07	Water Billing	15.54	34.91
03/07/07	Capital Improvement	1.38	19.37
03/07/07	Increased Cost	2.43	17.99
03/07/07	Sewer Billing	15.56	15.56
03/07/07	BILLING	34.91	
02/26/07	PAYMENT	-63.59	0.00
02/22/07	Late Penalty	20.70	63.59
01/09/07	Water Billing	21.90	42.89
01/09/07	Capital Improvement	1.38	20.99
01/09/07	Increased Cost	4.05	19.61
01/09/07	Sewer Billing	15.56	15.56
01/09/07	BILLING	42.89	

12/20/06	PAYMENT	-62.26	0.00
12/18/06	Late Penalty	20.70	62.26
11/02/06	Water Billing	20.84	41.56
11/02/06	Capital Improvement	1.38	20.72
11/02/06	Increased Cost	3.78	19.34
11/02/06	Sewer Billing	15.56	15.56
11/02/06	<u>BILLING</u>	41.56	
10/24/06	PAYMENT	-66.25	0.00
10/23/06	Late Penalty	20.70	66.25
09/07/06	Water Billing	24.02	45.55
09/07/06	Capital Improvement	1.38	21.53
09/07/06	Increased Cost	4.59	20.15
09/07/06	Sewer Billing	15.56	15.56
09/07/06	<u>BILLING</u>	45.55	
08/29/06	PAYMENT	-	0.00
08/25/06	Late Penalty	20.70	107.96
07/12/06	Water Billing	57.36	87.26
07/12/06	Capital Improvement	1.38	29.90
07/12/06	Increased Cost	12.96	28.52
07/12/06	Sewer Billing	15.56	15.56
07/12/06	<u>BILLING</u>	87.26	
06/30/06	PAYMENT	-39.35	0.00
06/28/06	Late Penalty	10.00	39.35
05/12/06	Water Billing	13.42	29.35
05/12/06	Capital Improvement	1.38	15.93
05/12/06	Increased Cost	1.75	14.55
05/12/06	Sewer Billing	12.80	12.80
05/12/06	<u>BILLING</u>	29.35	
05/05/06	PAYMENT	-52.45	0.00
05/03/06	Late Penalty	10.00	52.45
03/17/06	Water Billing	24.02	42.45
03/17/06	Capital Improvement	1.38	18.43
03/17/06	Increased Cost	4.25	17.05
03/17/06	Sewer Billing	12.80	12.80
03/17/06	<u>BILLING</u>	42.45	
03/08/06	PAYMENT	-66.86	0.00
03/06/06	Late Penalty	10.00	66.86
01/19/06	Water Billing	35.68	56.86
01/19/06	Capital Improvement	1.38	21.18
01/19/06	Increased Cost	7.00	19.80
01/19/06	Sewer Billing	12.80	12.80
01/19/06	<u>BILLING</u>	56.86	
01/09/06	PAYMENT	-58.10	0.00
01/04/06	Late Penalty	10.00	58.10
11/14/05	Water Billing	31.44	48.10
11/14/05	Capital Improvement	1.38	16.66
11/14/05	Increased Cost	6.00	15.28
11/14/05	Sewer Billing	9.28	9.28
11/14/05	<u>BILLING</u>	48.10	
11/07/05	PAYMENT	-90.02	0.00
11/03/05	Late Penalty	10.00	90.02

09/19/05	Water Billing	57.36	80.02
09/19/05	Capital Improvement	1.38	22.66
09/19/05	Increased Cost	12.00	21.28
09/19/05	Sewer Billing	9.28	9.28
09/19/05	<u>BILLING</u>	80.02	
09/09/05	PAYMENT	-43.69	0.00
09/07/05	Late Penalty	10.00	43.69
07/22/05	Water Billing	19.78	33.69
07/22/05	Capital Improvement	1.38	13.91
07/22/05	Increased Cost	3.25	12.53
07/22/05	Sewer Billing	9.28	9.28
07/22/05	<u>BILLING</u>	33.69	
07/15/05	After Hours Charge	50.00	0.00
07/14/05	PAYMENT	-91.54	-50.00
07/11/05	Late Penalty	10.00	41.54
05/25/05	Water Billing	18.72	31.54
05/25/05	Capital Improvement	1.38	12.82
05/25/05	Increased Cost	2.16	11.44
05/25/05	Sewer Billing	9.28	9.28
05/25/05	<u>BILLING</u>	31.54	
05/16/05	PAYMENT	-24.64	0.00
03/30/05	Water Billing	15.54	24.64
03/30/05	Capital Improvement	1.38	9.10
03/30/05	Increased Cost	1.44	7.72
03/30/05	Pre-paid Sewer Billing Cost	3.00	6.28
03/30/05	Sewer Billing	6.28	3.28
03/30/05	<u>BILLING</u>	27.64	
03/22/05	PAYMENT	-85.64	-3.00
03/21/05	PAYMENT	100.00	82.64
03/17/05	Late Penalty	10.00	182.64
02/01/05	Water Billing	133.26	172.64
02/01/05	Capital Improvement	1.38	39.38
02/01/05	Increased Cost	18.72	38.00
02/01/05	Sewer Billing	9.28	19.28
02/01/05	<u>BILLING</u>	162.64	
01/24/05	PAYMENT	-64.36	10.00
01/19/05	Late Penalty	10.00	74.36
11/29/04	Water Billing	47.46	64.36
11/29/04	Capital Improvement	1.38	16.90
11/29/04	Increased Cost	6.24	15.52
11/29/04	Sewer Billing	9.28	9.28
11/29/04	<u>BILLING</u>	64.36	
11/19/04	PAYMENT	-81.92	0.00
11/17/04	Late Penalty	10.00	81.92
10/01/04	Water Billing	54.06	71.92
10/01/04	Capital Improvement	1.38	17.86
10/01/04	Increased Cost	7.20	16.48
10/01/04	Sewer Billing	9.28	9.28
10/01/04	<u>BILLING</u>	71.92	
09/24/04	PAYMENT	109.64	0.00

09/22/04	Late Penalty	10.00	109.64
08/05/04	Water Billing	78.26	99.64
08/05/04	Capital Improvement	1.38	21.38
08/05/04	Increased Cost	10.72	20.00
08/05/04	Sewer Billing	9.28	9.28
08/05/04	<u>BILLING</u>	99.64	
07/29/04	PAYMENT	-86.22	0.00
07/26/04	Late Penalty	10.00	86.22
06/10/04	Water Billing	59.56	76.22
06/10/04	Capital Improvement	1.38	16.66
06/10/04	Increased Cost	6.00	15.28
06/10/04	Sewer Billing	9.28	9.28
06/10/04	<u>BILLING</u>	76.22	
06/03/04	PAYMENT	-51.44	0.00
06/01/04	Late Penalty	10.00	51.44
04/14/04	Water Billing	28.26	41.44
04/14/04	Capital Improvement	1.38	13.18
04/14/04	Increased Cost	2.52	11.80
04/14/04	Sewer Billing	9.28	9.28
04/14/04	<u>BILLING</u>	41.44	
04/09/04	PAYMENT	-49.70	0.00
04/07/04	Late Penalty	10.00	49.70
02/18/04	Water Billing	35.68	39.70
02/18/04	Capital Improvement	1.38	4.02
02/18/04	Increased Cost	3.36	2.64
02/18/04	Pre-paid Sewer Billing Cost	9.28	-0.72
02/18/04	<u>BILLING</u>	49.70	
01/22/04	PAYMENT	-47.90	-10.00
12/15/03	Water Billing	25.08	37.90
12/15/03	Capital Improvement	1.38	12.82
12/15/03	Increased Cost	2.16	11.44
12/15/03	Sewer Billing	9.28	9.28
12/15/03	<u>BILLING</u>	37.90	
12/05/03	PAYMENT	-60.88	0.00
12/03/03	Late Penalty	10.00	60.88
10/17/03	Water Billing	36.74	50.88
10/17/03	Capital Improvement	1.38	14.14
10/17/03	Increased Cost	3.48	12.76
10/17/03	Sewer Billing	9.28	9.28
10/17/03	<u>BILLING</u>	50.88	
10/09/03	PAYMENT	-57.06	0.00
10/06/03	Late Penalty	10.00	57.06
08/21/03	Water Billing	35.68	47.06
08/21/03	Capital Improvement	1.38	11.38
08/21/03	Increased Cost	3.36	10.00
08/21/03	Sewer Billing	6.64	6.64
08/21/03	<u>BILLING</u>	47.06	
08/14/03	PAYMENT	-41.46	0.00
08/12/03	Late Penalty	10.00	41.46
06/25/03	Water Billing	22.96	31.46
06/25/03	Capital Improvement	1.38	8.50

06/25/03	Increased Cost	0.48	7.12
06/25/03	Sewer Billing	6.64	6.64
06/25/03	<u>BILLING</u>	31.46	
06/17/03	PAYMENT	-36.01	0.00
06/12/03	Late Penalty	10.00	36.01
04/29/03	Water Billing	17.66	26.01
04/29/03	Capital Improvement	1.38	8.35
04/29/03	Increased Cost	0.33	6.97
04/29/03	Sewer Billing	6.64	6.64
04/29/03	<u>BILLING</u>	26.01	
04/22/03	PAYMENT	-48.00	0.00
04/17/03	Late Penalty	10.00	48.00
03/04/03	Water Billing	29.32	38.00
03/04/03	Capital Improvement	1.38	8.68
03/04/03	Increased Cost	0.66	7.30
03/04/03	Sewer Billing	6.64	6.64
03/04/03	<u>BILLING</u>	38.00	
02/25/03	PAYMENT	-25.93	0.00
02/20/03	Late Penalty	10.00	25.93
01/06/03	Water Billing	17.66	15.93
01/06/03	Capital Improvement	1.38	-1.73
01/06/03	Increased Cost	0.33	-3.11
01/06/03	Pre-paid Sewer Billing Cost	6.64	-3.44
01/06/03	<u>BILLING</u>	26.01	
12/10/02	PAYMENT	-34.73	-10.08
10/31/02	Water Billing	16.60	24.65
10/31/02	Capital Improvement	1.38	8.05
10/31/02	Increased Cost	0.30	6.67
10/31/02	Pre-paid Sewer Billing Cost	0.27	6.37
10/31/02	Sewer Billing	6.37	6.10
10/31/02	<u>BILLING</u>	24.92	
10/24/02	PAYMENT	-45.00	-0.27
10/21/02	Late Penalty	10.00	44.73
09/05/02	Water Billing	26.14	34.73
09/05/02	Capital Improvement	1.38	8.59
09/05/02	Increased Cost	0.57	7.21
09/05/02	Sewer Billing	6.64	6.64
09/05/02	<u>BILLING</u>	34.73	
09/03/02	PAYMENT	-54.54	0.00
08/28/02	Late Penalty	10.00	54.54
07/11/02	Water Billing	35.68	44.54
07/11/02	Capital Improvement	1.38	8.86
07/11/02	Increased Cost	0.84	7.48
07/11/02	Sewer Billing	6.64	6.64
07/11/02	<u>BILLING</u>	44.54	
06/27/02	PAYMENT	-26.74	0.00
05/16/02	Water Billing	18.72	26.74
05/16/02	Capital Improvement	1.38	8.02
05/16/02	Sewer Billing	6.64	6.64
05/16/02	<u>BILLING</u>	26.74	

04/24/02	PAYMENT	-23.56	0.00
03/21/02	Water Billing	15.54	23.56
03/21/02	Capital Improvement	1.38	8.02
03/21/02	Sewer Billing	6.64	6.64
03/21/02	<u>BILLING</u>	23.56	
02/26/02	PAYMENT	-29.92	0.00
01/24/02	Water Billing	21.90	29.92
01/24/02	Capital Improvement	1.38	8.02
01/24/02	Sewer Billing	6.64	6.64
01/24/02	<u>BILLING</u>	29.92	
01/10/02	PAYMENT	-37.80	0.00
01/08/02	Late Penalty	10.00	37.80
11/19/01	Water Billing	19.78	27.80
11/19/01	Capital Improvement	1.38	8.02
11/19/01	Sewer Billing	6.64	6.64
11/19/01	<u>BILLING</u>	27.80	
11/05/01	PAYMENT	-26.74	0.00
09/24/01	Water Billing	18.72	26.74
09/24/01	Capital Improvement	1.38	8.02
09/24/01	Sewer Billing	6.64	6.64
09/24/01	<u>BILLING</u>	26.74	
09/10/01	PAYMENT	-26.37	0.00
07/27/01	Water Billing	16.53	26.37
07/27/01	Capital Improvement	1.38	9.84
07/27/01	Increased Cost	1.82	8.46
07/27/01	Sewer Billing	6.64	6.64
07/27/01	<u>BILLING</u>	26.37	
06/19/01	PAYMENT	-23.52	0.00
05/31/01	Water Billing	14.10	23.52
05/31/01	Capital Improvement	1.38	9.42
05/31/01	Increased Cost	1.40	8.04
05/31/01	Sewer Billing	6.64	6.64
05/31/01	<u>BILLING</u>	23.52	
04/16/01	PAYMENT	-23.52	0.00
04/04/01	Water Billing	14.10	23.52
04/04/01	Capital Improvement	1.38	9.42
04/04/01	Increased Cost	1.40	8.04
04/04/01	Sewer Billing	6.64	6.64
04/04/01	<u>BILLING</u>	23.52	
03/21/01	PAYMENT	-28.27	0.00
02/06/01	Water Billing	18.15	28.27
02/06/01	Capital Improvement	1.38	10.12
02/06/01	Increased Cost	2.10	8.74
02/06/01	Sewer Billing	6.64	6.64
02/06/01	<u>BILLING</u>	28.27	
01/17/01	PAYMENT	-40.17	0.00
01/15/01	Late Penalty	10.00	40.17
12/01/00	Water Billing	19.77	30.17
12/01/00	Capital Improvement	1.38	10.40
12/01/00	Increased Cost	2.38	9.02
12/01/00	Sewer Billing	6.64	6.64
12/01/00	<u>BILLING</u>	30.17	

11/15/00	PAYMENT	-26.37	0.00
10/03/00	Water Billing	16.53	26.37
10/03/00	Capital Improvement	1.38	9.84
10/03/00	Increased Cost	1.82	8.46
10/03/00	Sewer Billing	6.64	6.64
10/03/00	<u>BILLING</u>	26.37	
08/17/00	PAYMENT	-27.32	0.00
08/08/00	Water Billing	17.34	27.32
08/08/00	Capital Improvement	1.38	9.98
08/08/00	Increased Cost	1.96	8.60
08/08/00	Sewer Billing	6.64	6.64
08/08/00	<u>BILLING</u>	27.32	
07/20/00	PAYMENT	-29.98	0.00
06/12/00	Water Billing	19.77	29.98
06/12/00	Capital Improvement	1.38	10.21
06/12/00	Increased Cost	2.19	8.83
06/12/00	Sewer Billing	6.64	6.64
06/12/00	<u>BILLING</u>	29.98	
05/01/00	PAYMENT	-28.10	0.00
04/14/00	Water Billing	18.15	28.10
04/14/00	Capital Improvement	1.38	9.95
04/14/00	Increased Cost	1.93	8.57
04/14/00	Sewer Billing	6.64	6.64
04/14/00	<u>BILLING</u>	28.10	
04/10/00	PAYMENT	-39.04	0.00
04/06/00	Late Penalty	10.00	39.04
02/18/00	Water Billing	18.96	29.04
02/18/00	Capital Improvement	1.38	10.08
02/18/00	Increased Cost	2.06	8.70
02/18/00	Sewer Billing	6.64	6.64
02/18/00	<u>BILLING</u>	29.04	
01/24/00	PAYMENT	-27.16	0.00
12/16/99	Water Billing	17.34	27.16
12/16/99	Capital Improvement	1.38	9.82
12/16/99	Increased Cost	1.80	8.44
12/16/99	Sewer Billing	6.64	6.64
12/16/99	<u>BILLING</u>	27.16	
12/06/99	PAYMENT	-41.86	0.00
12/02/99	Late Penalty	10.00	41.86
10/19/99	Water Billing	21.39	31.86
10/19/99	Capital Improvement	1.38	10.47
10/19/99	Increased Cost	2.45	9.09
10/19/99	Sewer Billing	6.64	6.64
10/19/99	<u>BILLING</u>	31.86	
10/11/99	PAYMENT	-35.22	0.00
10/07/99	Late Penalty	10.00	35.22
08/23/99	Water Billing	21.39	25.22
08/23/99	Capital Improvement	1.38	3.83
08/23/99	Increased Cost	2.45	2.45
08/23/99	<u>BILLING</u>	25.22	
08/10/99	PAYMENT	-13.49	0.00
06/28/99	Water Billing	18.96	13.49

06/28/99	Capital Improvement	1.38	-5.47
06/28/99	Increased Cost	1.58	-6.85
06/28/99	<u>BILLING</u>	21.92	
06/14/99	PAYMENT	-30.00	-8.43
04/30/99	Water Billing	18.96	21.57
04/30/99	Capital Improvement	1.38	2.61
04/30/99	Increased Cost	1.58	1.23
04/30/99	<u>BILLING</u>	21.92	
04/13/99	Starting Balance	24.65	-0.35
04/13/99	PAYMENT	-25.00	

[Back](#)



Water Billing System

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Customer

Name: **MONTES, C JULIO (373147061)**
 Address: 12571 TWINTREE LN, GARDEN GROVE, CA 92840
 Email: DL: A8303835
 Phones: 740-2582 HM 520-0200 WK

Credit Issues:

billing date	issue	billing date	issue
12/22/2010	LATE	07/29/2009	LATE
08/31/2010	LATE	06/03/2009	LATE
07/02/2010	LATE	04/07/2009	LATE
		10/08/2008	LATE

Account

balance: **\$139.20** , due by: **04/25/2011**
 status: 2 , 03/24/1997 to current , Renter

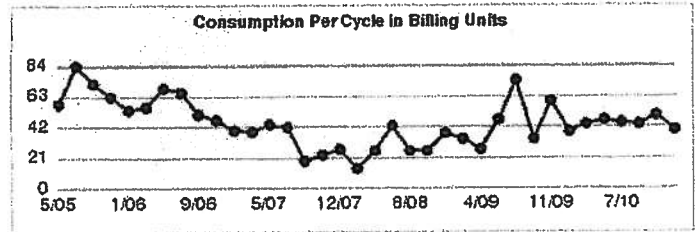
Remarks: [add remark](#) | [edit remarks](#)

G/C MTR LK REPLACD WASHERS LK ON CITY SIDE 07/08/08 RP

date	type	amount	balance
03/14/11	Sewer Maintenance Fee	24.52	139.20
03/14/11	Water Service Charge	11.38	114.68
03/14/11	Water Capital Improvement	1.38	103.30
03/14/11	Imported Water Fee 40@0.53	21.20	101.92
03/14/11	Water Tier 1 Use 36@2.01	72.36	80.72
03/14/11	Water Tier 2 Use 4@2.09	8.36	8.36
03/14/11	BILLING	139.20	
02/25/11	PAYMENT	161.90	0.00
01/14/11	Sewer Maintenance Fee	24.52	161.90
01/14/11	Water Service Charge	11.38	137.38
01/14/11	Water Capital Improvement	1.38	126.00
01/14/11	Imported Water Fee 50@0.46	23.00	124.62
01/14/11	Water Tier 1 Use 36@2.01	72.36	101.62
01/14/11	Water Tier 2 Use 14@2.09	29.26	29.26
01/14/11	BILLING	161.90	
12/23/10	PAYMENT	167.30	0.00

Service

Estimated Next Read: 05/06/2011
 Service at: **12571 TWINTREE LN** Map Loc: 22
 Service id: 37314706 Housing units: 1
 Current read: 4275 Service type: single family home
 Rate type: Metered Meter size: 5/8"x3/4"
 Meter serial: 53461661 Meter installed: 05/01/1999
 Meter remarks: None.



Base Cons:

year	cons
2010	27
2009	14
2008	19
2007	40
2006	54
2005	52

[adjust](#) | [new](#)

Consumption Summary:

start	end	days	read	units	avg/per day
01/10/11	03/09/11	58	4275	40	0.69
11/03/10	01/10/11	68	4235	50	0.74
09/09/10	11/03/10	55	4185	44	0.80
07/15/10	09/09/10	56	4141	45	0.80
05/18/10	07/15/10	58	4096	47	0.81
03/23/10	05/18/10	56	4049	44	0.79
01/26/10	03/23/10	56	4005	39	0.70
11/20/09	01/26/10	67	3966	60	0.90
09/24/09	11/20/09	57	~3906	34	0.60
07/29/09	09/24/09	57	~3872	74	1.30
06/03/09	07/29/09	56	~3798	47	0.84
04/07/09	06/03/09	57	~3751	27	0.47
02/09/09	04/07/09	57	~3724	34	0.60
12/04/08	02/09/09	67	~3690	38	0.57
10/08/08	12/04/08	57	~3652	26	0.46
08/12/08	10/08/08	57	~3626	26	0.46
06/16/08	08/12/08	57	~3600	43	0.75
04/18/08	06/16/08	59	~3557	26	0.44
02/22/08	04/18/08	56	~3531	14	0.25
12/18/07	02/22/08	66	~3517	27	0.41
10/22/07	12/18/07	57	~3490	23	0.40
08/24/07	10/22/07	59	~3467	19	0.32
06/28/07	08/24/07	57	~3448	42	0.74
05/02/07	06/28/07	57	~3406	44	0.77
03/07/07	05/02/07	56	~3362	39	0.70
01/09/07	03/07/07	57	~3323	40	0.70
11/02/06	01/09/07	68	~3283	47	0.69
09/07/06	11/02/06	56	~3236	51	0.91

12/22/10	Late Fee	20.70	167.30
11/09/10	Sewer Maintenance Fee	24.52	146.60
11/09/10	Water Service Charge	11.38	122.08
11/09/10	Water Capital Improvement	1.38	110.70
11/09/10	Imported Water Fee 44@0.46	20.24	109.32
11/09/10	Water Tier 1 Use 36@2.01	72.36	89.08
11/09/10	Water Tier 2 Use 8@2.09	16.72	16.72
11/09/10	<u>BILLING</u>	146.60	
10/22/10	PAYMENT	149.15	0.00
09/14/10	Sewer Maintenance Fee	24.52	149.15
09/14/10	Water Service Charge	11.38	124.63
09/14/10	Water Capital Improvement	1.38	113.25
09/14/10	Imported Water Fee 45@0.46	20.70	111.87
09/14/10	Water Tier 1 Use 36@2.01	72.36	91.17
09/14/10	Water Tier 2 Use 9@2.09	18.81	18.81
09/14/10	<u>BILLING</u>	149.15	
09/01/10	PAYMENT	174.95	0.00
08/31/10	Late Fee	20.70	174.95
07/19/10	Sewer Maintenance Fee	24.52	154.25
07/19/10	Water Service Charge	11.38	129.73
07/19/10	Water Capital Improvement	1.38	118.35
07/19/10	Imported Water Fee 47@0.46	21.62	116.97
07/19/10	Water Tier 1 Use 36@2.01	72.36	95.35
07/19/10	Water Tier 2 Use 11@2.09	22.99	22.99
07/19/10	<u>BILLING</u>	154.25	
07/06/10	PAYMENT	157.38	0.00
07/02/10	Late Fee	20.70	157.38
05/20/10	Sewer Maintenance Fee	19.54	136.68
05/20/10	Water Service Charge	10.84	117.14
05/20/10	Water Capital Improvement	1.38	106.30
05/20/10	Imported Water Fee 44@0.46	20.24	104.92
05/20/10	Water Tier 1 Use 36@1.91	68.76	84.68
05/20/10	Water Tier 2 Use 8@1.99	15.92	15.92

07/12/06	09/07/06	57	~3185	66	1.16
05/12/06	07/12/06	61	~3119	69	1.13
03/17/06	05/12/06	56	~3050	56	1.00
01/19/06	03/17/06	57	~2994	54	0.95
11/14/05	01/19/06	66	~2940	63	0.95
09/19/05	11/14/05	56	~2877	72	1.29
07/22/05	09/19/05	59	~2805	84	1.42
05/25/05	07/22/05	58	~2721	58	1.00

05/20/10	<u>BILLING</u>	136.68	
05/06/10	PAYMENT	124.43	0.00
03/25/10	Sewer Maintenance Fee	19.54	124.43
03/25/10	Water Service Charge	10.84	104.89
03/25/10	Water Capital Improvement	1.38	94.05
03/25/10	Imported Water Fee 39@0.46	17.94	92.67
03/25/10	Water Tier 1 Use 36@1.91	68.76	74.73
03/25/10	Water Tier 2 Use 3@1.99	5.97	5.97
03/25/10	<u>BILLING</u>	124.43	
03/08/10	PAYMENT	175.88	0.00
01/27/10	Sewer Maintenance Fee	19.54	175.88
01/27/10	Water Service Charge	10.84	156.34
01/27/10	Water Capital Improvement	1.38	145.50
01/27/10	Imported Water Fee 60@0.46	27.60	144.12
01/27/10	Water Tier 1 Use 36@1.91	68.76	116.52
01/27/10	Water Tier 2 Use 24@1.99	47.76	47.76
01/27/10	<u>BILLING</u>	175.88	
12/02/09	PAYMENT	105.88	0.00
11/20/09	Water Billing	75.78	105.88
11/20/09	Capital Improvement	1.38	30.10
11/20/09	Increased Cost	9.18	28.72
11/20/09	Sewer Billing	19.54	19.54
11/20/09	<u>BILLING</u>	105.88	
10/21/09	PAYMENT	196.12	0.00
09/24/09	Water Billing	155.22	196.12
09/24/09	Capital Improvement	1.38	40.90
09/24/09	Increased Cost	19.98	39.52
09/24/09	Sewer Billing	19.54	19.54
09/24/09	<u>BILLING</u>	196.12	
09/14/09	PAYMENT	155.80	0.00
09/11/09	Late Penalty	20.70	155.80
07/29/09	Water Billing	101.49	135.10
07/29/09	Capital Improvement	1.38	33.61
07/29/09	Increased Cost	12.69	32.23
07/29/09	Sewer Billing	19.54	19.54
07/29/09	<u>BILLING</u>	135.10	
07/21/09	PAYMENT	109.86	0.00
07/17/09	Late Penalty	20.70	109.86
06/03/09	Water Billing	58.14	89.16

06/03/09	Capital Improvement	1.38	31.02
06/03/09	Increased Cost	7.29	29.64
06/03/09	Sewer Billing	22.35	22.35
06/03/09	<u>BILLING</u>	89.16	
05/26/09	PAYMENT	-	0.00
		124.21	
05/21/09	Late Penalty	20.70	124.21
04/07/09	Water Billing	70.60	103.51
04/07/09	Capital Improvement	1.38	32.91
04/07/09	Increased Cost	9.18	31.53
04/07/09	Sewer Billing	22.35	22.35
04/07/09	<u>BILLING</u>	103.51	
03/03/09	PAYMENT	-	0.00
		111.85	
02/09/09	Water Billing	77.86	111.85
02/09/09	Capital Improvement	1.38	33.99
02/09/09	Increased Cost	10.26	32.61
02/09/09	Sewer Billing	22.35	22.35
02/09/09	<u>BILLING</u>	111.85	
01/06/09	PAYMENT	-87.11	0.00
12/04/08	Water Billing	56.36	87.11
12/04/08	Capital Improvement	1.38	30.75
12/04/08	Increased Cost	7.02	29.37
12/04/08	Sewer Billing	22.35	22.35
12/04/08	<u>BILLING</u>	87.11	
11/25/08	PAYMENT	-	0.00
		107.81	
11/21/08	Late Penalty	20.70	107.81
10/08/08	Water Billing	56.36	87.11
10/08/08	Capital Improvement	1.38	30.75
10/08/08	Increased Cost	7.02	29.37
10/08/08	Sewer Billing	22.35	22.35
10/08/08	<u>BILLING</u>	87.11	
09/10/08	PAYMENT	-	0.00
		122.45	
08/12/08	Water Billing	87.11	122.45
08/12/08	Capital Improvement	1.38	35.34
08/12/08	Increased Cost	11.61	33.96
08/12/08	Sewer Billing	22.35	22.35
08/12/08	<u>BILLING</u>	122.45	
07/23/08	PAYMENT	-77.86	0.00
06/16/08	Water Billing	46.88	77.86
06/16/08	Capital Improvement	1.38	30.98
06/16/08	Increased Cost	7.02	29.60
06/16/08	Sewer Billing	22.58	22.58
06/16/08	<u>BILLING</u>	77.86	
05/27/08	PAYMENT	-56.86	0.00
04/18/08	Water Billing	29.12	56.86
04/18/08	Capital Improvement	1.38	27.74
04/18/08	Increased Cost	3.78	26.36
04/18/08	Sewer Billing	22.58	22.58
04/18/08	<u>BILLING</u>	56.86	
03/25/08	PAYMENT	-79.61	0.00

02/22/08	Water Billing	48.36	79.61
02/22/08	Capital Improvement	1.38	31.25
02/22/08	Increased Cost	7.29	29.87
02/22/08	Sewer Billing	22.58	22.58
02/22/08	<u>BILLING</u>	79.61	
02/01/08	PAYMENT	-99.62	0.00
01/31/08	Late Penalty	20.70	99.62
12/18/07	Water Billing	42.44	78.92
12/18/07	Capital Improvement	1.38	36.48
12/18/07	Increased Cost	6.21	35.10
12/18/07	Sewer Billing	22.58	28.89
12/18/07	<u>BILLING</u>	72.61	
12/10/07	PAYMENT	-80.00	6.31
12/05/07	Late Penalty	20.70	86.31
10/22/07	Water Billing	36.52	65.61
10/22/07	Capital Improvement	1.38	29.09
10/22/07	Increased Cost	5.13	27.71
10/22/07	Sewer Billing	22.58	22.58
10/22/07	<u>BILLING</u>	65.61	
10/01/07	PAYMENT	-	0.00
		106.22	
08/24/07	Water Billing	70.92	106.22
08/24/07	Capital Improvement	1.38	35.30
08/24/07	Increased Cost	11.34	33.92
08/24/07	Sewer Billing	22.58	22.58
08/24/07	<u>BILLING</u>	106.22	
07/23/07	PAYMENT	-87.62	0.00
06/28/07	Water Billing	52.96	87.62
06/28/07	Capital Improvement	1.38	34.66
06/28/07	Increased Cost	11.88	33.28
06/28/07	Sewer Billing	21.40	21.40
06/28/07	<u>BILLING</u>	87.62	
05/31/07	PAYMENT	-80.77	0.00
05/02/07	Water Billing	47.46	80.77
05/02/07	Capital Improvement	1.38	33.31
05/02/07	Increased Cost	10.53	31.93
05/02/07	Sewer Billing	21.40	21.40
05/02/07	<u>BILLING</u>	80.77	
04/05/07	PAYMENT	-82.14	0.00
03/07/07	Water Billing	48.56	82.14
03/07/07	Capital Improvement	1.38	33.58
03/07/07	Increased Cost	10.80	32.20
03/07/07	Sewer Billing	21.40	21.40
03/07/07	<u>BILLING</u>	82.14	
02/07/07	PAYMENT	-91.73	0.00
01/09/07	Water Billing	56.26	91.73
01/09/07	Capital Improvement	1.38	35.47
01/09/07	Increased Cost	12.69	34.09
01/09/07	Sewer Billing	21.40	21.40
01/09/07	<u>BILLING</u>	91.73	
11/27/06	PAYMENT	-97.21	0.00
11/02/06	Water Billing	60.66	97.21

11/02/06	Capital Improvement	1.38	36.55
11/02/06	Increased Cost	13.77	35.17
11/02/06	Sewer Billing	21.40	21.40
11/02/06	<u>BILLING</u>	97.21	
10/02/06	PAYMENT	-	0.00
		117.76	
09/07/06	Water Billing	77.16	117.76
09/07/06	Capital Improvement	1.38	40.60
09/07/06	Increased Cost	17.82	39.22
09/07/06	Sewer Billing	21.40	21.40
09/07/06	<u>BILLING</u>	117.76	
08/14/06	PAYMENT	-	0.00
		121.87	
07/12/06	Water Billing	80.46	121.87
07/12/06	Capital Improvement	1.38	41.41
07/12/06	Increased Cost	18.63	40.03
07/12/06	Sewer Billing	21.40	21.40
07/12/06	<u>BILLING</u>	121.87	
06/12/06	PAYMENT	-	0.00
		102.04	
05/12/06	Water Billing	66.16	102.04
05/12/06	Capital Improvement	1.38	35.88
05/12/06	Increased Cost	14.00	34.50
05/12/06	Sewer Billing	20.50	20.50
05/12/06	<u>BILLING</u>	102.04	
04/05/06	PAYMENT	-99.34	0.00
03/17/06	Water Billing	63.96	99.34
03/17/06	Capital Improvement	1.38	35.38
03/17/06	Increased Cost	13.50	34.00
03/17/06	Sewer Billing	20.50	20.50
03/17/06	<u>BILLING</u>	99.34	
02/14/06	PAYMENT	-	0.00
		111.49	
01/19/06	Water Billing	73.86	111.49
01/19/06	Capital Improvement	1.38	37.63
01/19/06	Increased Cost	15.75	36.25
01/19/06	Sewer Billing	20.50	20.50
01/19/06	<u>BILLING</u>	111.49	
12/13/05	PAYMENT	-	0.00
		112.42	
11/14/05	Water Billing	83.76	112.42
11/14/05	Capital Improvement	1.38	28.66
11/14/05	Increased Cost	18.00	27.28
11/14/05	Sewer Billing	9.28	9.28
11/14/05	<u>BILLING</u>	112.42	
10/11/05	PAYMENT	-	0.00
		128.62	
09/19/05	Water Billing	96.96	128.62
09/19/05	Capital Improvement	1.38	31.66
09/19/05	Increased Cost	21.00	30.28
09/19/05	Sewer Billing	9.28	9.28
09/19/05	<u>BILLING</u>	128.62	
08/09/05	PAYMENT	-93.52	0.00

07/22/05	Water Billing	68.36	93.52
07/22/05	Capital Improvement	1.38	25.16
07/22/05	Increased Cost	14.50	23.78
07/22/05	Sewer Billing	9.28	9.28
07/22/05	<u>BILLING</u>	93.52	
06/21/05	PAYMENT	-88.18	0.00
05/25/05	Water Billing	67.26	88.18
05/25/05	Capital Improvement	1.38	20.92
05/25/05	Increased Cost	10.26	19.54
05/25/05	Sewer Billing	9.28	9.28
05/25/05	<u>BILLING</u>	88.18	
05/02/05	PAYMENT	-89.56	0.00
03/30/05	Water Billing	69.46	89.56
03/30/05	Capital Improvement	1.38	20.10
03/30/05	Increased Cost	9.44	18.72
03/30/05	Sewer Billing	9.28	9.28
03/30/05	<u>BILLING</u>	89.56	
03/03/05	PAYMENT	-	0.00
		112.24	
02/01/05	Water Billing	89.26	112.24
02/01/05	Capital Improvement	1.38	22.98
02/01/05	Increased Cost	12.32	21.60
02/01/05	Sewer Billing	9.28	9.28
02/01/05	<u>BILLING</u>	112.24	
01/04/05	PAYMENT	-80.74	0.00
11/29/04	Water Billing	61.76	80.74
11/29/04	Capital Improvement	1.38	18.98
11/29/04	Increased Cost	8.32	17.60
11/29/04	Sewer Billing	9.28	9.28
11/29/04	<u>BILLING</u>	80.74	
11/05/04	PAYMENT	-	0.00
		109.72	
10/01/04	Water Billing	87.06	109.72
10/01/04	Capital Improvement	1.38	22.66
10/01/04	Increased Cost	12.00	21.28
10/01/04	Sewer Billing	9.28	9.28
10/01/04	<u>BILLING</u>	109.72	
09/13/04	PAYMENT	-	0.00
		109.72	
08/05/04	Water Billing	87.06	109.72
08/05/04	Capital Improvement	1.38	22.66
08/05/04	Increased Cost	12.00	21.28
08/05/04	Sewer Billing	9.28	9.28
08/05/04	<u>BILLING</u>	109.72	
07/12/04	PAYMENT	-	0.00
		118.92	
06/10/04	Water Billing	98.06	118.92
06/10/04	Capital Improvement	1.38	20.86
06/10/04	Increased Cost	10.20	19.48
06/10/04	Sewer Billing	9.28	9.28
06/10/04	<u>BILLING</u>	118.92	
05/11/04	PAYMENT	-93.30	0.00
04/14/04	Water Billing	74.96	93.30

04/14/04	Capital Improvement	1.38	18.34
04/14/04	Increased Cost	7.68	16.96
04/14/04	Sewer Billing	9.28	9.28
04/14/04	<u>BILLING</u>	93.30	
03/29/04	PAYMENT	-	0.00
		117.70	
02/18/04	Water Billing	96.96	117.70
02/18/04	Capital Improvement	1.38	20.74
02/18/04	Increased Cost	10.08	19.36
02/18/04	Sewer Billing	9.28	9.28
02/18/04	<u>BILLING</u>	117.70	
01/07/04	PAYMENT	-	0.00
		134.78	
12/15/03	Water Billing	112.36	134.78
12/15/03	Capital Improvement	1.38	22.42
12/15/03	Increased Cost	11.76	21.04
12/15/03	Sewer Billing	9.28	9.28
12/15/03	<u>BILLING</u>	134.78	
11/18/03	PAYMENT	-	0.00
		177.48	
10/17/03	Water Billing	150.86	177.48
10/17/03	Capital Improvement	1.38	26.62
10/17/03	Increased Cost	15.96	25.24
10/17/03	Sewer Billing	9.28	9.28
10/17/03	<u>BILLING</u>	177.48	
09/18/03	PAYMENT	-	0.00
		156.54	
08/21/03	Water Billing	134.36	156.54
08/21/03	Capital Improvement	1.38	22.18
08/21/03	Increased Cost	14.16	20.80
08/21/03	Sewer Billing	6.64	6.64
08/21/03	<u>BILLING</u>	156.54	
07/29/03	PAYMENT	-	0.00
		118.80	
06/25/03	Water Billing	107.96	118.80
06/25/03	Capital Improvement	1.38	10.84
06/25/03	Increased Cost	2.82	9.46
06/25/03	Sewer Billing	6.64	6.64
06/25/03	<u>BILLING</u>	118.80	
06/02/03	PAYMENT	-	0.00
		108.63	
04/29/03	Water Billing	98.06	108.63
04/29/03	Capital Improvement	1.38	10.57
04/29/03	Increased Cost	2.55	9.19
04/29/03	Sewer Billing	6.64	6.64
04/29/03	<u>BILLING</u>	108.63	
04/07/03	PAYMENT	-	0.00
		114.28	
03/04/03	Water Billing	103.56	114.28
03/04/03	Capital Improvement	1.38	10.72
03/04/03	Increased Cost	2.70	9.34
03/04/03	Sewer Billing	6.64	6.64
03/04/03	<u>BILLING</u>	114.28	

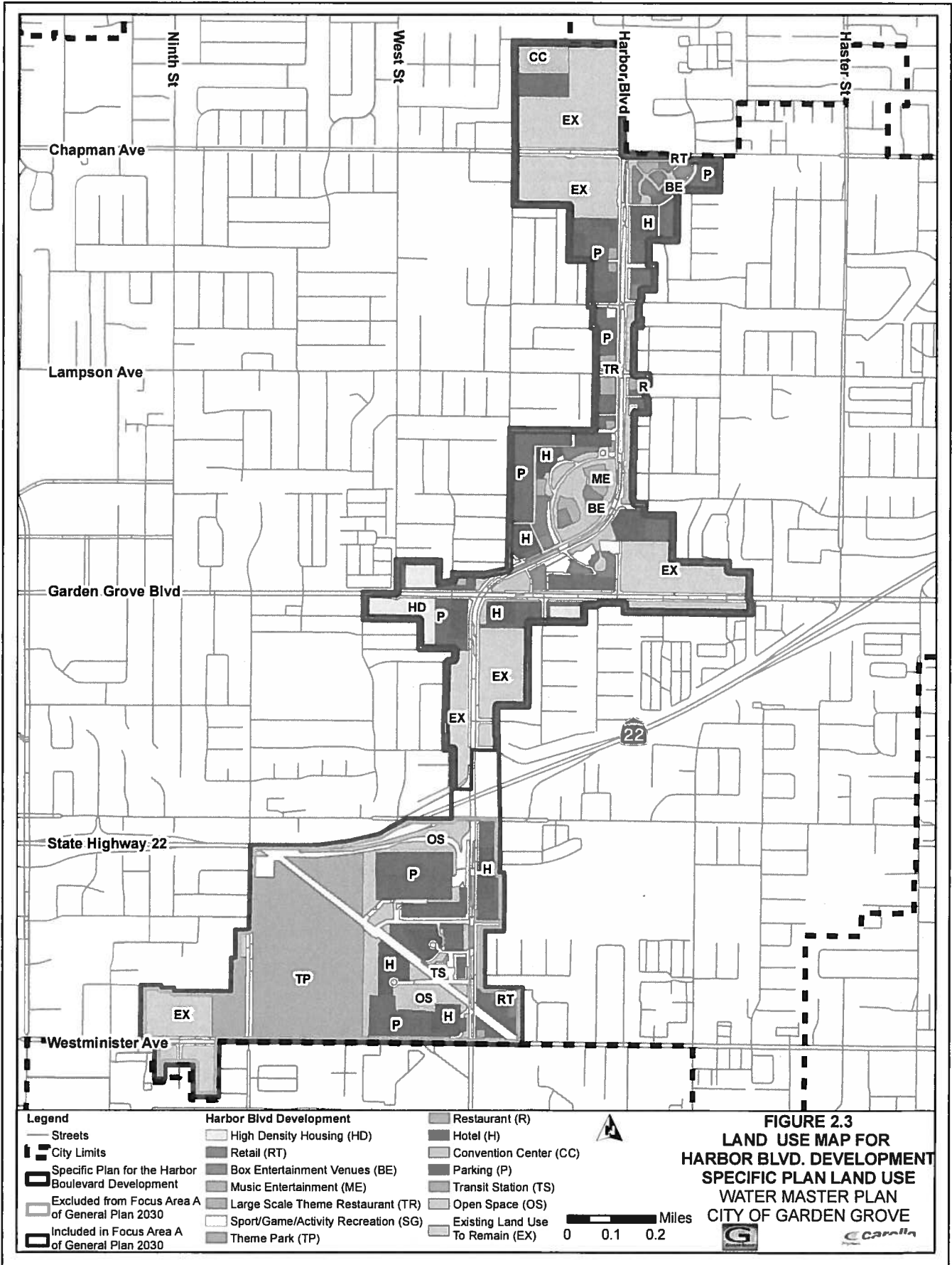
02/03/03	PAYMENT	-99.59	0.00
01/06/03	Water Billing	89.26	99.59
01/06/03	Capital Improvement	1.38	10.33
01/06/03	Increased Cost	2.31	8.95
01/06/03	Sewer Billing	6.64	6.64
01/06/03	<u>BILLING</u>	99.59	
11/25/02	PAYMENT	-98.46	0.00
10/31/02	Water Billing	88.16	98.46
10/31/02	Capital Improvement	1.38	10.30
10/31/02	Increased Cost	2.28	8.92
10/31/02	Sewer Billing	6.64	6.64
10/31/02	<u>BILLING</u>	98.46	
10/07/02	PAYMENT	-97.33	0.00
09/05/02	Water Billing	87.06	97.33
09/05/02	Capital Improvement	1.38	10.27
09/05/02	Increased Cost	2.25	8.89
09/05/02	Sewer Billing	6.64	6.64
09/05/02	<u>BILLING</u>	97.33	
08/22/02	PAYMENT	-99.59	0.00
07/11/02	Water Billing	89.26	99.59
07/11/02	Capital Improvement	1.38	10.33
07/11/02	Increased Cost	2.31	8.95
07/11/02	Sewer Billing	6.64	6.64
07/11/02	<u>BILLING</u>	99.59	
06/10/02	PAYMENT	-86.28	0.00
05/16/02	Water Billing	78.26	86.28
05/16/02	Capital Improvement	1.38	8.02
05/16/02	Sewer Billing	6.64	6.64
05/16/02	<u>BILLING</u>	86.28	
04/29/02	PAYMENT	-66.48	0.00
03/21/02	Water Billing	58.46	66.48
03/21/02	Capital Improvement	1.38	8.02
03/21/02	Sewer Billing	6.64	6.64
03/21/02	<u>BILLING</u>	66.48	
03/05/02	PAYMENT	-92.88	0.00
01/24/02	Water Billing	84.86	92.88
01/24/02	Capital Improvement	1.38	8.02
01/24/02	Sewer Billing	6.64	6.64
01/24/02	<u>BILLING</u>	92.88	
01/02/02	PAYMENT	-71.98	0.00
11/19/01	Water Billing	63.96	71.98
11/19/01	Capital Improvement	1.38	8.02
11/19/01	Sewer Billing	6.64	6.64
11/19/01	<u>BILLING</u>	71.98	
10/22/01	PAYMENT	-68.68	0.00
09/24/01	Water Billing	60.66	68.68
09/24/01	Capital Improvement	1.38	8.02
09/24/01	Sewer Billing	6.64	6.64
09/24/01	<u>BILLING</u>	68.68	
09/06/01	PAYMENT	-69.01	0.00
07/27/01	Water Billing	53.01	69.01
07/27/01	Capital Improvement	1.38	16.00

07/27/01	Increased Cost	7.98	14.62
07/27/01	Sewer Billing	6.64	6.64
07/27/01	BILLING	69.01	
07/09/01	PAYMENT	-51.19	0.00
05/31/01	Water Billing	37.71	51.19
05/31/01	Capital Improvement	1.38	13.48
05/31/01	Increased Cost	5.46	12.10
05/31/01	Sewer Billing	6.64	6.64
05/31/01	BILLING	51.19	
05/10/01	PAYMENT	-64.06	0.00
04/04/01	Water Billing	48.76	64.06
04/04/01	Capital Improvement	1.38	15.30
04/04/01	Increased Cost	7.28	13.92
04/04/01	Sewer Billing	6.64	6.64
04/04/01	BILLING	64.06	
03/06/01	PAYMENT	-90.69	0.00
02/06/01	Water Billing	71.71	90.69
02/06/01	Capital Improvement	1.38	18.98
02/06/01	Increased Cost	11.06	17.60
02/06/01	Pre-paid Sewer Billing Cost	0.10	6.54
02/06/01	Sewer Billing	6.54	6.44
02/06/01	BILLING	90.79	
01/12/01	PAYMENT	-80.00	-0.10
12/01/00	Water Billing	62.36	79.90
12/01/00	Capital Improvement	1.38	17.54
12/01/00	Increased Cost	9.52	16.16
12/01/00	Sewer Billing	6.64	6.64
12/01/00	BILLING	79.90	
11/08/00	PAYMENT	-70.99	0.00
10/03/00	Water Billing	54.71	70.99
10/03/00	Capital Improvement	1.38	16.28
10/03/00	Increased Cost	8.26	14.90
10/03/00	Sewer Billing	6.64	6.64
10/03/00	BILLING	70.99	
09/11/00	PAYMENT	-67.03	0.00
08/08/00	Water Billing	51.31	67.03
08/08/00	Capital Improvement	1.38	15.72
08/08/00	Increased Cost	7.70	14.34
08/08/00	Sewer Billing	6.64	6.64
08/08/00	BILLING	67.03	
07/25/00	PAYMENT	-67.40	0.00
06/12/00	Water Billing	52.16	67.40
06/12/00	Capital Improvement	1.38	15.24
06/12/00	Increased Cost	7.22	13.86
06/12/00	Sewer Billing	6.64	6.64
06/12/00	BILLING	67.40	
05/05/00	PAYMENT	-70.34	0.00
04/14/00	Water Billing	54.71	70.34
04/14/00	Capital Improvement	1.38	15.63
04/14/00	Increased Cost	7.61	14.25
04/14/00	Sewer Billing	6.64	6.64

04/14/00	BILLING	70.34	
03/27/00	PAYMENT	-73.27	0.00
02/18/00	Water Billing	57.26	73.27
02/18/00	Capital Improvement	1.38	16.01
02/18/00	Increased Cost	7.99	14.63
02/18/00	Sewer Billing	6.64	6.64
02/18/00	BILLING	73.27	
01/12/00	Adjustment Other	-1.17	0.00
01/12/00	Pre-paid Sewer Billing Cost	1.17	1.17
01/12/00	BILLING	1.17	
01/10/00	PAYMENT	-78.17	0.00
12/16/99	Water Billing	61.51	78.17
12/16/99	Capital Improvement	1.38	16.66
12/16/99	Increased Cost	8.64	15.28
12/16/99	Sewer Billing	6.64	6.64
12/16/99	BILLING	78.17	
11/22/99	PAYMENT	-72.29	0.00
10/19/99	Water Billing	56.41	72.29
10/19/99	Capital Improvement	1.38	15.88
10/19/99	Increased Cost	7.86	14.50
10/19/99	Sewer Billing	6.64	6.64
10/19/99	BILLING	72.29	
09/28/99	PAYMENT	-61.74	0.00
08/23/99	Water Billing	53.01	61.74
08/23/99	Capital Improvement	1.38	8.73
08/23/99	Increased Cost	7.35	7.35
08/23/99	BILLING	61.74	
08/03/99	PAYMENT	-50.54	0.00
06/28/99	Water Billing	44.51	50.54
06/28/99	Capital Improvement	1.38	6.03
06/28/99	Increased Cost	4.65	4.65
06/28/99	BILLING	50.54	
06/08/99	PAYMENT	-53.68	0.00
04/30/99	Water Billing	92.11	53.68
04/30/99	Capital Improvement	1.38	-38.43
04/30/99	Deposit Refund	-50.00	-39.81
04/30/99	Increased Cost	10.19	10.19
04/30/99	BILLING	103.68	
04/13/99	Starting Balance	150.18	0.00
04/13/99	PAYMENT	150.18	

[Back](#)

**APPENDIX B
HARBOR BLVD. DEVELOPMENT LAND USE PLAN
AND STATISTICS (from 2008 Water Master Plan)**



General Plan 2030 does not apply the International West Mixed Use designation to portions of the Specific Plan for the Harbor Boulevard Development south of State Route 22, as the General Plan does not anticipate this area to be developed within the planning horizon. *General Plan 2030* states the International Designation will be applied to this area when development actively begins in this area [29]. While the Specific Plan includes a total of 402 acres, the portion of the Specific Plan north of State Route 22 totals 235 acres. Table 2.3 and Figure 2.3 include the entire area projected for redevelopment at build-out, with areas included in Focus Area A of *General Plan 2030* outlined separately on Figure 2.3.

LU Category	Land Use Description	Quantity	Unit
ME	Musical Entertainment	165,000	ft ²
TR	Large Scale Theme Restaurants	75,000	ft ²
BE	Box Entertainment Venues	150,000	ft ²
SG	Sport/Game Activity Recreation	205,000	ft ²
Rest.	Restaurants	64,000	ft ²
LC	Retail	245,271	ft ²
H2AS	Mid Priced (All Suites)	500	rooms
H2EX	Mid Priced (Extended Stay)	400	rooms
H1EX	First Class (Extended Stay)	550	rooms
H2FS	Mid Priced (Full Service)	750	rooms
H1AS	First Class (All Suites)	700	rooms
H1FS	First Class (Full Service)	3,000	rooms
RC	Meeting Space Convention Center	300,000 ⁽¹⁾	ft ²
HD	High Density Residential Housing	12	ac
RC	Theme Park	67	ac
TS	Transit Station	0.8	ac

Handwritten notes:
 - A bracket groups the rows for H2AS through H1FS, with a note "5,900 rms".
 - A bracket groups the rows for TR, BE, SG, and Rest., with a note "139,000 sf".

Notes:
 Source: International West Land Use Map [7].
 (1) Assumed to be 300,000 ft² versus 300 ft² mentioned in the land use map.

APPENDIX C
2009-2010 BMP REPORT SUMMARY FILING WITH CUWCC

Subject: Garden Grove Site C Stats

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>

Date: Tue, 12 Jul 2011 14:29:26 -0700

To: Greg Blodgett <greg1@ci.garden-grove.ca.us>, Paul Guerrero <paulg@ci.garden-grove.ca.us>

CC: Matthew Reid <matt.reid@landanddesign.com>

Per our conversation, I have listed the restaurant/retail/ballroom program for the project:

38,000 sq. ft. conference/banquet- 2 story of 19,000 sq. ft. each

20,000 sq. ft. restaurant-4 pads along Harbor Blvd of 5,000 sq. ft. each

20,000 sq. ft. restaurant/entertainment-pad behind 2 restaurant pads

4,000 sq. ft. hotel restaurant-2K per each limited hotel

7,000 sq. ft. hotel restaurant-full service hotel

20,000 sq. ft. retail-not currently shown on Master Plan

Please confirm I have it correct, before I send it out to our sub consultants.

Jayna Morgan

Environmental Planner

Design + Planning

jayna.morgan@aecom.com

AECOM

2737 Campus Drive, Irvine, CA 92612 USA

T 949.660.8044 F 949.660.1046

www.aecom.com

Subject: Planning Commission Meetings

From: Paul Guerrero <paulg@ci.garden-grove.ca.us>

Date: Wed, 13 Jul 2011 15:29:27 -0700 (PDT)

To: Jayna.Morgan@aecom.com, Greg Blodgett <gregl@ci.garden-grove.ca.us>, matt.reid@landanddesign.com

Jayna,

Attached is the planning commission meetings schedule. No changes to the agenda.

Thanks

Paul

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**AGENDA IDEAS
SITE 'C' MEETING
AECOM/EDAW OFFICE
JULY 14, 2011
4:00 pm**

ECONOMIC DEVELOPMENT

1. Future of Redevelopment
 - a. Status

2. Disposition and Development Agreement
 - a. Performance Schedule
 1. Milestones
 2. Escrow
 3. Land Acquisition/ Negotiations

3. Planning Division
 - a. Review Studies/ Status
 - b. Planning Commission

AECOM/EDAW

1. Environmental
 - a. Program Clarification
 - b. Schedule
 - c. Neighborhood Meeting
 1. Format/Method
 2. Location
 3. Length of Time
 4. Who Speaks
 5. How Many Meetings
 6. Graphic Material Needed
 7. Technology (powerpoint/illustration boards/handout/etc.)
 - d. Consultants
 1. Studies Status

DEVELOPER

1. Site Interest
 - a. Hotel Interest
2. Financing
 - a. Status
3. Site Survey

OTHER

Planning Commission Meetings 2011 held 1 st & 3 rd	Planning Commission Legal Ads and Legal Notices Due	Planning Commission Staff Reports Due for Proofing by Planner, Mgr., Director, Sec.
THURSDAYS	MONDAYS	MONDAYS
January 6	December 13	December 20
January 20	December 20	January 3
February 3	January 10	January 17
February 17	January 24	January 31
March 3	February 7	February 14
March 17	February 17	February 28
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April 7	March 14	March 21
April 21	March 28	March 4
May 5	April 11	April 18
May 19	April 25	May 2
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June 2	May 9	May 16
June 16	May 23	May 31 <u>TUES</u>
July 7	June 13	June 20
July 21	June 27	July 5 <u>TUES</u>
August 4	July 11	July 18
August 18	July 25	August 1
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September 1	August 8	August 15
September 15	August 22	August 29
October 6	September 12	September 19
October 20	September 26	October 3
November 3	October 10	October 17
November 17	October 24	October 31
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December 1	November 7	November 15 <u>TUES</u>
December 15	December 21	November 28
January 5	December 12	December 19
January 19	December 19	January 2

PLANNING COMMISSION
 PACKAGES DUE FOR
 REVIEW (1 WEEK) PRIOR
 TO THE MEETING
 MONDAYS

AUGUST 22
 SEPTEMBER 12
 SEPTEMBER 26
 OCTOBER 10
 OCTOBER 24
 NOVEMBER 7
 NOVEMBER 21

Subject: RE: Planning Commission Meetings

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>

Date: Wed, 13 Jul 2011 16:30:53 -0700

To: Paul Guerrero <paulg@ci.garden-grove.ca.us>, Greg Blodgett <greg1@ci.garden-grove.ca.us>, <matt.reid@landanddesign.com>

Thanks! See you tomorrow. I will send over the revised schedule in the am.

From: Paul Guerrero [mailto:paulg@ci.garden-grove.ca.us]

Sent: Wed 7/13/2011 3:29 PM

To: Morgan, Jayna; Greg Blodgett; matt.reid@landanddesign.com

Subject: Planning Commission Meetings

Jayna,

Attached is the planning commission meetings schedule. No changes to the agenda.

Thanks

Paul

Subject: Land Use Applicant Site "C"

From: Maria Parra <mariap@ci.garden-grove.ca.us>

Date: Fri, 15 Jul 2011 10:18:54 -0700 (PDT)

To: matt.reid@landanddesign.com, drose3@chather.net

CC: drose3@chather.net, Paul Guerrero <paulg@ci.garden-grove.ca.us>, Greg Blodgett <greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>

Matt,

Attached is a copy of the land use application and filing instructions. As mentioned at yesterday's meeting, a preliminary Water Quality Management Plan (WQMP) will also be required as part of the submittal package, and attached is a copy of the requirements. If you have any questions about the preliminary WQMP, please contact the Engineering Division at (714) 741-5887.

If you have any questions, please contact the Planning Services Division at (714) 741-5312.

Sincerely,

Maria Parra

Urban Planner

City of Garden Grove | Planning Services Division

11222 Acacia Parkway, Garden Grove, CA 92840

(714) 741-5312 | (714) 741-5578 fax

mariap@ci.garden-grove.ca.us | www.ci.garden-grove.ca.us

Community Development Department of the City of Garden Grove

"Providing Quality Services Through Creativity and Collaboration"

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—MasterApplication.pdf

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— Land Use Filing Instructions.pdf

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CONCEPTUAL / PRELIMINARY

WQMP PREPARATION



7.II-5.1 Conceptual or Preliminary WQMP Preparation

To facilitate early water quality planning and ensure that water quality protection and LID principles are considered in the earliest phases of a project, the local jurisdiction will suggest that the project proponent prepare a Conceptual or Preliminary WQMP prior to a complete or final project WQMP for full review and approval. A Conceptual or Preliminary WQMP may be used by the local jurisdiction during the land use entitlement process or as part of a project application for discretionary project approval.

A Conceptual or Preliminary WQMP supports the CEQA process by serving as the basis for Lead Agency and Responsible Agency to conclude that the MEP standard is being met, by serving as the basis that selected BMPs will not have the potential to cause significant effects and/or that the effects have been mitigated; and by providing supporting rationale for determining that water quality impacts are not significant or are not significant with mitigation.

The Conceptual or Preliminary WQMP should be circulated with the CEQA document or summarized within the circulated CEQA document.

A WQMP Template has been produced to assist project proponents with developing a Conceptual or Preliminary WQMP (available at www.ocwatersheds.com). The level of detail in a Conceptual or Preliminary WQMP can vary somewhat upon the level of detail known at the time discretionary project approval is sought, but must contain at a minimum the following information:

- Local project Identifier and description (application number, tentative tract number, review number, etc.)
- Site plan (tentative map, major project features, use exhibit, etc.) showing the following:
 - Property or project boundaries
 - Locations of buildings, landscaping, street, curb and gutter, storm drainage system and other major project features
 - Direction of surface drainage
 - Existing easements
 - Surface waters
 - Areas of known or potential hazards such as landfills, soil and groundwater contamination, Alquist-Priolo fault zones, etc.
 - Other project features or activities that may generate pollutants such as wash racks, trash enclosures, fuelling areas, loading docks, etc.
- Preliminary site assessment information
 - Most proximate and downstream receiving waters and any impairments
 - POCs and primary POCs, and the related conclusions that are to be made from this information
 - Identification of any hydrologic conditions of concern and the supporting rationale
- LID feasibility analysis

- Proposed LID BMP selection rationale and supporting details and calculations (or sub-regional/regional LID BMPs if applicable)
- Proposed hydromodification control BMPs and calculations
- Proposed treatment control BMPs and calculations
- Any proposed project specific credits or alternative compliance methods planned
- Preliminary Source Control BMP information
- Proposed parties responsible for the long-term operation and maintenance of proposed BMPs
- Proposed funding mechanisms for the long-term operation and maintenance the proposed BMPs
- The list of standard WQMP requirements as indicated earlier, including access easement, records to be kept, records retention, inspection frequencies, etc.

Local jurisdiction staff will review and evaluate the Conceptual or Preliminary WQMP for general acceptance and conceptual or preliminary approval, and will offer guidance toward plan elements necessary for approval of the full Project WQMP. Additional information and submittals may be necessary for conceptual or preliminary approval. It is the responsibility of the project proponent to provide the additional information for consideration by the local jurisdiction.

PLANNING DIVISION

Community Development Department

City of Garden Grove

LAND USE PERMIT APPLICATION

Project Address: _____

Project Location: _____

Application For:

- | | | |
|--------------------------|-----------------------------------|--------------------|
| <input type="checkbox"/> | Code Amendment | \$1,750 |
| <input type="checkbox"/> | Conditional Use Permit | \$2,100 |
| <input type="checkbox"/> | Director's Review (R-1) | 175 |
| <input type="checkbox"/> | Director's Review (Duplex/Tripex) | \$1,600 |
| <input type="checkbox"/> | Director's Review, Others | \$ 400 |
| <input type="checkbox"/> | Front Yard Determination | \$ 175 |
| <input type="checkbox"/> | General Plan Amendment | \$1,950 |
| <input type="checkbox"/> | Interpretation of Use - PC | \$ 575 |
| <input type="checkbox"/> | Lot Line Adjustment | \$ 975 |
| <input type="checkbox"/> | Modification to Conditions | 1/2 cost |
| <input type="checkbox"/> | Modification to Plans | 1/2 cost |
| <input type="checkbox"/> | Planned Unit Development | \$3,150 |
| <input type="checkbox"/> | Site Plan | \$2,250 |
| <input type="checkbox"/> | Specific Plan | cost+15% |
| <input type="checkbox"/> | Street Vacation | \$1,750 |
| <input type="checkbox"/> | Tentative Parcel Map | \$1,425 + \$15 lot |
| <input type="checkbox"/> | Tentative Tract Map | |
| <input type="checkbox"/> | Variance - all others | \$1,675 |
| <input type="checkbox"/> | Variance Single Family | \$ 500 |
| <input type="checkbox"/> | Zone Change | \$1,800 |
| <input type="checkbox"/> | Time Extension | 1/2 fee |

Environmental Review:

- | | | |
|--------------------------|-----------------------------|------------|
| <input type="checkbox"/> | Environmental Impact Report | cost + 15% |
| <input type="checkbox"/> | Mitigated Neg Dec | \$ 1,050 |
| <input type="checkbox"/> | Negative Declaration | \$ 775 |
| <input type="checkbox"/> | Notice of Exemption | \$ 200 |
| <input type="checkbox"/> | County Recording Fee | \$ 50 |
| <input type="checkbox"/> | Fish and Game Fee | \$1,993 |

Applicant/Owner Information:**Applicant:**

Name: _____

Address: _____

City/State/Zip: _____

Phone: _____

Representative:

Name: _____

Address: _____

City/State/Zip: _____

Phone: _____

**\$2,525 + \$15 lot
Property Owner:**

Name: _____

Address: _____

City/State/Zip: _____

Phone: _____

Status of Applicant:

- | | | | |
|--------------------------|--|--------------------------|--------------------------------------|
| <input type="checkbox"/> | Recorded Property Owner | <input type="checkbox"/> | Lessee |
| <input type="checkbox"/> | Purchasing/Escrow Subject to Case Approval | <input type="checkbox"/> | Authorized Agent of One of The Above |

AUTHORIZED SIGNATURES**Important Note:** If the applicant is anyone other than the recorded owner of the property, a letter of authorization, signed by the owner, is to be notarized and submitted as a part of the application.

Owner's Signature: _____ Date: _____

Applicant's Signature: _____ Date: _____

Application Accepted By : _____ Date: _____

EXCERPT FROM TITLE 9 OF THE MUNICIPAL CODE
OF THE CITY OF GARDEN GROVE, CALIFORNIA

Section 9.24.100.C Effective Date of Order Granting or Denying Land Use Actions. The order granting or denying a land use action shall become final twenty-one days after the order, unless within such twenty-one day period an appeal in writing is filed with the City Clerk by either an applicant or opponent. The filing of the appeal within such time limit shall stay the effective date of the order until such time as the City Council has acted upon the appeal as hereafter set forth in this Chapter.

9.24.010.D. Fees Required. All applicants described in Section 9.24.030 shall require fees paid in accordance with a Resolution adopted by the City Council. A copy of the resolution and information may be obtained from the Office of the City Clerk.

NOTE: Evidence not presented to the Planning Commission or Zoning Administrator in connection with this case will not be considered by the Council. All maps, petitions, plans, testimony, and other facts or opinions must have been heard by the Planning Commission or Zoning Administrator in order to be heard by the City Council.

Any new evidence which you desire to submit must be presented as part of a new application for which the normal filing fees will be charged. The new application will be heard by the Planning Commission or Zoning Administrator in the manner set forth in Title 9 of the Garden Grove Municipal Code.

9.24.010.E. LIMITATION OF REFILEING OF APPLICATIONS. A final action denying an application for a land use action shall prohibit the further filing of the same type application on a property until not less than one year shall have elapsed from the date of denial of any application.

9.24.160 EXPIRATION OF GRANTED LAND USE ACTIONS. Unless a time extension is granted in accordance with Section 9.24.030, any discretionary action becomes null and void if not exercised within the time specified in the approval of the discretionary action or, if not date is specified, within one year from the date of approval of said discretionary action.

9.24.030.D.10 REVOCATION. Applicability. The City Council, Hearing Body, or City Manager may initiate revocation procedures for any land use action designated by this Title. The Hearing Body may revoke or modify a land use action if any one of the following findings are made:

- The approval was obtained by fraud;
- The approved use has ceased to exist or has been suspended for one year or a lesser time as established by land use ordinance;
- That the approved use is being, or recently has been, exercised contrary to the terms or conditions of such approval, or in violation of any statute, ordinance or regulation;
- That the approved use was so exercised as to be detrimental to the public safety or so as to constitute a public nuisance.

NOTE: If you are not the recorded owner of the property, this letter of authorization must be signed by the owner of the property, notarized, and submitted as a part of the application.

**COMMUNITY DEVELOPMENT DEPARTMENT
PLANNING SERVICES DIVISION**

LETTER OF AUTHORIZATION

TO BE NOTARIZED

To: City of Garden Grove

Application for _____

I, _____, owner of the below-described property, do hereby appoint _____ as my agent for the purpose of consummating the above application, and agree to accept and fulfill any and all requirements which may be imposed as conditions of approval. The conditions of approval may be required to be recorded on the title of the property in the form of a Notice of Discretionary Permit Approval. These conditions of approval run with the land and constitute express limitations and restriction on the use of the Property. These conditions of approval will be binding on all persons who own or occupy the Property.

LEGAL PROPERTY DESCRIPTION: _____

(Signature of Owner)

TO BEGIN THE PROCESS:

The applicant should contact the Planning Division to discuss the land use permit application prior to the preparation of any detailed plans. This contact should take place prior to any substantial investment (i.e., land acquisition, site planning, engineering or construction plans) in the preparation of the proposed application.

If requested by staff, please submit a pre-application review. During this review, Department representatives will inform you of the applicable policies, plans, and requirements as they pertain to the proposal, and review the appropriate procedures specified in the Municipal Code. During this period, staff will examine the project in relation to the City's Municipal Code, policies, and General Plan. When necessary, staff will suggest possible alternatives or modifications relating to the project. Preliminary environmental issues will also be identified. Any further technical studies relating to the project will be addressed at this time.

The Planning Division may be reached by telephone at (714) 741-5312 or at the Development Permit Center, City Hall, 11222 Acacia Parkway, Garden Grove, California.

PRIOR TO SUBMITTING YOUR APPLICATION:

Once your project is ready to submit for the public hearing process, it is strongly suggested that you request an application review with the Planning Division prior to formal submittal of a land use permit application. During the final application review, Department representatives will review the application submittal for completeness. This review is critical to saving you time and money as it will enable staff to insure the completeness of your application.

THE APPLICATION SUBMITTAL:

After review by the City, you should **schedule an appointment** with your project planner to submit your application. Your planner will instruct you to bring all required exhibits, as described below and as otherwise required by the City, to the Development Permit Center, City Hall, 11222 Acacia Parkway, Garden Grove, California 92840. Your project planner

will verify that your application materials are complete. If all submittals are in order, the planner will accept the application for public hearing.

NO APPLICATION WILL BE ACCEPTED UNTIL ALL APPLICATION FORMS, REQUIREMENTS, INFORMATION, PLANS AND MAPS HAVE BEEN COMPLETED TO THE REQUIRED SPECIFICATIONS. **NOTE: THE PROJECT PLANNER DOES NOT HAVE THE AUTHORITY TO "HOLD" ANY INCOMPLETE APPLICATION.**

As a permit granting Agency, the Community Development Department is required to review land use permit applications to determine if they are complete and acceptable for filing. The applicant will then be notified, in writing, of the status of the application. From the date of the submittal of the application, there is a 30-day time limit for written notification of any incompleteness.

Since it could become necessary to postpone the hearing date for an incomplete application, you should work closely with your project planner. The acceptance of an application as complete does not guarantee that further studies or information will be required to fully evaluate the project.

EXHIBITS

The formal application must contain twenty-five (25) sets of plans at the time of application. Each set of plans must be stapled together in the following order, from top to bottom:

1. Area Map
2. Existing Facilities Plan
3. Plot Plan
4. Floor Plan(s)
5. Elevations
6. Landscape Plan
7. Sign Plans and Program
8. Preliminary Grading Plan
9. Lighting Plan

Plans must be folded to a size approximately 11 inches by 14 inches and in such a manner as to expose the title block. **Plans that are not folded will not be accepted.**

Also required as a part of the submittal package are the following:

1. Application fees
2. Application form(s)
 - a. Cover sheet
 - b. Letter of Authorization
3. One Preliminary Title Report, less than 180 days old
4. Environmental Information Form
5. Colored Exhibits (**not** to be folded or mounted on boards)
 - a. Site Plan
 - b. Elevations
6. Materials and Color Board
7. Site Photographs - including all parking areas, landscaping and buildings
8. Plan Photos - Photo Ready copy of the plans reduced to 8-1/2"X11"
9. List of Property Owners Within 500 Feet of the Project Site for any properties outside of the City limits
10. Other supporting documents as required by the City.

The following explains the type of exhibits required, and the information necessary for staff to perform a full analysis of your application. Remember, if you do not include all of the information below, your

application cannot be accepted for processing. If you have questions regarding the instructions, please contact Planning Division at (714) 741-5312.

AREA MAP (25 Copies @ 8-1/2" X 11")

The Area Map must be drawn at a scale of 1" = 100 feet or 1" = 200 feet and must include all of the following:

1. North Arrow, Scale and Title Block (name of project, applicant and date prepared)
2. Show all properties within 500 feet of the project site, with the subject site clearly designated
3. Show the Assessors, Book, Block, and Parcel Number(s) for the development site and all properties within 500 feet.
4. Show all streets and their names.
5. Show all Municipal and County boundaries.

EXISTING FACILITIES PLAN (25 COPIES WITH A MAXIMUM SIZE OF 30 INCHES BY 42 INCHES)

The Existing Facilities Plan must be drawn at the same scale as the Plot Plan and at a scale large enough to clearly indicate all of the following:

1. North Arrow, Scale, and Title Block
2. Show all property lines of the subject site and dimensions of each.
3. Show all existing building and structure locations, dimensioned to show size, setbacks, distance between buildings, etc.
4. Show and label existing streets, drives and alleys adjacent to the subject site, including any necessary dedications and medians to show widths and distance from street centerlines. Show all driveways on the opposite side of all streets, drives and alleys from the project.
5. Show all existing signs including location, size, height and type.
6. Show and label all existing utilities, including water, sewer, electric, gas, cable, etc. serving the project site.
7. Show and label all existing easements affecting the project site.
8. Show all existing landscaping on the site. Indicate type (Latin and common name), and where appropriate approximate size (caliper and height).

9. Show all existing perimeter fences and walls labeling each as to material, type, height, and condition.
10. Show all structures, fences, and walls located on contiguous properties within 30 feet of the subject property. For residential projects, indicate the use of buildings on adjacent properties and identify building fronts, sides, and rear.

PLOT PLAN (25 COPIES WITH A MAXIMUM SIZE OF 30 INCHES BY 42 INCHES)

The Plot Plan must be drawn at the same scale as the Existing Facilities Plan and at a scale large enough to clearly indicate all of the following:

1. North arrow, scale, and title block, including the name and telephone number of the person preparing the plan.
2. Show property lines of the subject property and dimensions of each.
3. Show proposed building locations, dimensions to show building sizes, setbacks, distance between buildings, etc.
4. Show and label proposed streets and drives, including any necessary dedications, and dimensioned to show widths and distance from street centerlines.
5. Show all proposed parking spaces and aisles, including dimensions.
6. Show all proposed signs including location and dimensions, with reference to the sign program.
7. Indicate proposed utility meter locations and electrical transformers.
8. Show all structures on contiguous properties within 30 feet of the subject property.
9. Show all proposed walls and fences, and label each as to type of dimensions on the subject property.
10. Show all landscaped areas and dimensions of each.
11. Show the following in tabular form:
 - a. Net size of parcel(s)
 - b. Total square feet of parking areas, including areas used for ingress or egress, drives, aisles, stalls, and maneuvering
 - c. Total area of landscaping within parking area
 - d. Total landscaping area within parking area as a percent of the parking area
 - e. Building area, coverage and height
 - f. Total number of parking spaces on the site and number of compact and handicap spaces, and percentages of each
 - g. Total square feet of landscaped area excluding setbacks.

12. For residential projects, show the following information in tabular form:
 - a. Number of units
 - b. Total building coverage in square feet and as a percent of the site area
 - c. Total number of covered and guest parking spaces, both compact and regular-sized and percentages of each
 - d. Total square feet of all common recreation areas and average common area per unit
 - e. Show all common recreation areas and private patio areas and dimensions of each.
 - f. Density as square feet per unit
 - g. Density as number of units per acre
 - h. Numbers of one- two- and three-bedroom units, including the number of bathrooms, and square footage of each type of units
 - i. Building height
 - j. Total landscape area within parking area in square feet and a percent of the parking area
 - k. Total square feet of landscaped area, including setbacks and parking area, but excluding common and private recreation area.
13. For all nonresidential projects indicate the proposed uses and the amount of square footage for each use.

***Note: All portions of the site plan shall be plainly visible, unobstructed by conceptual landscaping items (trees, shrubs, etc.) or other opaque features. Landscaping plans shall be submitted on separate plans. Landscaping, signs or other architectural features added or an artist's rendering of the proposed project may be submitted as supplemental information.**

FLOOR PLANS (25 COPIES WITH A MAXIMUM SIZE OF 30 INCHES BY 42 INCHES)

The Floor Plans must be fully dimensioned and drawn to a scale large enough to clearly indicate all of the following:

1. Title block.
2. Types: One of each type of unit or building proposed.

3. Each separate floor plan shall indicate
 - a. Overall square footage
 - b. Room sizes
 - c. Doorway locations,
 - d. Window types, sizes, and locations.
4. Each residential floor plan shall show fully dimensioned patio and balcony area.

ELEVATIONS (25 COPIES WITH A MAXIMUM SIZE OF 30 INCHES BY 42 INCHES)

Elevations are required for all developments. The Elevation Plans must be fully dimensioned and drawn to a scale large enough to clearly indicate all of the following:

1. Types: Elevations shall include all sides of each building type proposed for the site.
2. Scale: Not less than 1/8" = 1'-0"
3. All exterior building materials and colors labeled and identified.
4. All roof, window, and door heights shall be dimensioned.
5. Title block.

***Note: All portions of the elevations shall be plainly visible, unobstructed by conceptual landscaping items (trees, shrubs, etc.) or other opaque features. However, supplemental plans may be submitted showing building elevations with landscaping, signs or other architectural features added or an artist's rendering of the proposed project.**

ROOF PLANS (25 COPIES WITH A MAXIMUM SIZE OF 30 INCHES BY 42 INCHES)

Roof Plans are required for all developments. The Roof Plans must be fully dimensioned and drawn to a scale large enough to clearly indicate all features and shall include the following:

1. Ridge, valley, and hip line locations.
2. Roof slope and type
3. Roofing material (e.g.: composition shingles, concrete tile, etc.)

LANDSCAPE PLANS (25 COPIES WITH A MAXIMUM SIZE OF 30 INCHES BY 42 INCHES)

Landscape Plans are required for all developments. The Landscape plans must be drawn at the same scale as the Plot Plan. This plan shall indicate type, common and Latin name, size and location of trees, and type and location of shrubs and groundcovers. Existing trees on-site which are to be incorporated into the proposed project shall also be shown. The landscaping plan shall take into account any grade differences as shown on the preliminary grading plan. Please consult the Garden Grove Municipal Code for specific design requirements for landscape plans including percentages, location, type and size of landscape materials.

SIGN PROGRAM (25 COPIES WITH A MAXIMUM SIZE OF 30 INCHES BY 42 INCHES)

Sign Plans and a sign program are required for all developments. The Sign plans must be drawn at to a scale large enough to clearly indicate all details, including the following:

1. Pylon Signs (Five acre minimum development site)
 - a. Location, number, and height (above natural grade)
 - b. Square footage of sign face(s) plus overall dimensions
 - c. Color and style of letters, trim, and background clearly designated.
 - d. Elevation above natural grad, sign with materials and colors indicated
2. Monument Signs
 - a. Location, number, and height
 - b. Square footage of sign face plus overall dimensions
 - c. Color and style of letters, trim, and background
 - d. Elevation above natural grade, sign with materials and colors indicated
3. Wall signs
 - a. Applicant shall submit building elevations incorporating typical wall signage for each proposed tenant or use,

including a detail indicating size, height, materials, and colors. These elevations shall be separate from the building elevations required as part of the Site Plan submittal.

4. Other Signage (as applicable)
 - a. Directional signs, logos, canopy signs, etc., may be required depending upon the type of project and location. Signage shall comply with all provisions of the Municipal Code.

PRELIMINARY GRADING PLAN AND CROSS SECTIONS (25 COPIES WITH A MAXIMUM SIZE OF 30 INCHES BY 42 INCHES)

Grading Plans are required for all developments. The grading plans must be drawn at the same scale as the Plot Plan and shall indicate any existing or proposed grade change and its relationship to the project.

LIGHTING PLAN (25 COPIES WITH A MAXIMUM SIZE OF 30 INCHES BY 42 INCHES)

A Lighting Plan shall be submitted in conjunction with the landscape plan indicating the following:

1. Height of lighting standards.
2. Placement.
3. Method of Shielding.
4. Dramatic lighting (building accent, security, or for special landscaping effect).
5. Minimum lighting levels in all parking and pedestrian areas.

Subject: FW: Agency Resolution No. 629

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>

Date: Fri, 15 Jul 2011 14:14:50 -0700

To: David Rose <drose3@charter.net>, Karl Hill <karlh@ci.garden-grove.ca.us>, Matthew Reid <matt.reid@landanddesign.com>

CC: Greg Blodgett <greg1@ci.garden-grove.ca.us>, Rogier Goedecke <rg@rkengineer.com>, Maria Parra <mariap@ci.garden-grove.ca.us>, Michael Dickerson <md@rkengineer.com>, "Chang, Jane" <Jane.Chang@aecom.com>, Paul Guerrero <paulg@ci.garden-grove.ca.us>

Hi All,

I just received this resolution from the City and a quick review shows that the 2002 EIR did identify significant unavoidable impacts to:

"noise; air quality; population, housing and employment; and park and recreational impacts; and, as to cumulative impacts on traffic; population, housing and employment; noise; and parks and recreation; which are not eliminated or mitigated to a level of insignificance, the Agency hereby adopts the Statement of Overriding Considerations set forth in Exhibit "B" which is attached hereto and incorporated herein by reference, and finds that based on substantial evidence in the record, including but not limited to the Statement of Overriding Considerations, the specific economic, legal, social, technological and other benefits of the Amendment outweigh the significant effects on the environment."

This is good and bad news from the Addendum EIR aspect. Good that it had a statement of overrides adopted, but bad that aesthetic was not listed as one of the unavoidable impacts.

I still need to review the EIR, especially the aesthetics section, but will let you know my thoughts as soon as I do.

Best,

Jayna Morgan

AECOM

T. 949.660.8044

From: Maria Parra [mailto:mariap@ci.garden-grove.ca.us]

Sent: Friday, July 15, 2011 1:58 PM

To: Morgan, Jayna

Subject: Agency Resolution No. 629

Hi Jayna,

Karl asked that I e-mail you a copy of the Resolution that certified the EIR for the Redevelopment plan.

Thanks!

Maria Parra

Urban Planner
City of Garden Grove | Planning Services Division
11222 Acacia Parkway, Garden Grove, CA 92840
(714) 741-5312 | (714) 741-5578 fax
mariap@ci.garden-grove.ca.us | www.ci.garden-grove.ca.us

Community Development Department of the City of Garden Grove
"Providing Quality Services Through Creativity and Collaboration"

From: "Karl Hill" <karlh@ci.garden-grove.ca.us>
To: "Maria Parra" <mariap@ci.garden-grove.ca.us>
Sent: Friday, July 15, 2011 11:41:39 AM
Subject: Fwd: Agency Resolution No. 629

Maria: do you have Jayna's e-mail to forward this copy of the resolution of the EIR to Jayna???

thanks
Karl

From: "Denise Kehn" <denisek@ci.garden-grove.ca.us>
To: "Maria Parra" <mariap@ci.garden-grove.ca.us>, "Paul Guerrero" <paulg@ci.garden-grove.ca.us>
Cc: "Karl Hill" <karlh@ci.garden-grove.ca.us>
Sent: Friday, July 15, 2011 10:58:24 AM
Subject: Fwd: Agency Resolution No. 629

Here is the attachment. Sorry.

A copy of the EIR report will be sent to Karl.

Denise Kehn
Records Specialist
City of Garden Grove
714-741-5036

From: "Denise Kehn" <denisek@ci.garden-grove.ca.us>
To: "Maria Parra" <mariap@ci.garden-grove.ca.us>, "Paul Guerrero" <paulg@ci.garden-grove.ca.us>

Cc: "Karl Hill" <karlh@ci.garden-grove.ca.us>
Sent: Friday, July 15, 2011 10:41:29 AM
Subject: Agency Resolution No. 629

Attached is a copy of Resolution No. 629 pertaining to the Agency approving and certifying the final environmental impact report for the amendment of the redevelopment plan for the Garden Grove Community Project.

Denise Kehn
Records Specialist
City of Garden Grove
714-741-5036

--
Karl Hill

Reso No. 629.pdf	Content-Description: Reso No. 629.pdf
	Content-Type: application/pdf
	Content-Encoding: base64

GARDEN GROVE AGENCY FOR COMMUNITY DEVELOPMENT

RESOLUTION NO. 629

A RESOLUTION OF THE GARDEN GROVE AGENCY FOR COMMUNITY DEVELOPMENT APPROVING AND CERTIFYING THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE AMENDMENT OF THE REDEVELOPMENT PLAN FOR THE GARDEN GROVE COMMUNITY PROJECT

WHEREAS, the Garden Grove Agency for Community Development (the "Agency") has initiated an amendment (the "Amendment") to the Redevelopment Plan for the Garden Grove Community Project (the "Redevelopment Plan"); and

WHEREAS, the City of Garden Grove Planning Commission has approved and forwarded to the Agency its report that the proposed Amendment is in conformity with the General Plan of the City of Garden Grove and has recommended approval of said Amendment; and

WHEREAS, a Draft Environmental Impact Report (the "Draft EIR") was prepared for the Amendment pursuant to and in accordance with the California Environmental Quality Act (Public Resources Code section 21000 *et seq.*) ("CEQA") and the Guidelines for Implementation of the California Environmental Quality Act (Title 14, California Code of Regulations, Sections 15000 *et seq.*) (the "CEQA Guidelines"); and

WHEREAS the Draft EIR was sent to the City of Garden Grove Planning Commission (the "Commission"), and the Commission held a public hearing to receive public input on the adequacy of the Draft Environmental Impact Report; and

WHEREAS, all actions required to be taken by applicable law related to the preparation, circulation, and review of the Draft EIR have been taken; and

WHEREAS, pursuant to public notice duly given, the City Council of the City of Garden Grove (the "City Council") and the Agency held a full and fair public hearing on the proposed Amendment and Final Environmental Impact Report ("Final EIR") on June 25, 2002; and

WHEREAS, the Agency is the lead agency for the Amendment under CEQA; and

WHEREAS, the Agency has reviewed and considered the Final EIR and mitigation monitoring and reporting program with respect to the Amendment (the "MMRP"), including all comments and responses thereto; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have occurred.

NOW, THEREFORE, BE IT RESOLVED by the Garden Grove Agency for Community Development as follows:

Section 1. The Final Environmental Impact Report is an adequate and complete document completed in accordance with CEQA and the CEQA Guidelines, as well as the local CEQA guidelines.

Section 2. The Agency hereby certifies that a full and fair public hearing has been held on the Final EIR, including all comments received thereon and responses thereto, which comments and responses are included in the Final EIR; the Agency as the lead agency has reviewed and considered the Final EIR and the information contained therein prior to deciding whether to approve the proposed Amendment, including all comments received thereon and responses thereto; and the Agency finds that the Final EIR reflects the independent judgment and analysis of the Agency. These actions having been taken, the Final EIR is hereby approved, certified, and adopted as the Final EIR for the Amendment by the Agency, and is hereby incorporated herein by reference.

Section 3. The Agency hereby makes and adopts the CEQA Findings of Fact as set forth in Exhibit "A," which is attached hereto and incorporated herein by reference. Based on such Findings of Fact, the Agency hereby finds that:

a. Environmental impacts of the Amendment will be less than significant without mitigation for energy; water services; biological resources; and mineral resources.

b. Changes or alterations, which are within the responsibility and jurisdiction of the Agency and/or the City of Garden Grove, have been incorporated into, the proposed Amendment and activities undertaken thereunder, to eliminate or reduce to a level of insignificance the potentially significant environmental impacts of the Amendment, with the exception of noise impacts; air quality impacts; population, housing and employment impacts; and park and recreational impacts, as to which significant unavoidable impacts may occur even with implementation of all mitigation measures contained in the MMRP.

c. All feasible mitigation measures, which are within the jurisdiction of the Agency or the City of Garden Grove, as identified in the Final Environmental Impact Report, have been incorporated into the Amendment, attached hereto and incorporated herein by this reference. Based on such Findings of Fact, the Agency hereby finds that, as to the significant environmental impacts on noise; air quality; population, housing and employment; and park and recreational impacts; and, as to cumulative impacts on traffic; population, housing and employment; noise; and parks and recreation; which are not eliminated or mitigated to a level of insignificance, the Agency hereby adopts the Statement of Overriding Considerations set forth in Exhibit "B" which is attached hereto and incorporated herein by reference, and finds that based on substantial evidence in the record, including but not limited to the Statement of Overriding Considerations, the specific economic, legal, social, technological and other benefits of the Amendment outweigh the significant effects on the environment.

Section 4. The Agency finds that the project alternatives identified in the Final EIR either would not achieve the primary objectives of the Amendment, or would do so only with adverse impacts equal to those associated with the Amendment. Accordingly, and for reasons set forth

herein, including in Exhibit A attached hereto, and in the Final EIR, such alternatives are therefore infeasible, and the proposed Amendment is the environmentally superior alternative.

Section 5. The Agency hereby adopts the MMRP set forth in the Final EIR, which is attached hereto as Exhibit C, and incorporated herein by this reference.

Section 6. The City shall make available the Environmental Impact Report and other related materials, including, without limitation, the City's General Plan EIR, which constitute the record of the proceedings upon which its decision is based at the Garden Grove City Hall, 11222 Arcacia Parkway, Garden Grove, California.

Section 7. When considering the whole record, there is no evidence that the project will have the potential for significant adverse effects on historic resources, wildlife resources or the habitat on which wildlife depends and therefore the Agency finds that such impacts will be de minimis.

Section 8. Five days after the approval of this resolution, the City of Garden Grove shall submit a fee of \$25.00, required by the County of Orange, for the filing of a Certificate of Fee Exemption and de minimis findings pursuant to AB 3158 and the California Code of Regulations.

Section 9. That the Chairman shall sign this resolution and the Secretary shall attest and certify to the passage and adoption thereof.

Section 10. The Secretary of the Agency is hereby authorized and directed to file with the County Clerk of the County of Orange, a Notice of Determination, pursuant to Title 14, California Code of Regulations, Section 15094.

Adopted this 2nd day of July 2002.

/s/ MARK ROSEN
CHAIRMAN

ATTEST:

/s/ PRISCILLA STIERSTORFER
DEPUTY SECRETARY

STATE OF CALIFORNIA)
COUNTY OF ORANGE) SS:
CITY OF GARDEN GROVE)

I, PRISCILLA STIERSTORFER, Deputy Secretary of the Garden Grove Agency for Community Development, do hereby certify that the foregoing Resolution was duly adopted by the Garden Grove Agency for Community Development, at an adjourned regular meeting thereof held on the 2nd day of July 2002 by the following vote:

AYES: MEMBERS: (5) BROADWATER, DALTON, LEYES, TRAN, ROSEN
NOES: MEMBERS: (0) NONE
ABSENT: MEMBERS: (0) NONE

/s/ PRISCILLA STIERSTORFER
DEPUTY SECRETARY

EXHIBIT "A"

FINDINGS OF FACT RELATING TO THE ENVIRONMENTAL IMPACT OF THE AMENDMENT TO THE REDEVELOPMENT PLAN FOR THE GARDEN GROVE COMMUNITY PROJECT

Section 1. FINDINGS CONCERNING THE SIGNIFICANCE OF SPECIFIC ENVIRONMENTAL IMPACTS IDENTIFIED IN THE FINAL EIR

a. LAND USE

(1) Environmental Impacts

The threshold criteria for determining potentially significant land use impacts associated with the Amendment are whether or not the adoption and implementation of the Amendment will: (a) conflict with adopted policies and objectives of the City's General Plan; or (b) disrupt or divide the physical arrangement of an established community.

The proposed Amendment is consistent with the uses shown on the General Plan because it incorporates by reference the General Plan and does not propose any land use or zone changes with respect to either the Existing Area or the Added Territory (as defined in the Final EIR).

With respect to the disruption or division of the physical arrangement of an established community, the development of mixed-use projects within certain sub-areas of the Project Areas could change the character of certain existing residential areas, and could result in a proximity of residential and non-residential uses that may be considered a land use conflict and a potentially significant impact.

(2) Mitigation Measures Adopted by the Agency

(a) Residential uses shall only be developed in locations where residents will not be exposed to substantial hazards, nuisances, and other land use incompatibilities. The City shall require an independent environmental review process for each proposed residential development project to ensure the compatibility of each such residential use with surrounding uses in the Added Area, and through the environmental review process, develop mitigation, if necessary, including, without limitation, denial of the project, to eliminate incompatibilities.

(b) In its decision to approve or deny an application for a development application permit or conditional use permit, the City shall consider the proposed use's potential to cause land use conflicts or compatibilities with nearby sensitive uses. Uses can be considered to have the potential to cause land use conflicts if their operation would result in the generation of excessive noise, odors, hazards, light and glare, late-night activities, high traffic levels, or other undesirable effects or activities. Sensitive uses include residential, schools, childcare, hospitals and medical facilities, congregate care, convalescent homes, libraries and similar facilities.

(c) If it is determined that a proposed use has the potential to cause land use conflicts or incompatibilities, measures shall be taken to reduce or eliminate any potential nuisances or hazards in order to protect sensitive uses. Possible design measures include increased setbacks, perimeter barriers and buffers, adequate landscaping for screening, and cut-off exterior lighting fixtures. Other possible measures include limited hours of operation, limitation of activities, which present a potential nuisance or hazard, and limitations on the type and quantity of materials used or stored at the site. Proposed site plans and building plans shall be examined to determine if the physical arrangement of facilities could be altered to reduce or eliminate potential problems. Features to be examined will include setbacks, landscaping, signs, site access and parking, exterior lighting, perimeter walls and fences, location of loading areas, building orientation, and location of equipment and storage. In some cases, minimum distance requirements may need to be established between incompatible uses.

(3) Findings of Significance

The Agency finds that the adoption and implementation of the above referenced mitigation measures will reduce land use impacts of the Amendment to a level of insignificance, and no significant unavoidable adverse impacts are anticipated as a result of the adoption and implementation of the Amendment.

b. GEOLOGY/SOILS

(1) Environmental Impacts

The threshold criteria for determining potentially significant geology/soil impacts associated with the Amendment are whether the adoption and implementation of the Amendment would:

- (a) trigger/accelerate geological processes such as landslides or erosion;
- (b) disturb or adversely affect unique geologic features of unusual scientific value;
- (c) require grading or construction that will cause displacement, compaction, or other soil disturbances that would result in a reasonable probability of damage, endangerment, or other hazard to buildings or structures from geologic/soils failure; or

The adoption and implementation of the Amendment is unlikely to cause significant geologic and soils impacts except in the area of soil erosion, and possibly in the area of liquefaction and lateral spreading, with the development of new projects and grading associated therewith, as to which information is not known and cannot be known until applications for entitlements have been submitted to the City.

(2) Mitigation Measures Adopted by the Agency

The City shall require all projects to provide soil and water erosion control measures to reduce wind and water erosion impacts to a level of insignificance in accordance with NPDES regulations and applicable laws and regulations regarding air and water quality. The City shall require the incorporation of all applicable soil and water erosion measures into both private and public projects.

A soils and geotechnical report shall be submitted to and approved by the City for each public and private projects proposed under the Amendment prior to the issuance of grading or building permits, whichever is issued first. The soils and geotechnical report will identify the types of soil on the site and determine if the soil can safely support the proposed development. If the report identifies geotechnical constraints the City shall impose mitigation measure necessary to comply with Section 1804 of the 1998 Uniform Building Code and other applicable regulations and codes.

(3) Findings of Significance

The Agency finds that adoption and implementation of the above referenced mitigation measures will reduce geology/soils impacts to a level of insignificance, and no significant unavoidable adverse geological impacts are anticipated to result from the adoption and implementation of the Amendment.

c. HYDROLOGY/DRAINAGE /WATER QUALITY

(1) Environmental Impacts

The threshold criteria for determining potentially significant drainage, hydrology and water quality impacts of the Amendment is whether the adoption and implementation of the Amendment will: (a) substantially degrade water quality in any surface body of water; (b) substantially degrade or deplete groundwater resources; or (c) cause substantial flooding, erosion, and/or siltation in any surface body of water.

Adoption and implementation of the Amendment is likely to generate additional stormwater runoff by encouraging new development which may increase impervious surfaces within the Project Area. Without mitigation, such increased runoff could result in the degradation of water quality in surface water and/or groundwater. Additionally, new development and redevelopment could result in the need for increased capacity for existing flood control facilities, or the need for construction of new flood control facilities.

(2) Mitigation Measures Adopted by the Agency

(a) All development projects as determined by the City's Public Works Department shall prepare a preliminary hydrology study to determine whether or not the existing storm drain system serving the project has capacity to handle the runoff from the proposed development project on the subject site. The City shall require on- or off-site upgrades and improvements, including on-site retention of increased surface water flows, as appropriate, to assure that project-generated runoff does not significantly impact downstream storm drain facilities.

(b) All projects shall comply with all applicable State NPDES requirements including the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) including Best Management Practices (BMP's) that must be incorporated into the project to reduce or eliminate urban pollutants from entering local surface waters to a level acceptable under the County's and City's NPDES permit.

(c) Construction in Caltrans, County, or Orange County Flood Control District right's-of-way shall be required to obtain an encroachment permit prior to the start of construction.

(3) Findings of Significance

The Agency finds that adoption by the Agency and implementation of the above mitigation measures will reduce the impacts of the Amendment on hydrology, drainage and water quality to a level of insignificance, and no significant unavoidable adverse impacts are anticipated from adoption and implementation of the Amendment.

d. TRAFFIC AND CIRCULATION

(1) Environmental Impacts

The threshold criteria for determining potentially significant traffic and circulation impacts of the Amendment is whether the adoption and implementation of the Amendment will: (a) conflict with adopted environmental plans and goals of the community in which the Project Area affected by the Amendment is located; (b) interfere substantially with the movement of any resident; and (c) cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system.

Without mitigation, the construction of projects within the Project Area will generate traffic during construction which may significantly impact traffic and circulation. Additionally, individual projects undertaken within the Project Area may, without mitigation, result in potentially significant traffic and circulation impacts, depending on density and land use, including impacts inconsistent with the County Congestion Management Plan.

(2) Mitigation Measures Adopted by the Agency

(a) The City or Agency, as appropriate, shall review all projects for potential traffic and circulation impacts, including safety and congestion, when submitted for approval. A traffic analysis shall be prepared to evaluate the potential traffic and circulation impacts when the City or Agency, as appropriate, determines a project could have significant traffic or circulation impacts. The City or Agency, as appropriate, shall require all projects to change, modify or incorporate measures accordingly to reduce identified significant traffic and circulation impacts to meet the City's minimum acceptable level of service which is Level of Service D.

(3) Findings of Significance

The Agency finds that adoption by the Agency and implementation of the above mitigation measure will reduce the impacts of the Amendment on traffic and circulation to

a level of insignificance, and no significant unavoidable adverse impacts are anticipated from adoption and implementation of the Amendment.

e. **AESTHETICS**

(1) Environmental Impacts

The threshold criteria for determining potentially significant aesthetic impacts of the Amendment is whether the adoption and implementation of the Amendment will have any substantial and demonstrable negative aesthetic effect. Construction of public and private improvement projects may result in short-term aesthetic impacts due to the presence of construction equipment and materials. Future development projects may have the potential to result in aesthetic impacts, however information regarding specific development projects cannot be known at this time and will not be known until plans for such projects are submitted for approval.

(2) Mitigation Measures Adopted by the Agency

(a) As part of the review of projects within the Project Area, the City shall evaluate and require the conformity of such projects to the Open Space/Conservation Element, Land Use Element, Community Design Element and Zoning Ordinance.

(3) Findings of Significance

The Agency finds that adoption and implementation of the above-referenced mitigation measure will reduce aesthetics to a level of insignificance, and no significant unavoidable impacts to aesthetics are anticipated as a result of adoption and implementation of the Amendment.

f. **NOISE**

(1) Environmental Impacts

The threshold criteria for determining noise impact significance is based on whether or not the Amendment will substantially increase the ambient noise levels beyond the limits set forth in the City's Noise Element.

Noise impacts associated with the Amendment can be divided into two categories: short-term and long-term impacts. The short-term impacts are generally associated with construction of improvements within the Project Area while long-term noise impacts are associated with the post construction operation of facilities and traffic generated thereby. Development encouraged by the Amendment has the potential to create both types of noise impacts, particularly traffic noise impacts resulting from increased vehicle trips to and from new development.

(2) Mitigation Measures Adopted by the Agency

City and/or Agency shall review all projects within the Project Area to determine if potentially significant noise impacts will result therefrom, and if such impacts are identified, will either require all feasible mitigation to reduce noise impacts to a level consistent with the City's Noise Element. If significant noise impacts are identified, proper measures suggested by the City or Agency, as appropriate, to reduce noise levels in compliance with the City's Noise Ordinance, shall be incorporated into the project.

(3) Findings of Significance

Significant unavoidable traffic noise impacts may result from future development under the Amendment in spite of incorporation of all feasible mitigation measures, and as to such impacts, the Agency adopts a Statement of Overriding Considerations. (See Exhibit "B," attached hereto.)

g. AIR QUALITY

(1) Environmental Impacts

The threshold for determining potentially significant air quality impacts of the Amendment is whether the adoption and implementation of the Amendment will:

(a) conflict with adopted environmental plans and goals of the community in which the Project Area affected by the Amendment is located; or

(b) violate any ambient air quality standard; contribute substantially to an existing or projected air quality violation; or expose sensitive receptors to substantial pollution concentrations.

Construction of public and private projects within the Project Area will generate short-term air quality impacts from construction operations. Common practice for minimizing such impacts include watering prior to and during grading; rinsing of construction vehicles prior to moving them; and other measures designed to minimize fugitive dust and particulates. The incorporation of standard dust control measures recognized by SCAQMD to minimize dust emissions during implementation of the Amendment will reduce dust emissions to a level of insignificance.

Development of projects as part of implementation of the Amendment may result in significant long-term air quality impacts, due to the ongoing operation of equipment, generation of electrical power and fuels associated therewith, and traffic traveling to and from such new development. Such long-term air quality impacts shall be consistent with the City's General Plan. Because the air basin in which the Project Area is located is already above SCAQMD's threshold levels for ozone (non-attainment), any contribution of development as part of implementation of the Amendment to existing ozone levels is deemed a significant air quality impact.

(2) Mitigation Measures Adopted by the Agency

(a) Adherence to SCAQMD Rule 403, Fugitive Dust, as revised, which includes dust minimization measures such as daily watering of soils, application

of non-toxic soils stabilizers, replacement of ground cover in disturbed areas as soon as possible, suspension of excavating and grading operations when wind speeds (or instantaneous gusts) exceed 25 miles per hour, and maintenance of a minimum two feet of freeboard on all trucks hauling dirt, sand, soil or other loose material.

- (b) Sweeping of local streets near the construction area.
- (c) Rinsing of wheels on construction vehicles prior to leaving construction area.
- (d) Paving of all construction access roads at least 100 feet onto the site from the main road.
- (e) Use of electricity from power poles rather than temporary diesel or gasoline powered generators.
- (f) Use of methanol, natural gas, propane, or butane powered on site mobile equipment rather than diesel or gasoline-powered equipment.
- (g) Encourage that all developments within the City with 100 employees or more develop a rideshare program as required under SCAQMD Regulation XV.
- (h) Encourage trip reduction plans to achieve 1.5 average vehicle ridership for businesses with less than 100 employees or multi-tenant worksites.
- (i) Encourage the use of low-emission fleet vehicles.
- (j) Encourage the use of satellite offices rather than regular worksites to reduce vehicle miles traveled.
- (k) Encourage on-site employee services such as cafeterias, banks, etc.
- (l) Construct additional bus turnouts, passenger benches, or shelters as appropriate.
- (m) Require the construction of on-site bicycle facilities for all new non-residential developments.
- (n) Require on-site truck loading zones for all new commercial and industrial developments.
- (o) Use of solar or low-emission water heaters in all new developments.
- (p) Use of energy efficient low-sodium parking lot lights in all new parking areas.

(q) Use of lighting controls and energy-efficient lighting in all new developments.

(r) Require the increase of wall and attic insulation beyond Title 24 requirements in all new developments.

(s) The City shall coordinate with SCAG to update and refine future population and housing projections to ensure consistency in air quality planning.

(t) All projects shall be reviewed by the City or Agency, as appropriate, for potential air quality impacts. If potential significant air quality impacts are identified, based on adopted South Coast Air Quality Management District thresholds, measures shall be incorporated into the project to reduce air quality impacts to the extent feasible.

(u) The City or Agency, as appropriate, shall incorporate into each project all applicable air emission reduction measures to reduce air emissions to comply with air emission thresholds adopted by the SCAQMD. In addition, the City or Agency, as appropriate, shall incorporate new short and long-term air emission reduction measures in the future as applicable to further reduce project air emissions.

(3) Findings of Significance

The Agency finds that implementation of the mitigation measures identified above will reduce any potential short term impacts to air quality as a result of the Amendment to a level of insignificance. Long term air quality impacts of implementing the Amendment are potentially significant in spite of mitigation measures adopted by the Agency. As to these air quality impacts, the Agency adopts a statement of Overriding Considerations. (See Exhibit "B," attached hereto.)

h. PUBLIC SERVICES

(1) Water Service

(a) Environmental Impacts

The threshold criteria for determining potentially significant water service impacts of the Amendment is whether the adoption and implementation of the Amendment will: (a) substantially degrade or deplete groundwater resources; (b) encourage activities that result in the use of large amounts of water; or (c) use water in a wasteful manner.

Development under the Amendment is required to be consistent with the City's General Plan. Additional development pursuant to the General Plan has been analyzed, and the City has determined that build-out of the General Plan would result in an increased water demand. The General Plan EIR has determined that the City has an adequate water supply to meet this added demand, and distribution and treatment systems have been sized to serve the water needs of the City, including such build-out conditions. While facts regarding specific developments cannot be known at this time, the City and/or Agency will require all future projects undertaken as part of implementation of the Amendment to

incorporate all feasible water conservation features and, to the extent new distribution facilities are required, to require such developments to fund and construct such facilities. Based on the threshold criteria and the findings of the General Plan EIR, no significant impacts on water supply are anticipated from the adoption and implementation of the Amendment.

(b) Mitigation Measures Adopted by the Agency

Since no significant impact on water service is anticipated to be caused by the Amendment, no mitigation measures are required.

(c) Findings of Significance

The Agency finds that no significant water service impacts are anticipated from the adoption and implementation of the Amendment.

(2) Police Protection

(a) Environmental Impacts

The threshold criteria for determining potentially significant impacts on police services of the Amendment is whether the adoption and implementation of the Amendment will: (a) conflict with adopted environmental plans and goals of the community in which the Project Area affected by the Amendment is located; or (b) interfere with emergency response plans or emergency evacuation plans.

The Garden Grove Police Department has determined that adoption and implementation of the Amendment will not have a significant effect on police services, however, it is expected that future development within the Project Area along with development in other parts of the City may cumulatively increase the demand for police services. The City's development review process ensures application of all relevant regulations, standards, and requirements for the provision of adequate services as development occurs, as does the City's annual Capital Improvement Program and budget review process.

(b) Mitigation Measures Adopted by the Agency

The need for additional police services such as personnel and facilities shall be monitored and mitigated during the discretionary review process for future development projects as deemed necessary by the City.

(c) Findings of Significance

The Agency finds that adoption and implementation of the above-referenced mitigation measure will reduce police service impacts to a level of insignificance.

(3) Fire Protection

(a) Environmental Impacts

The threshold criteria for determining potentially significant fire protection impacts of the Amendment is whether the adoption and implementation of the Amendment will interfere with emergency response plans or emergency evacuation plans.

While public improvements within the Project Area, such as street and water system improvements, could have positive impacts on fire protection services, development of individual projects as part of the implementation of the Amendment could result in significant impacts to fire protection services, absent mitigation. Such development could have impacts on the availability of an adequate emergency water supply, as well as increased demand for fire protection services.

(b) Mitigation Measures Adopted by the Agency

(i) Ongoing coordination with the Fire Department during review of development proposals shall be required to ensure that adequate fire protection, facilities, staffing and equipment are available to meet anticipated needs, as a condition of project approval.

(ii) The City shall continue to require developers, at the time of issuance of building permits, to participate in the City-wide fire protection impact fee program.

(c) Findings of Significance

The Agency finds that, with adoption and implementation of the above referenced mitigation measures, no significant fire protection service impacts are anticipated from the Amendment.

(4) School Facilities

(a) Environmental Impacts

The threshold criteria for determining potentially significant school facilities impacts of the Amendment is whether the adoption and implementation of the Amendment will encourage development that will result in demand for school facilities exceeding the capacity of existing and planned facilities serving the Project Area.

Construction of residential development within the Project Area could increase the number of students attending area schools, and such generation of additional students could result in demand exceeding capacity of existing and planned school facilities. The development of non-residential projects is not anticipated to significantly impact school facilities because most employees of such projects will not relocate to the Project Area but will more likely commute from their existing residences.

(b) Mitigation Measures Adopted by the Agency

(i) The City shall continue to include the appropriate school districts in the State mandated review of tentative tract maps to help ensure that adequate school facilities and services are planned and provided.

(ii) The City shall continue to require developers to contribute their fair share of State mandated school impact fees.

(iii) The City shall continue to work with the school districts and developers to facilitate the development of school facilities to accommodate growth and ensure that the districts can meet future needs; to this end, facilitate the re-opening of schools (which have been closed and used for other purposes) as necessary to accommodate increases in student populations.

(iv) The Agency shall continue to make pass-through payments pursuant to the existing tax sharing agreements and shall make all additional statutory payments required by Section 33607.5 and 33607.7 when due under the Amendment.

(c) Findings of Significance

The Agency finds that, with the adoption and implementation of the above referenced mitigation measures, no significant impacts to school facilities are anticipated from the Amendment.

(5) Wastewater Service

(a) Environmental Impacts

The threshold criteria for determining potentially significant wastewater impacts of the Amendment is whether the adoption and implementation of the Amendment will generate demand for additional sewer service that exceeds the capacity of existing and planned sewer collection infrastructure and treatment facilities.

Development under the Amendment is required to be consistent with the City's General Plan. The General Plan requires that adequate wastewater treatment plant capacity be available to serve future development. Therefore, all development will be required to demonstrate adequate wastewater treatment capacity prior to approval, or to construct new treatment facilities as a condition of approval. As no new densities or land uses are proposed in the implementation of the Amendment, the Amendment would not impact or change wastewater flows from those contemplated by the General Plan. Thus incorporation of mitigation measures as set forth in the General Plan EIR should render wastewater impacts less than significant.

(b) Mitigation Measures Adopted by the Agency

(i) The City or Agency shall evaluate for each development project whether or not adequate existing wastewater facilities are available when development plans are submitted for approval. If adequate facilities are not available the City or Agency, as appropriate, will require the developer to construct the wastewater facilities necessary to serve the project.

(ii) The City shall require that all applicable state and local water conservation measures be incorporated into all projects to reduce wastewater flows as much as feasible.

(iii) The City shall require the incorporation of all applicable and feasible measures into commercial and industrial projects to reduce the strength and quantity of wastewater equal to required standards, or less when feasible.

(c) Findings of Significance

The Agency finds that, with adoption and implementation of the above referenced mitigation measures, no significant wastewater service impacts are anticipated from the adoption and implementation of the Amendment.

i. HAZARDS

(1) Environmental Impacts

The threshold criteria for determining potentially significant hazardous impacts of the Amendment is whether adoption and implementation of the Amendment will create a potential public health hazard or involve the use, production or disposal of materials that would pose a hazard to existing or planned populations in the Project Area.

While redevelopment of industrial areas as part of implementation of the Amendment might result in a presence of hazardous materials within the Project Area, existing federal, state, and local regulations of the use, storage, and the hazard impacts of such redevelopment to a level of insignificance. Further, as part of its consideration of any future development, undertaken in implementation of the Amendment, the City and Agency will require remediation of any on-site hazardous materials as a condition of approval.

(2) Mitigation Measures Adopted by the Agency

(a) The City or Agency, as appropriate, will review development plans to assess if hazardous materials are present that could impact workers constructing the project, employees or area residents. If contaminated soils or groundwater are present the soils or groundwater will be required to be removed and remediated in conformance with law prior to commencement of construction.

(b) Use the Polanco Act, where feasible, to facilitate clean-up and remediation of contaminated sites when no alternative cleanup options are available.

(3) Findings of Significance

The Agency finds the Project will not cause any significant adverse hazard impacts.

j. POPULATION, HOUSING AND EMPLOYMENT

(1) Environmental Impacts

The threshold criteria for determining potentially significant population, housing and employment impacts of the Amendment is whether or not the adoption and implementation of the Amendment will: (a) result in noncompliance with population and housing

allocations for the region; (b) displace a large number of people; or (c) create a substantial demand for additional housing.

Development of individual projects as part of implementation of the Amendment will be consistent with the City's General Plan, which currently contemplates job creation in excess of regional projections established by the Southern California Association of Governments (SCAG). Although creation of affordable housing via the Agency's low and moderate income fund will have a positive impact on housing demand, the overabundance of jobs created by implementation of the Amendment is a significant impact.

(2) Mitigation Measures Adopted by the Agency

(a) The City shall coordinate with SCAG to update and refine future populations, housing and employment projections.

(b) The City shall evaluate projects for potential incorporation of an affordable housing component and consider compliance and implementation of affordable housing goals, programs, and objectives set-forth in the City's Housing Element, Agency's Implementation Plan and Replacement Housing Plan.

(3) Findings of Significance

The Agency finds that even with implementation of the above-referenced mitigation measures there will be unavoidable significant impacts to population, employment and housing as a result of implementation of the Amendment, and as to such impacts, the Agency adopts a Statement of Overriding Considerations. (See Exhibit "B" attached hereto.)

k. RECREATION

(1) Environmental Impacts

(a) The threshold for determining whether the Amendment will significantly impact recreation is whether the Amendment will provide less than 5 acres of parkland per 1,000 residents.

(b) Implementation of the Amendment and development of residential projects in conjunction therewith is likely to increase the City's population and result in an imbalance in the parkland to residents ratio, which is already below the 5-to-1000 established threshold. Although Agency assistance to City park projects would help mitigate this impact, the implementation of the Amendment will still result in a parkland deficit.

(2) Mitigation Measures Adopted by the Agency

(a) The need for additional park and recreational facilities shall be monitored as growth occurs and the need for additional parkland shall be mitigated during the discretionary review process for future development projects. Mitigation may be in the form of land dedicated for public park purposes or the payment of in-lieu fees. The need for the provision of private recreational facilities to serve the needs of individual development projects shall also be examined.

(b) The City shall coordinate with the Manager, EMA/Harbors, Beaches, and Parks/Program Planning, in efforts to provide additional parks and recreation opportunities.

(3) Findings of Significance

The Agency finds that even with implementation of the above-referenced mitigation measures there will be unavoidable significant impacts to recreation as a result of implementation of the Amendment, and as to such impacts, the Agency adopts a Statement of Overriding Considerations. (See Exhibit "B" attached hereto.)

I. BIOLOGICAL RESOURCES

(1) Environmental Impacts

The threshold criteria for determining potentially significant biological impacts of the Amendment is whether or not the adoption and implementation of the Amendment will: (a) reduce the number or restrict the range of any rare or endangered species of animal or plant; (b) substantially affect the movement of any resident or migratory fish or wildlife species; (c) substantially diminish habitat of significant or endangered fish, wildlife or plant species; (d) cause a fish or wildlife population to fall below self-sustaining levels; or (e) eliminate a plant or animal community.

The Project Area is located in an urbanized environment, regularly cultivated for weed control, with no existing sensitive biological resources. The Agency thus finds that no significant biological impact would occur from the Amendment.

(2) Mitigation Measures Adopted by the Agency

Since no potentially significant biological impacts will occur from the Amendment, no mitigation measures are being adopted.

(3) Findings of Significance

The Agency finds that no significant unavoidable adverse impacts are anticipated.

m. CULTURAL RESOURCES

(1) Environmental Impacts

The threshold for determining whether the Project will disrupt or adversely affect a prehistoric or historic archaeological site or a property of historical or cultural significance to a community or ethnic or social group; or a paleontological site, except as part of a scientific study.

Sensitive archaeological resources may exist in the Project Area, and development occurring as a result of adoption of the Amendment could significantly impact such archaeological resources.

(2) Mitigation Measures Adopted by the Agency

(a) Phase 1: Phase 1 shall consist of a qualified archaeologist doing a literature and records search, surface study, subsurface testing if necessary, the recordation of any sites, and a recommendation regarding the need for further work.

(b) Phase 2: If it is determined during Phase 1 that further work is necessary, it shall consist of the following:

(i) A qualified archaeological monitor shall be present at a pre-grading conference with the developer, grading contractor, and the environmental review coordinator. The purpose of this meeting will be to consult and coordinate the role of the archaeologist in the grading of the site.

(ii) An archaeologist or designate shall be present during those relative phases of grading as determined at the pre-grading conference. The monitor shall have the authority to temporarily direct, divert, or halt grading to allow recovery of fossil remains. The developer shall authorize the deposit of any resources found on the project site in an institution staffed by qualified archaeologist as may be determined by the Community Development Director. The contractor shall be aware of the random nature of archaeological resource occurrences and the possibility of a discovery of such scientific and/or educational importance that might warrant a long-term salvage operation or preservation. The Community Development Director shall resolve any conflicts regarding the role of the archaeologist and/or recovery times.

(3) Findings of Significance

The Agency finds that, with adoption and implementation of the above-referenced mitigation measures, the Amendment will cause no significant impacts on cultural resources.

n. CUMULATIVE IMPACTS ON AIR QUALITY AND TRANSPORTATION/CIRCULATION

(1) Environmental Impacts

The threshold for determining if the Amendment will have significant cumulative impacts is whether the incremental effects of the Amendment are cumulatively considerable when viewed in connection with the effects of past projects, current projects, and foreseeable future projects. The City's General Plan, EIR found that build-out under the General Plan would result in significant cumulative impacts in the areas of traffic, population, housing and employment noise, and parks and recreation. Because the Amendment contemplates development in compliance with the General Plan, implementation of the Amendment will have the same cumulative impacts.

(2) Mitigation Measures Adopted by the Agency

All feasible mitigation measures, as described in the City's General Plan EIR and in these Findings of Fact, shall be implemented by the City and/or the Agency. However, other mitigation measures which would mitigate these impacts to a level of insignificance are infeasible because they are not within the jurisdiction of the City or the Agency, or are economically or technically infeasible due to current build-out conditions.

(3) Findings of Significance

As to cumulative impacts on traffic, population, housing and employment, noise and parks and recreation, the Agency adopts a Statement of Overriding Considerations. (See Attachment "B" below.)

Section 2. FINDINGS REGARDING INFEASIBILITY OF PROJECT ALTERNATIVES

a. ALTERNATIVE 1: NO PROJECT

As a "No Project" alternative, CEQA requires a discussion of "the existing conditions, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services". The existing conditions are described in the Project Description, the Environmental Setting section, and in the "environmental setting" discussion of each environmental issue analyzed in the EIR.

Under the "No Project" alternative, existing blighted conditions in the Added Territory will in all likelihood remain and continue well into the future, and in many cases, worsen without an infusion of public assistance. Moreover, a deficit in affordable housing would

likely result due to the Agency's inability to collect tax increment from the Added Territory and to utilize its 20% "set-aside" funds to create and preserve affordable housing in the community.

Since the elimination of blight and the provision of affordable housing are the primary objectives of the Amendment, the "No Project" alternative would not implement the basic project objectives, and is therefore infeasible and less desirable than the proposed Amendment.

Furthermore, the "No Project" alternative would not eliminate the indirect adverse environmental impacts of the Amendment, because development would occur even without the Amendment in accordance with the City's General Plan. The impacts of such development would likely be worse without the Amendment, because the Agency would not have the ability to construct needed public improvements to mitigate certain environmental effects of such development.

Based on this analysis, the "No Project" Alternative is neither environmentally superior or inferior to the proposed Project, and is infeasible in that it fails to meet basic project objectives.

b. ALTERNATIVE 2: ALTERNATIVE FINANCING

Under this Alternative, the City would be required to find alternative sources of funding for public improvements. Under the scenario, the Agency would be unable to secure revenue, acquire property, fund renovations or new projects, or otherwise reduce blight on private property or improve the economic viability of the Added Territory. Thus, like the "No Project" alternative, this alternative will not meet the basic objectives of the Amendment and is therefore found to be infeasible. Furthermore, this alternative would not eliminate the environmental impacts associated with the Amendment, in that development would still occur, albeit potentially at a lower pace, at the densities and land uses set forth in the General Plan.

Based on this analysis, this Alternative is not environmentally superior or inferior, and is infeasible in that it fails to meet basic project objectives.

c. ALTERNATIVE 3: CHANGE PROJECT AREA

Under this alternative, certain sub-areas of the Added Territory would be removed. This alternative would not preclude development of such sub-areas consistent with the General Plan, and therefore would not eliminate the environmental impacts associated with the Amendment. Additionally, removal of sub-areas would keep the Agency from eliminating blight in the sub-areas, one of the primary goals of the Amendment.

Based on this analysis, this alternative is not environmentally superior to the proposed Amendment, and is at any rate infeasible because it fails to achieve the project objective of eliminating blight throughout the Project Area as proposed to be amended.

d. Preferred Alternative

None of the project alternatives are environmentally superior to or preferred to the proposed Amendment. The proposed Amendment will have potential environmental impacts, but mitigation measures have been incorporated to the extent feasible to reduce many potential impacts to levels of insignificance. To the extent such impacts cannot be feasibly mitigated to a level of insignificance, project benefits are overriding considerations which justify approval of the Amendment, and as to those impacts, the Agency adopts a Statement of Overriding Considerations. (See Exhibit "B".)

The "No Project" alternative is not superior to the proposed Project, as it would not lessen any of the environmental impacts associated with the Project, nor would it meet the basic objectives of the Amendment to eliminate blight and increase affordable housing. Likewise, the Alternative Funding Alternative and the Reduction in the Added Territory Alternative would each have substantially similar environmental effect to those associated with the proposed Amendment, and would not accomplish the primary objectives of the Amendment.

In conclusion, the proposed Amendment is the preferred project for accomplishing the Agency's objectives. The proposed Amendment will allow the Agency to achieve its objectives of eliminating blight in the community consistent with the City's General Plan, increasing affordable housing in the community; and encouraging and facilitating the economic revitalization of currently stagnant and unproductive areas therein. Moreover, the environmental impacts of the Amendment are no more severe than those associated with the other alternatives considered and future development throughout the Project Area consistent with the General Plan as amended from time to time throughout the life of the Redevelopment Plan.

EXHIBIT "B"
STATEMENT OF OVERRIDING CONSIDERATIONS

Based on information set forth in the Final EIR and the Findings of Fact (Exhibit "A"), the Agency finds that the Amendment's adverse environmental impacts related to noise; air quality; population, housing, and employment; and parks and recreation; and adverse cumulative environmental impacts related to traffic; population, housing and employment; noise; and parks and recreation; are significant environmental impacts which cannot be entirely mitigated or avoided if the Amendment is implemented.

However, these unavoidable significant effects of the Amendment are overridden by the benefits of the Amendment and the considerations described below. Therefore, the Agency hereby approves and adopts this Statement of Overriding Considerations.

- (1) The Project will remedy, remove and prevent physical and economic blighting influences which are present in the Project Area.
- (2) The Project will encourage employment opportunities through environmental and economic improvements resulting from the redevelopment activities.
- (3) The Project will provide public infrastructure improvements and community facilities, such as the installation, construction and/or reconstruction of streets, utilities, buildings, facilities, structures, street lighting, landscaping and other improvements which are necessary for the effective redevelopment of the Project Area.
- (4) The Project will encourage the redevelopment of the Project Area through the cooperation of private enterprise and public agencies.
- (5) The Project will generate sales tax revenues and other local revenues to the City and the community.
- (6) The Project will attract new development into an unproductive area of the Community and recycle stagnant land uses in the area into viable and productive uses consistent with the City's General Plan.

Subject: Re: Agency Resolution No. 629
From: Matthew Reid <matt.reid@landanddesign.com>
Date: Fri, 15 Jul 2011 14:40:58 -0700
To: Greg Blodgett <Greg1@ci.garden-grove.ca.us>
CC: Dave Rose <drose3@charter.net>, Paul Guerrero <paulg@ci.garden-grove.ca.us>

Greg,

Has the City not ever faced this issue before this project? Seems unlikely...They're must be a way around this issue...

Matthew Reid

Land & Design, Inc.

8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942

619.335.5896 Google voice | 619.462.4144 fax

Skype – matthew.reid.ca

matt.reid@landanddesign.com

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Fri, 15 Jul 2011 14:14:50 -0700
To: Dave Rose <drose3@charter.net>, Karl Hill <karlh@ci.garden-grove.ca.us>, Matthew Reid <matt.reid@landanddesign.com>
Cc: Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Rogier Goedecke <rg@rkengineer.com>, Maria Parra <mariap@ci.garden-grove.ca.us>, Michael Dickerson <md@rkengineer.com>, "Chang, Jane" <Jane.Chang@aecom.com>, Paul Guerrero <paulg@ci.garden-grove.ca.us>
Subject: FW: Agency Resolution No. 629

Hi All,

I just received this resolution from the City and a quick review shows that the 2002 EIR did identify significant unavoidable impacts to:

“noise; air quality; population, housing and employment; and park and recreational impacts; and, as to cumulative impacts on traffic; population, housing and employment; noise; and parks and recreation; which are not eliminated or mitigated to a level of insignificance, the Agency hereby adopts the Statement of Overriding Considerations set forth in Exhibit “B” which is attached hereto and incorporated herein by reference, and finds that based on substantial evidence in the record, including but not limited to the Statement of Overriding Considerations, the specific economic, legal, social, technological and other benefits of the Amendment outweigh the significant effects on the environment.”

This is good and bad news from the Addendum EIR aspect. Good that it had a statement of overrides adopted, but bad that aesthetic was not listed as one of the unavoidable impacts.

I still need to review the EIR, especially the aesthetics section, but will let you know my thoughts as soon as I do.

Best,

Jayna Morgan
AECOM
T. 949.660.8044

From: Maria Parra [<mailto:mariap@ci.garden-grove.ca.us>]
Sent: Friday, July 15, 2011 1:58 PM
To: Morgan, Jayna
Subject: Agency Resolution No. 629

Hi Jayna,

Karl asked that I e-mail you a copy of the Resolution that certified the EIR for the Redevelopment plan.

Thanks!

Maria Parra

Urban Planner
City of Garden Grove | Planning Services Division
11222 Acacia Parkway, Garden Grove, CA 92840
(714) 741-5312 | (714) 741-5578 fax
mariap@ci.garden-grove.ca.us | www.ci.garden-grove.ca.us

Community Development Department of the City of Garden Grove
"Providing Quality Services Through Creativity and Collaboration"

From: "Karl Hill" <karlh@ci.garden-grove.ca.us>
To: "Maria Parra" <mariap@ci.garden-grove.ca.us>
Sent: Friday, July 15, 2011 11:41:39 AM
Subject: Fwd: Agency Resolution No. 629

Maria: do you have Jayna's e-mail to forward this copy of the resolution of the EIR to Jayna???

thanks
Karl

From: "Denise Kehn" <denisek@ci.garden-grove.ca.us>
To: "Maria Parra" <mariap@ci.garden-grove.ca.us>, "Paul Guerrero" <paulg@ci.garden-grove.ca.us>
Cc: "Karl Hill" <karlh@ci.garden-grove.ca.us>
Sent: Friday, July 15, 2011 10:58:24 AM
Subject: Fwd: Agency Resolution No. 629

Here is the attachment. Sorry.

A copy of the EIR report will be sent to Karl.

Denise Kehn
Records Specialist
City of Garden Grove
714-741-5036

From: "Denise Kehn" <denisek@ci.garden-grove.ca.us>
To: "Maria Parra" <mariap@ci.garden-grove.ca.us>, "Paul Guerrero" <paulg@ci.garden-grove.ca.us>
Cc: "Karl Hill" <karlh@ci.garden-grove.ca.us>
Sent: Friday, July 15, 2011 10:41:29 AM
Subject: Agency Resolution No. 629

Attached is a copy of Resolution No. 629 pertaining to the Agency approving and certifying the final environmental impact report for the amendment of the redevelopment plan for the Garden Grove Community Project.

Denise Kehn
Records Specialist
City of Garden Grove
714-741-5036

--

Karl Hill

Subject: US Hotel Occupancy Rises Anaheim-Santa Ana (+20.2 percent to US\$98.61

From: Greg Blodgett <greg1@ci.garden-grove.ca.us>

Date: Sun, 17 Jul 2011 16:59:51 -0700 (PDT)

To: Matt Fertal <matff@ci.garden-grove.ca.us>, Greg Blodgett <greg1@ch.ci.garden-grove.ca.us>

CC: Trae Rigby <traer@mcwhinney.com>, Paul Guerrero <paulg@ci.garden-grove.ca.us>, Matthew Reid <matt.reid@landanddesign.com>

The U.S. hotel industry experienced increases in all three key performance metrics during the week of 3-9 July 2011, according to data from STR.

In year-over-year comparisons for the week, occupancy rose 2.0 percent to 63.8 percent, average daily rate increased 3.4 percent to US\$98.40, and revenue per available room finished the week up 5.4 percent to US\$62.74.

Among the Top 25 Markets, Anaheim-Santa Ana, California, rose 12.1 percent in occupancy to 82.2 percent, reporting the largest increase in that metric. Five other markets posted occupancy increases of more than 10 percent: Miami-Hialeah, Florida (+11.1 percent to 69.6 percent); Orlando, Florida (+10.9 percent to 77.0 percent); Phoenix, Arizona (+10.5 percent to 41.0 percent); Tampa-St. Petersburg, Florida (+10.5 percent to 55.9 percent); and Los Angeles-Long Beach, California (+10.1 percent to 73.5 percent). New Orleans, Louisiana, dropped 15.5 percent in occupancy to 57.5 percent, reporting the only double-digit decrease in that metric.

Two markets experienced double-digit ADR increases for the week: Los Angeles-Long Beach (+11.2 percent to US\$124.45) and San Francisco/San Mateo, California (+10.9 percent to US\$135.44). Atlanta, Georgia, reported the largest ADR decrease, falling 2.9 percent to US\$72.85, followed by Washington, D.C., with a 2.2-percent decrease to US\$117.17.

Los Angeles-Long Beach jumped 22.5 percent in RevPAR to US\$91.46, reporting the largest increase in that metric, followed by Miami-Hialeah (+20.9 percent to US\$90.08) and Anaheim-Santa Ana (+20.2 percent to US\$98.61). New Orleans fell 17.0 percent in RevPAR to US\$63.39, reporting the largest decrease in that metric.

Greg Blodgett
SR Project Manager
City of Garden Grove
Economic Development

Subject: Revised Site C Site Plan

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>

Date: Mon, 18 Jul 2011 11:04:17 -0700

To: Matthew Reid <matt.reid@landanddesign.com>, David Rose <drose3@charter.net>

CC: Rogier Goedecke <rg@rkengineer.com>, Greg Blodgett <greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, "Smith, Don (Irvine)" <Don.E.Smith@aecom.com>, "Yang, Wendy" <Wendy.Yang@aecom.com>, "Suthiwan, Popy" <Popy.Suthiwan@aecom.com>, Bob Kahn <rk@rkengineer.com>, "Chang, Jane" <Jane.Chang@aecom.com>

Hi All,

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Matt/David- can you please coordinate with Roger Godecke to get the sketch plan he and Bob Kahn prepared on the secondary access so it can be incorporated into the revised site plan.

Thanks,

Jayna Morgan

Environmental Planner

Design + Planning

jayna.morgan@aecom.com

AECOM

2737 Campus Drive, Irvine, CA 92612 USA

T 949.660.8044 F 949.660.1046

www.aecom.com

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Great!

Jayna Morgan

AECOM

T. 949.660.8044

From: Matthew Reid [mailto:matt.reid@landanddesign.com]

Sent: Monday, July 18, 2011 11:23 AM

To: Morgan, Jayna; Dave Rose

Cc: Rogier Goedecke; Greg Blodgett; Karl Hill; Smith, Don (Irvine); Yang, Wendy; Suthiwan, Popy; Robert Kahn; Chang, Jane

Subject: Re: Revised Site C Site Plan

We should have this plan for you today.

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www.aecom.com

Subject: RE: Revised Site C Site Plan

From: "Rogier Goedecke" <rg@rkengineer.com>

Date: Mon, 18 Jul 2011 15:59:35 -0700

To: "Matthew Reid" <matt.reid@landanddesign.com>, "Morgan, Jayna" <Jayna.Morgan@aecom.com>, "Dave Rose" <drose3@charter.net>

CC: "Greg Blodgett" <greg1@ci.garden-grove.ca.us>, "Karl Hill" <karlh@ci.garden-grove.ca.us>, "Smith, Don (Irvine)" <Don.E.Smith@aecom.com>, "Yang, Wendy" <Wendy.Yang@aecom.com>, "Suthiwan, Popy" <Popy.Suthiwan@aecom.com>, "Bob Kahn" <rk@rkengineer.com>, "Chang, Jane" <Jane.Chang@aecom.com>, "Dan Candelaria" <danc@ci.garden-grove.ca.us>

Hi Matthew,

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Please provide clarification and/or confirmation of the above assumptions so we can revise the technical reports.

Kind regards,

Rogier Goedecke

Vice President Operations



transportation planning / traffic engineering & design
acoustical engineering / community traffic calming

4000 Westerly Place, Suite 280
Newport Beach, CA 92660
tel. 949.474.0809
fax 949.474.0902

www.rkengineer.com

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To: Morgan, Jayna; Dave Rose

Cc: Rogier Goedecke; Greg Blodgett; Karl Hill; Smith, Don (Irvine); Yang, Wendy; Suthiwan, Popy; Bob Kahn; Chang, Jane

Subject: Re: Revised Site C Site Plan

All new site plan per our conversation last week. We will reserve the right to make geometrical adjustments for the

final plan....

Thank you.

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Site C Site Plan RK .pdf	Content-Description: Site C Site Plan RK .pdf
	Content-Type: application/octet-stream
	Content-Encoding: base64



PROPOSED ELEVATED WITH INTERNATIONAL WEST LODG

HARBOR BOULEVARD

FULL SERVICE HOTEL
 19 STORIES
 350 KEYS
 -20 CASITAS W/ PRIVATE PATIO & POOL DECK
 -FANTASY POOL DECK W/BAR
 -SPA DECK
 -3 MEAL RESTAURANT & BAR
 5,000 S.F.
 -ALL DAY RESTAURANT, 5,000 S.F.

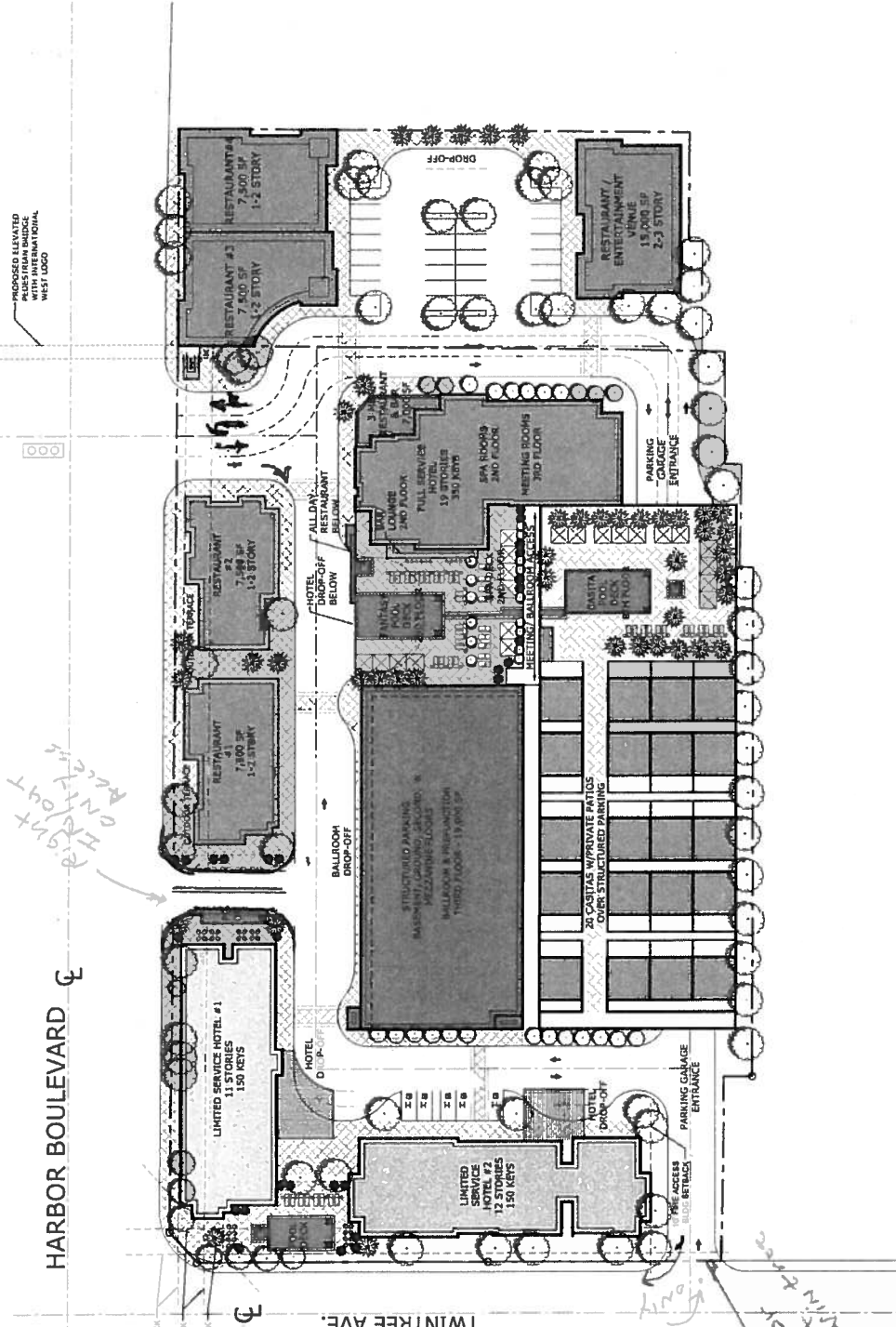
CONFERENCE CENTER
 BALLROOM AND MEETING ROOMS
 38,000 S.F.

LIMITED SERVICE HOTEL #1
 11 STORIES
 150 KEYS
 +/-15 ROOMS/FLOOR
 -MEETING ROOMS, 1,000 S.F.
 -POOL DECK / FITNESS CENTER

LIMITED SERVICE HOTEL #2
 12 STORIES
 150 KEYS
 +/-14 ROOMS/FLOOR
 -MEETING ROOMS, 1,000 S.F.
 -POOL DECK / FITNESS CENTER

RESTAURANTS / RETAIL
 -RESTAURANT #1 7,500 SF
 -RESTAURANT #2 7,500 SF
 -RESTAURANT #3 7,500 SF
 -RESTAURANT #4 7,500 SF
 -RESTAURANT / ENTERTAINMENT VENUE 15,000 SF
 15,000 SF

PARKING PROVIDED
 TOTAL -1,270 SPACES



International WEST
 GARDEN GROVE • CALIFORNIA

SITE PLAN - SCHEME 3.3
 SCALE: 1/64"=1'-0"

05.31.11
 JOB # 1043P
 Disclaimer: Hotel and restaurant brands shown are for demonstration purposes only; actual final proposal may contain a combination of brands shown or different brands altogether.

Subject: RE: Revised Site C Site Plan

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Thanks for the clarification Roger.

Jayna Morgan

AECOM

T. 949.660.8044

From: Rogier Goedecke [mailto:rg@rkengineer.com]

Sent: Monday, July 18, 2011 4:00 PM

To: Matthew Reid; Morgan, Jayna; Dave Rose

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Jayna Morgan
Environmental Planner
Design + Planning
jayna.morgan@aecom.com
AECOM
2737 Campus Drive, Irvine, CA 92612 USA
T 949.660.8044 F 949.660.1046
www.aecom.com

Subject: Revised Site C

From: Maria Parra <mariap@ci.garden-grove.ca.us>

Date: Mon, 18 Jul 2011 17:05:43 -0700 (PDT)

To: rg@rkengineer.com

CC: Matthew Reid <matt.reid@landanddesign.com>, Jayna Morgan <Jayna.Morgan@aecom.com>, Dave Rose <drose3@charter.net>, Cc <gregl@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, "Don Smith (Irvine)" <Don.E.Smith@aecom.com>, Wendy Yang <Wendy.Yang@aecom.com>, Popy Suthiwan <Popy.Suthiwan@aecom.com>, Bob Kahn <rk@rkengineer.com>, Jane Chang <Jane.Chang@aecom.com>, Dan Candelaria <danc@ci.garden-grove.ca.us>

Hi Roger,

Below are the parking requirements for Site "C":

Hotel with ancillary uses (located within the hotel):

*Hotel rooms: .8 space per room

*Hotel conference rooms and ballrooms: 1 space per 100 SF of gross floor area

*Hotel restaurants: 1 space per 100 SF gross floor area

Pad Buildings:

*Restaurants: 1 space per 100 SF of gross floor area

*Restaurants with entertainment: 1 space per 100 SF of gross floor area (seating and service), plus 1 space per 35 SF of entertainment area, plus 1 space per 7 SF of dance floor

*Assembly halls and dance floors: 1 space per 7 SF of dance floor or assembly area, plus 1 space per 35 SF of additional gross floor area.

If you have any questions, please contact the Planning Services Division at (714) 741-5312.

Sincerely,

Maria Parra

Urban Planner

City of Garden Grove | Planning Services Division

11222 Acacia Parkway, Garden Grove, CA 92840

(714) 741-5312 | (714) 741-5578 fax

mariap@ci.garden-grove.ca.us | www.ci.garden-grove.ca.us

Community Development Department of the City of Garden Grove

"Providing Quality Services Through Creativity and Collaboration"

From: "Rogier Goedecke" <rg@rkengineer.com>

To: "Matthew Reid" <matt.reid@landanddesign.com>, "Jayna Morgan" <Jayna.Morgan@aecom.com>, "Dave Rose" <drose3@charter.net>
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Sent: Monday, July 18, 2011 3:59:35 PM
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Rogier Goedecke
Vice President Operations



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tel. [949.474.0809](tel:949.474.0809)
fax [949.474.0902](tel:949.474.0902)

www.rkengineer.com

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Subject: RE: Revised Site C Site Plan

Great!

Jayna Morgan

AECOM

T. [949.660.8044](tel:949.660.8044)

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Sent: Monday, July 18, 2011 11:23 AM

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	All ancillary area(s) shall provide 1 space for each 250 square feet of gross floor area
F. Commercial Recreation.	
1. Golf course	100 spaces per 9 holes; 200 spaces for 18 holes, plus requirements for other facilities
2. Golf driving range	1.5 spaces per tee
3. Bowling alley	3 spaces per alley plus spaces for other uses on-site
4. Movie theaters	
a. Single screen	.5 space per seat
b. Multi screen	.3 space per seat
5. Arcades, pool hall	1 space per 200 square feet of gross floor area
6. Night clubs	1 space per 7 square feet of dance floor, plus 1 space per 35 square feet of additional gross floor area
7. Assembly halls and dance floors	1 space per 7 square feet of dance floor or assembly area, plus 1 space per 35 square feet of additional gross floor area
8. Spa/health clubs/gyms	1 space per 200 square feet of gross floor area
9. Private clubs	1 space per each 15 square feet of assembly area
10. Water oriented parks	
a. Public swimming pool	1 space per 500 square feet, plus spaces required for other uses on-site
b. Amusement park	Parking study required
11. Skating rinks	1 space per 100 square feet of gross floor area, plus spaces required for other uses on-site
12. Adult entertainment uses	
a. Adult bookstores including video rental and video arcade	1 space per 90 square feet
b. Adult motion picture theater/ mini motion picture theater	1 space per 3 seats, plus 5 spaces for employees
c. Cabaret	1 space per 25 square feet of gross floor area
d. Massage parlor	1 space per 200 square feet of gross floor area

- O. No person shall occupy or use any camp car, camper, mobile home, recreational vehicle, camper shell, trailer, vessel or other vehicle or trailer as a dwelling or for living or sleeping quarters upon any public street, right-of-way, alley, private street or alley, or any private property except in an approved trailer, mobile home or recreational vehicle park.

SECTION 9.16.040.150: Parking spaces required

The number of off-street parking spaces required shall be no less than as set forth in the following schedule. Parking shall be calculated by the maximum building occupancy and/or the gross floor area, as applicable. Where the application of these schedules results in a fractional space, then the resulting fraction shall be rounded up to the higher whole number.

USE	REQUIRED MINIMUM PARKING SPACES
A. Residential Uses.	
1. Preschool/daycare	1 space per care provider and staff member plus 1 space for each 6 children
B. Commercial Uses.	
1. Retail	
a. Under 40,000 square feet	1 space per 200 square feet gross floor area
b. 40,000--100,000 square feet	1 space per 225 square feet gross floor area
c. 100,000+ square feet	1 space per 250 square feet gross floor area
2. Restaurants	
Eating, Drinking Establishments, Cafes, Cafeterias, Lounges, Bars	
a. Attached 0-16 seats less than 300 s.f. of customer/dining area	1 space per 200 square feet of gross floor area
b. Attached 16+ seats	1 space per 100 square feet of gross floor area with a minimum of 10 spaces
c. Freestanding	1 space per 100 square feet of gross floor area with a minimum of 10 spaces
d. With entertainment	1 space per 100 square feet of gross floor area (seating and service), plus 1 space per 35 square feet of entertainment area, plus 1 space per 7 square feet of dance floor
3. Service stations	

Subject: Re: Revised Site C Site Plan

From: drose3@charter.net

Date: Tue, 19 Jul 2011 00:23:47 +0000

To: "Rogier Goedecke" <rg@rkengineer.com>, "Matthew Reid" <matt.reid@landanddesign.com>, "Morgan, Jayna" <Jayna.Morgan@aecom.com>

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- 1) Shown on new site plan;
- 2) City had indicated a driveway between Twintree and proposed new signal could NOT occur; and
- 3) Assume its restaurant, unless Matt strongly disagrees or IF we have to do EIR, then assume entertainment venue.

Please advise.

Thanks.

Dave

Sent via BlackBerry by AT&T

From: "Rogier Goedecke" <rg@rkengineer.com>

Date: Mon, 18 Jul 2011 15:59:35 -0700

To: Matthew Reid<matt.reid@landanddesign.com>; Morgan, Jayna<Jayna.Morgan@aecom.com>; Dave Rose<drose3@charter.net>

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2737 Campus Drive, Irvine, CA 92612 USA

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Fwd:

Subject: Fwd:
From: Sherri Oslund <sherrio@ci.garden-grove.ca.us>
Date: Tue, 19 Jul 2011 16:58:33 -0700 (PDT)
To: matt.reid@landanddesign.com
CC: Greg Blodgett <greg1@ci.garden-grove.ca.us>

Shade/Shadow study

Sherri Oslund
City of Garden Grove
Economic Development Department
sherrio@ci.garden-grove.ca.us
714/741-5120 Direct
714/741-5136 Fax

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PLANNING ■ DESIGN ■ CONSTRUCTION

SHADE/SHADOW STUDY
for the
Harbor Boulevard Hotel and Water Park Project

Consultant:

RBF CONSULTING
14725 Alton Parkway
Irvine, California 92618
Contact: Mr. Eddie Torres, INCE, REA
Director of Technical Studies
949.855.3612

Ms. Kristen Bogue, CEI, REA
Visual Resource Specialist
949.855.5747

September 2010

JN 10-107653

TABLE OF CONTENTS

1.0	PURPOSE OF THE STUDY	1
1.1	Project Description	1
2.0	METHODOLOGY.....	2
3.0	EXISTING CONDITIONS.....	4
3.1	Climate	4
3.2	Existing Shade/Shadow Conditions.....	4
4.0	SHADE/SHADOW ANALYSIS	10
4.1	Thresholds of Significance	10
4.2	Impacts and Mitigation Measures.....	10
5.0	REFERENCES	18
5.1	Preparers	18
5.2	Documents	18
5.3	Web Sites	18

LIST OF EXHIBITS

Exhibit 1 – Existing Summer Shadow Patterns	6
Exhibit 2 – Existing Winter Shadow Patterns.....	7
Exhibit 3 – Existing Vernal Shadow Patterns	8
Exhibit 4 – Existing Autumnal Shadow Patterns.....	9
Exhibit 5 – Proposed Summer Shadow Patterns.....	11
Exhibit 6 – Proposed Winter Shadow Patterns	13
Exhibit 7 – Proposed Vernal Shadow Patterns.....	15
Exhibit 8 – Proposed Autumnal Shadow Patterns.....	16

1.0 PURPOSE OF THE STUDY

The purpose of this Shade/Shadow Study (Study) is to describe the existing sunlight exposure and shade/shadow conditions at the project site and in the immediate vicinity, as well as analyzing the introduction of new sources of shade/shadow associated with the project. The information upon which this Study was based was compiled from site photographs, field reconnaissance conducted by RBF Consulting (RBF) personnel on August 9, 2010, and shade/shadow diagrams prepared by RBF for both the existing and proposed conditions.

1.1 PROJECT DESCRIPTION

PROJECT LOCATION

The proposed Harbor Boulevard Hotel and Water Park Project (herein referenced as the project) is located in the City of Garden Grove (City), California, within the northwestern portion of Orange County, California. The project site is located along Harbor Boulevard, approximately 0.60 miles north of State Route 22 (SR-22), and 0.10 miles south of Lampson Avenue. Overall, the project site is located within a developed area of the City and consists of two single-family residential units, a Recreational Vehicle (RV) Park, commercial uses (an abandoned building and the Humdinger Bar), and vacant disturbed land.

PROJECT DESCRIPTION

The proposed project consists of a hotel with a conference center, water park, restaurant, and parking garage. The project would construct a hotel structure with a conference center (up to 12 floors and 162 feet in height), water park (three floors and 70 feet in height), restaurant (one floor), and parking garage (five floors and 50 feet in height). Site access for the proposed project would be provided via a new signal-controlled full-access intersection at Harbor Boulevard, consisting of two inbound lanes and three outbound lanes.

2.0 METHODOLOGY

Shading refers to the effect of shadows cast upon adjacent areas by proposed structures. Consequences of shadows upon land uses may be positive, including cooling effects during warm weather, or negative, such as the loss of natural light necessary for solar energy purposes or the loss of warming influences during cool weather. Shadow effects are dependent upon several factors, including the local topography, the height and bulk of the project's structural elements, sensitivity of adjacent land uses, season, and duration of shadow projection. Facilities and operations sensitive to the effects of shading include: routinely usable outdoor spaces associated with residential, recreational, or institutional (e.g., schools, convalescent homes) land uses; commercial uses such as pedestrian-oriented outdoor spaces or restaurants with outdoor eating areas; nurseries; and existing solar collectors. These uses are considered sensitive because sunlight is important to function, physical comfort, or commerce.

In order to identify the proposed project's potential shadow-related impacts, existing and project-generated morning, noon, afternoon, and evening shade patterns were compared for each of the four seasons. Specifically, four dates were used for analysis purposes: the winter and summer solstices (December 21 and June 21), when the sun is at its lowest and highest point, respectively, and the spring and fall equinoxes (March 21 and September 21), when day and night are of approximately equal length. The longest shadows are cast during the winter months and the shortest shadows are cast during the summer months. The following discussion describes the summer/winter solstice and vernal/autumnal equinox phenomenon, local topography, and some general assumptions that affect shadow patterns in the project vicinity. Note that the analysis considers shadow effects associated with proposed building massing only; the shadow patterns associated with proposed landscaping are not addressed.

SUMMER AND WINTER SOLSTICE

"Solstice" is defined as either of the two points on the ecliptic that lie midway between the equinoxes (separated from them by an angular distance of 90°). At the solstices, the sun's apparent position on the celestial sphere reaches its greatest distance above or below the celestial equator, about 23.5° of the arc. At the time of summer solstice, approximately June 21, the sun is directly overhead at noon at the Tropic of Cancer. In the Northern Hemisphere, the longest day and shortest night of the year occur on this date, marking the beginning of summer. At winter solstice, approximately December 21, the sun is overhead at noon at the Tropic of Capricorn; this marks the beginning of winter in the Northern Hemisphere. Measuring shadow lengths for the winter and summer solstices represents the extreme shadow patterns that occur throughout the year. Shadows cast on the summer solstice are the shortest shadows during the year, becoming progressively longer until winter solstice when the shadows are the longest they are all year. Shadows are shown for summer and winter solstice, cast from 9:00 a.m. to 6:00 p.m. (summer) and to 3:00 p.m. (winter).

VERNAL AND AUTUMNAL EQUINOX

An equinox is the moment when the sun passes over the equator. The event occurs twice a year, approximately March 21 and September 21. The equinoxes are the two days each year when the middle of the sun is an equal amount of time above and below the horizon for every location on Earth. In the Northern Hemisphere, the March equinox is known as the vernal equinox and the September equinox is the autumnal equinox. In the Southern Hemisphere, the names are reversed. In practice, at the equinox, the day is longer than the night.

The equinoxes can be interpreted as virtual points in the sky. As Earth moves around the sun, the apparent position of the sun relative to the other stars moves in a full circle over the period of a year. This circle is called the ecliptic, and is also the plane of Earth's orbit projected against the whole sky. Other bright planets like Venus, Mars, and Saturn also appear to move along the ecliptic, because their orbits are in a similar plane to Earth's. Another virtual circle in the sky is the celestial equator, or the projection of the plane of Earth's equator against the whole sky. Because Earth's axis of rotation is tilted relative to the plane of Earth's orbit around the sun, the celestial equator is inclined to the ecliptic by about 23.5°.

SHADE/SHADOW DIAGRAMS

The shade/shadow diagrams are composed of a series of three-dimensional rendered site plans. The site plans consist of the project massing models, as well as the surrounding context and geography. Upon receiving the electronic site plan files (AutoCAD) and project description, RBF creates a 3D model to the correct heights. RBF then merges an ortho-rectified aerial photograph into AutoCAD at the correct coordinates and creates the base of the model. The AutoCAD file is then imported into SketchUp where the remainder of the model is built, based on the proposed building heights. Within SketchUp, RBF sets the model location, times, and dates, and renders the shadow conditions. The models illustrate the shadow effects of existing buildings and new buildings proposed as part of the project application. The orientation of the model was set to represent the orientation of the project site. Dates selected for each season were: summer/winter solstices and the vernal/autumnal equinoxes. For each of those days selected, the time periods were 9:00 a.m., 12:00 p.m., 3:00 p.m., and 6:00 p.m. The vernal and autumnal shadow patterns are similar in nature; these discussions have been grouped together in Section 3.2, Existing Shade/Shadow Conditions, and Section 4.2, Proposed Shade/Shadow Conditions.

3.0 EXISTING CONDITIONS

The project site currently consists of two single-family residential units, a RV Park (including an administrative building with a community pool and laundry facility), commercial uses (an abandoned building and the Humdinger Bar), and vacant disturbed land. Vegetation along the project boundaries and in the vicinity generally includes mature ornamental trees and landscaping. Also, mature ornamental trees are located throughout the southern portion of the project site, within the on-site RV Park. The remainder of on-site vegetation is highly disturbed. Three concrete block walls varying in height are located on-site, and separate the vacant land from the on-site commercial, residential, and RV Park uses.

The project area is generally located within a developed area, surrounded by the following land uses:

- North. Commercial and single-family residential uses are located to the north of the project site.
- East. Harbor Boulevard and residential uses are located to the east.
- South. Commercial uses are located to the south of the project site.
- West. Multi-family residential and institutional uses (Young Nak Presbyterian Church) are located to the west of the project site.

3.1 CLIMATE

The climate in the project area is characterized by moderate temperatures and comfortable humidity, with precipitation limited to a few storms during the winter season (November through April). The average annual temperature varies little and averages 75 degrees Fahrenheit. January is usually the coldest month, while July and August are usually the hottest months of the year. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature.

In the City, the climate is typically warm during summer, when temperatures tend to be in the 70s and 80s, and cool during winter, when temperatures tend to be in the 50s. The warmest month of the year is August with an average maximum temperature of 85 degrees Fahrenheit, while the coldest month of the year is December with an average minimum temperature of 45 degrees Fahrenheit.¹

3.2 EXISTING SHADE/SHADOW CONDITIONS

RBF staff visited the project site to take a photographic inventory and conduct observations on August 9, 2010. Photographs were taken using a Canon digital camera. Also, RBF prepared shade/shadow diagrams for the existing conditions.

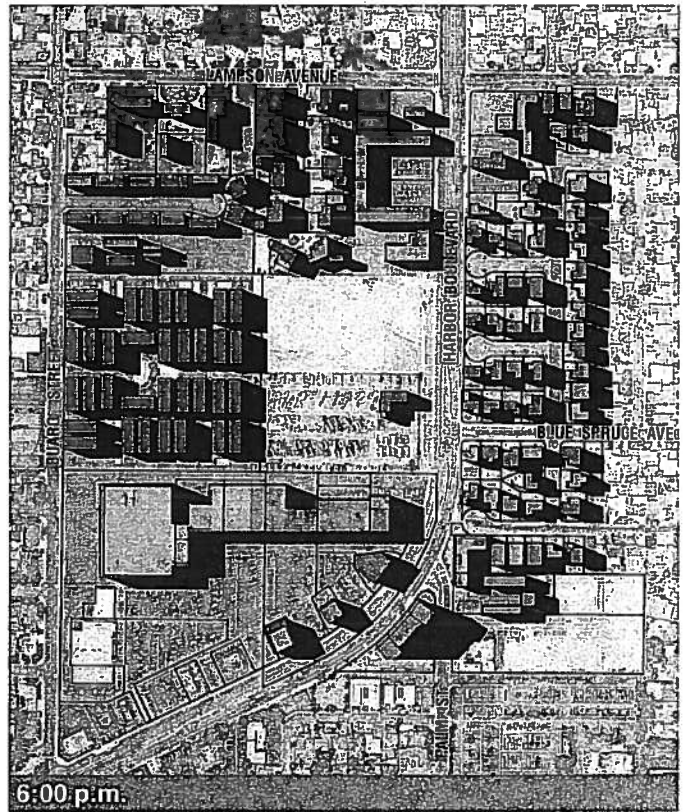
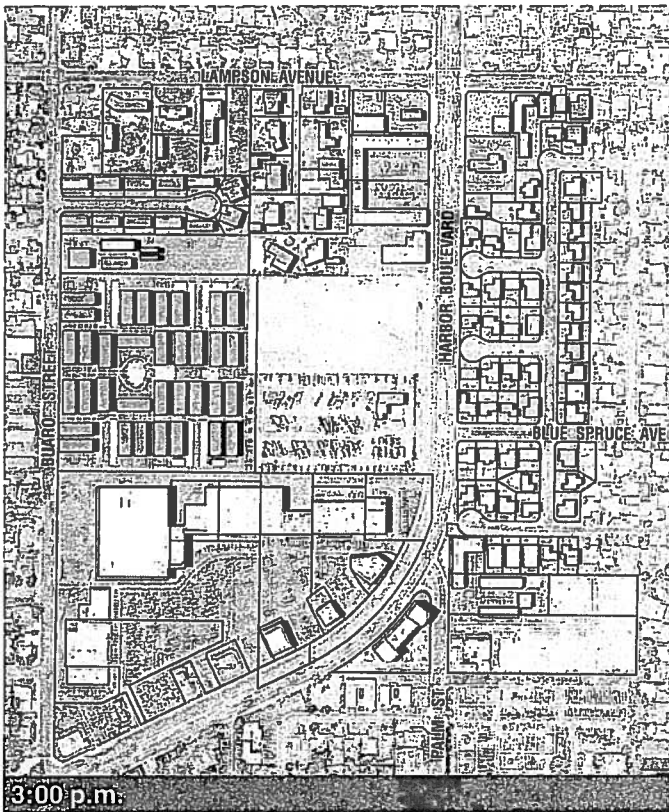
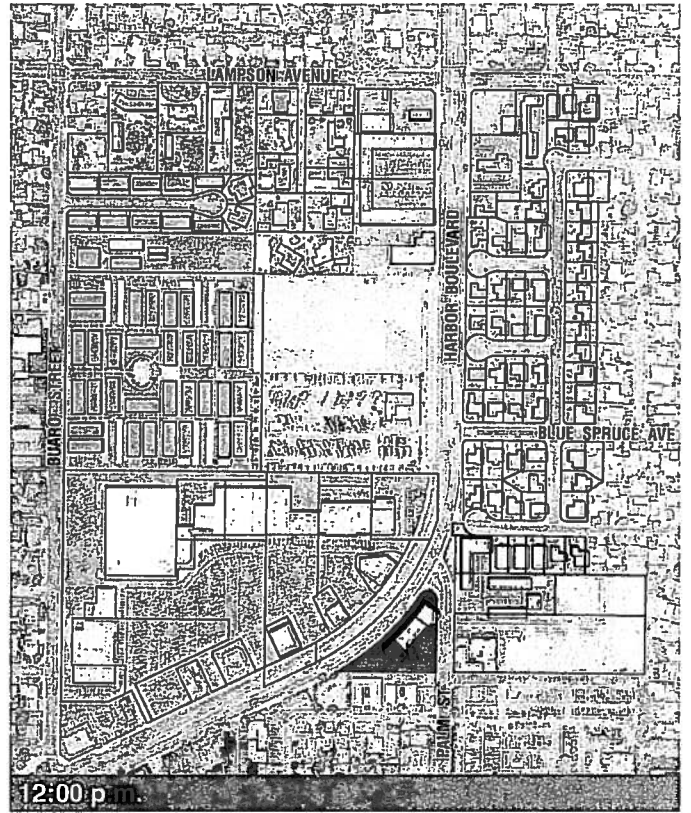
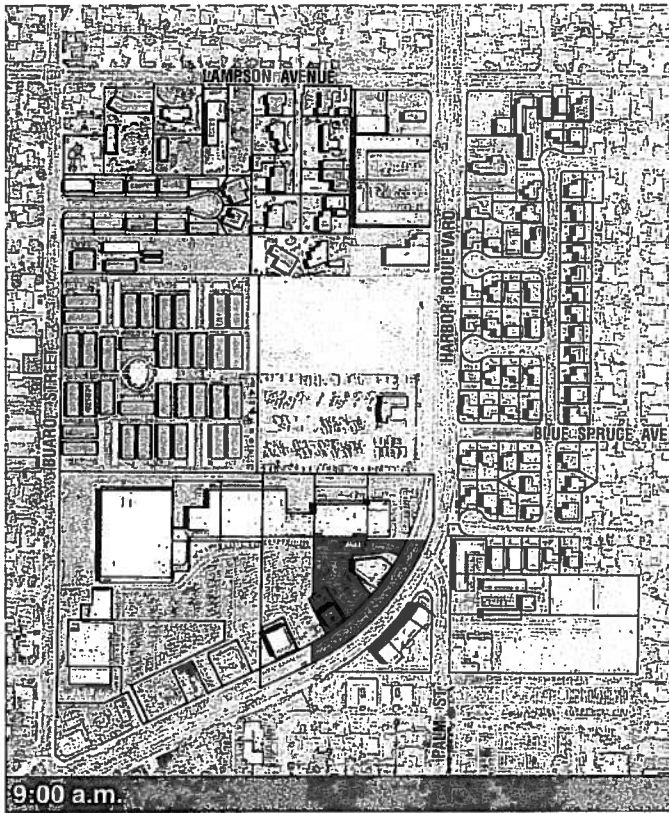
¹ The Weather Channel, *Average Weather for Garden Grove, CA*, <http://www.weather.com/outlook/health/airquality/wxclimatology/monthly/graph/USCA0635?role=>, accessed August 18, 2010.

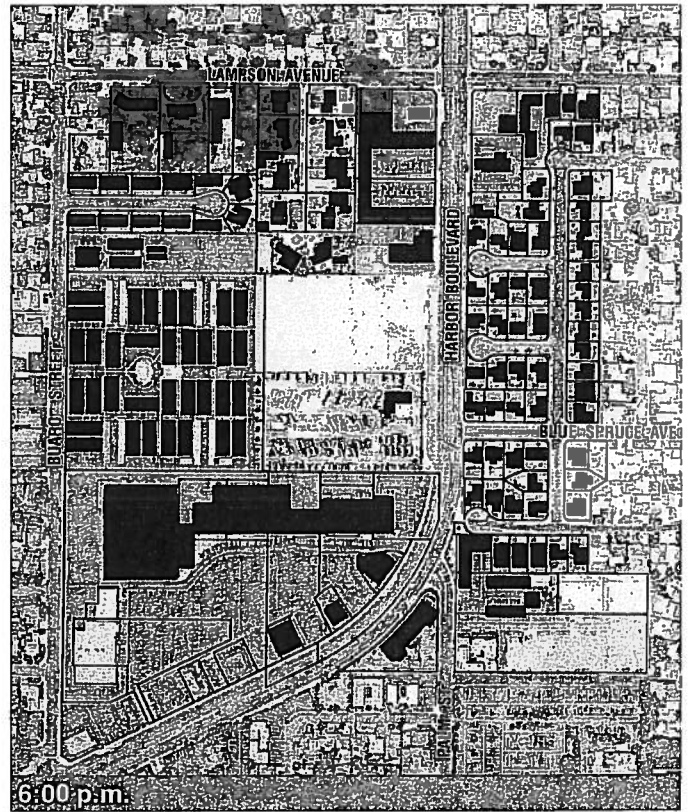
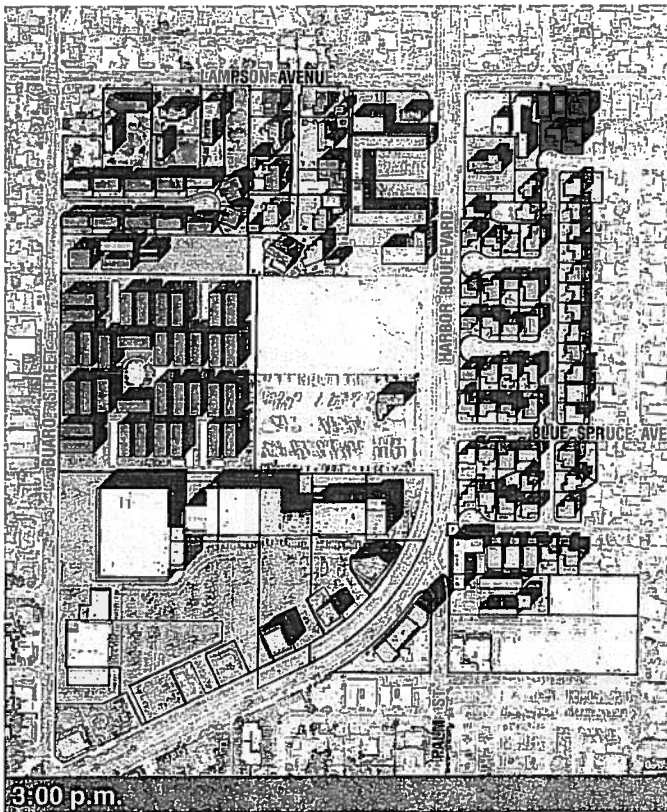
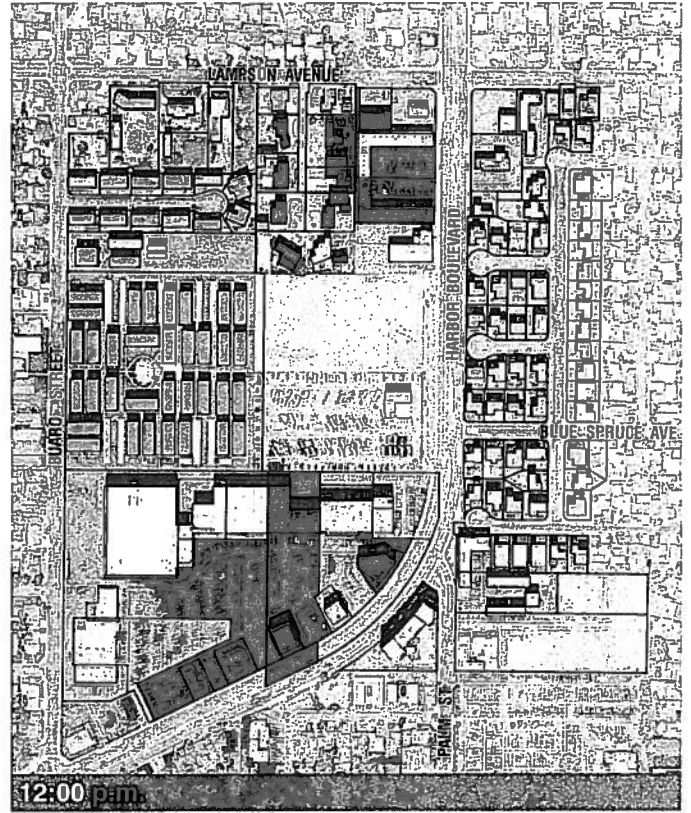
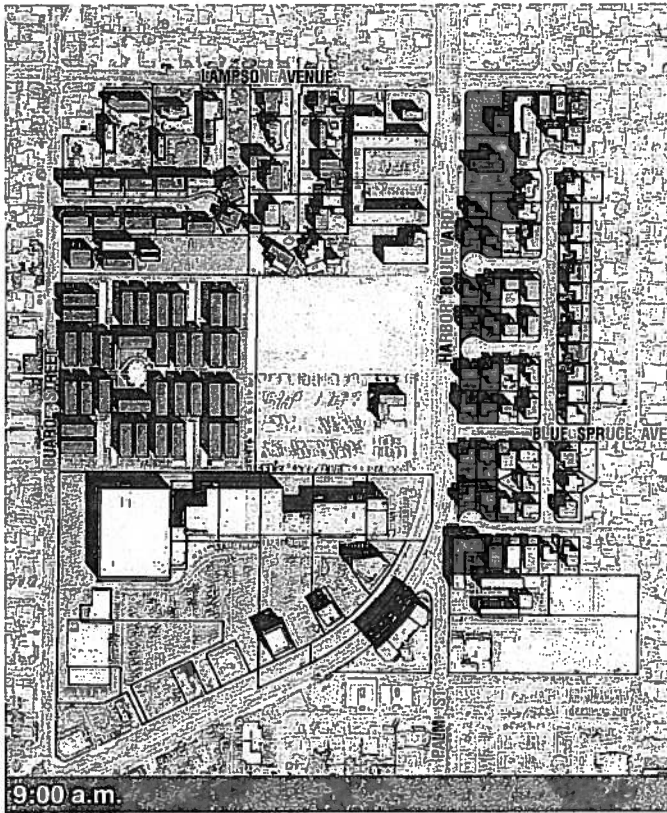
Five permanent structures are currently present within the boundaries of the project site. These include two single-family residential units and two commercial structures (an abandoned building and the Humdinger Bar) in the northern portion of the site, and one administrative building associated with the RV Park in the southern portion of the project site. All on-site structures are one story in height. This analysis excludes negligible shadows cast by the on-site recreational vehicles. Existing shade/shadow diagrams were created for the five existing permanent structures within the project site. The following describes the existing shadow conditions of the project site during the summer/winter solstices and the vernal/autumnal equinoxes.

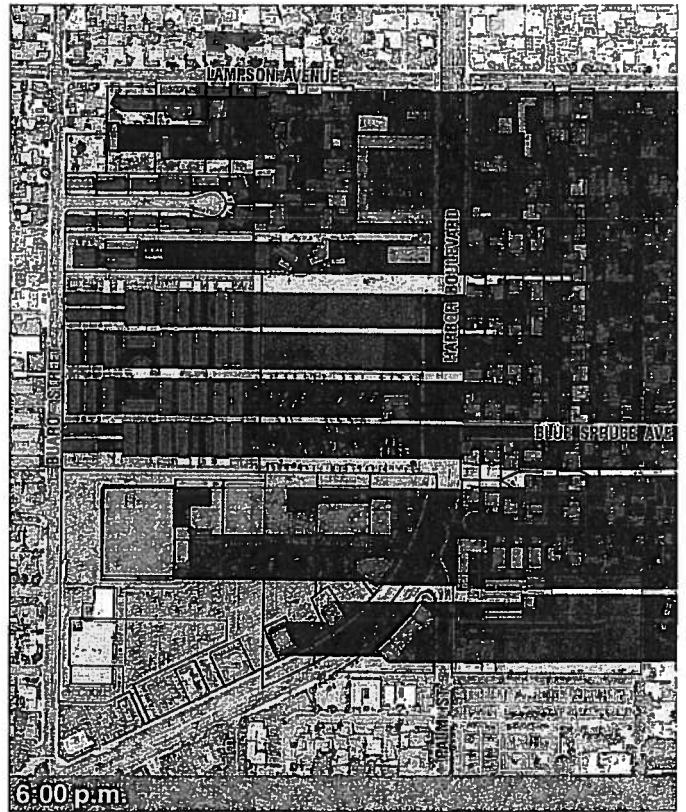
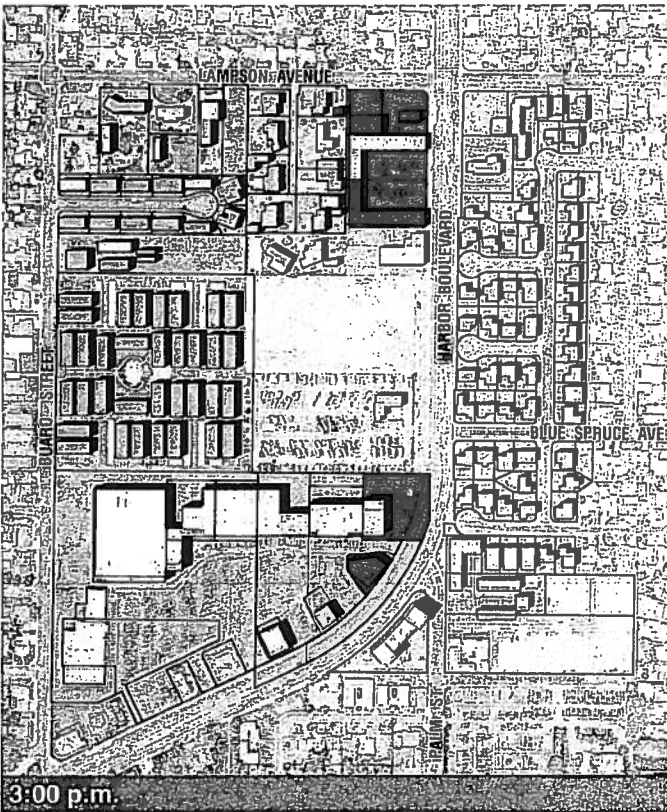
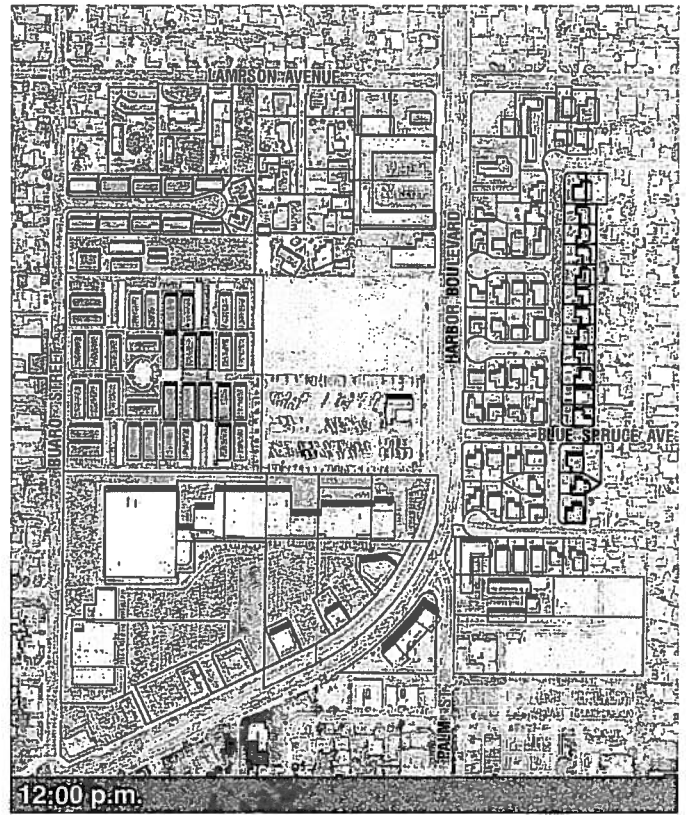
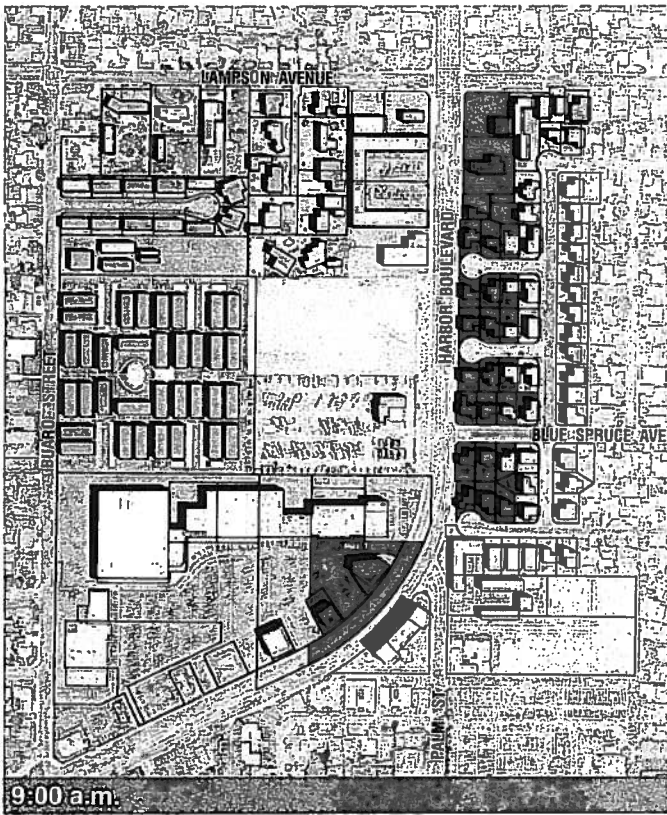
June 21. On June 21, shadows cast by on-site buildings during morning (9:00 a.m.) and afternoon (12:00 p.m.) hours are contained within the site; refer to Exhibit 1, Existing Summer Shadow Patterns. Shadows cast during the late afternoon hour (3:00 p.m.) from the on-site commercial structures minimally extend onto the Harbor Boulevard sidewalk. During the evening hours (6:00 p.m.), shadows from the on-site commercial structures and the RV Park administrative building extend onto Harbor Boulevard. No shadow-sensitive uses are currently shaded by existing on-site structures.

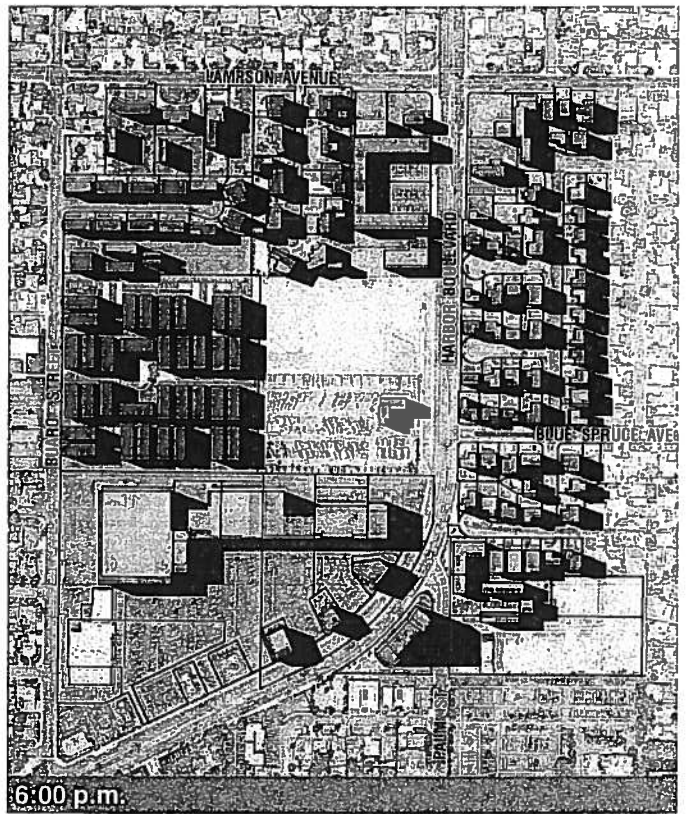
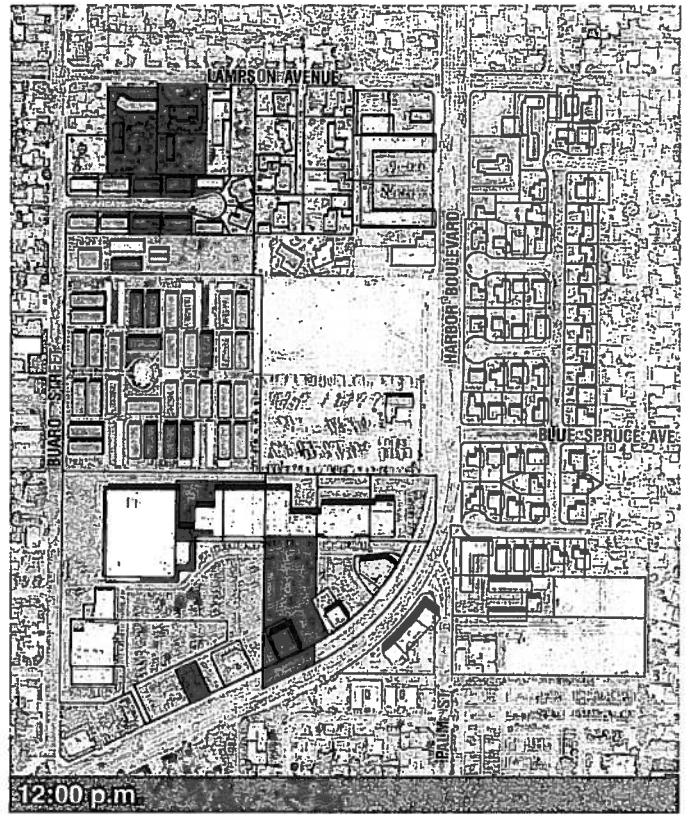
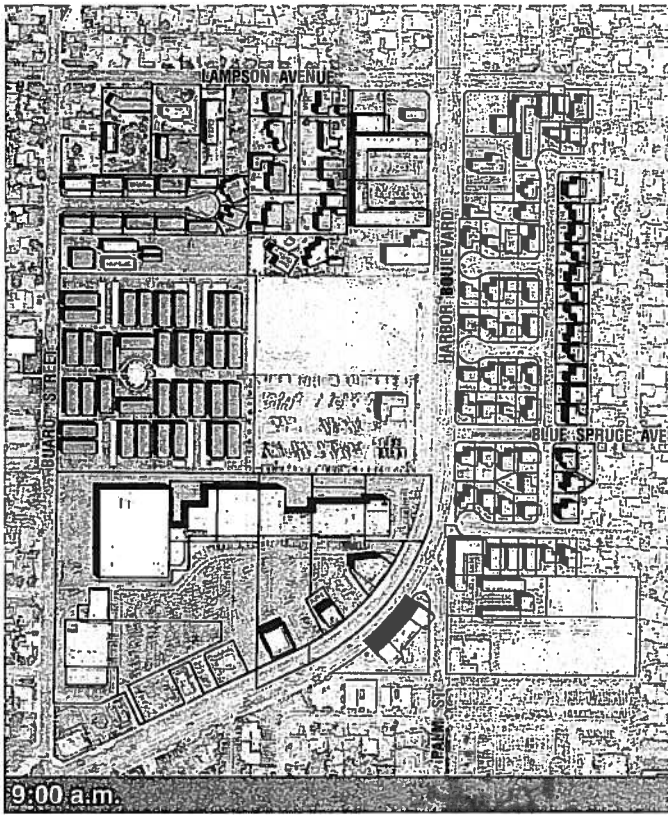
December 21. On December 21, shadows during the morning (9:00 a.m.) and afternoon (12:00 p.m.) hours from one on-site residential structure extend onto a small portion of the front and side yards of the adjoining residence to the north; refer to Exhibit 2, Existing Winter Shadow Patterns. Also, the on-site commercial structures currently cast shadows onto the parking lot of the adjoining commercial uses to the north. During the late afternoon (3:00 p.m.) hours, one on-site residential structure casts shadows onto a small portion of the side yard of the adjoining residence to the north. The on-site commercial structures cast shadows onto a small portion of the adjoining commercial structure and parking lot to the north during the late afternoon hours, as well as onto Harbor Boulevard. Shadows from the on-site administrative building remain on-site during all hours of the day. Note that shadows are not readily apparent at dusk. No shadow-sensitive uses are currently shaded by existing on-site structures for more than three hours between 9:00 a.m. and 3:00 p.m.

March 21/September 21. Shadows generated by buildings are similar on March 21 and September 21, when the sun shines at a moderate angle at noon; refer to Exhibit 3, Existing Vernal Shadow Patterns, and Exhibit 4, Existing Autumnal Shadow Patterns. Morning and afternoon (9:00 a.m. and 12:00 p.m.) shadows on these dates from on-site buildings would be confined within the project site. During the late afternoon hours of 3:00 p.m., the only shadows cast off-site are from the on-site commercial structures which cast shade onto the western sidewalk of Harbor Boulevard. During the evening hours in the vernal period, the five on-site structures, along with single- and multi-family structures to the west of the site, cast shadows onto multiple single-family residential units to the east of the project site (across Harbor Boulevard), as well as onto adjacent roadway rights-of-way and associated sidewalks. However, during the evening hours of the autumnal period, shadows are currently cast by the on-site commercial structures and administrative building onto the Harbor Boulevard right-of-way and western sidewalk. No shadow-sensitive uses are currently shaded by existing on-site structures for more than three hours between 9:00 a.m. and 3:00 p.m.









4.0 SHADE/SHADOW ANALYSIS

4.1 THRESHOLDS OF SIGNIFICANCE

A project would have a significant impact if it would substantially block sunlight for neighboring buildings. Specifically, a project would have a significant impact if:

- Shadow-sensitive use areas (where sunlight is important to its function) would be shaded by project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October), compared to existing conditions.

Of the total amount of the sun's energy available during a daylight period, approximately 85 percent of it reaches the earth between 9:00 a.m. and 3:00 p.m. The California Energy Commission defines this time period as the useable solar sky-space.² Useable sky-space, at the winter solstice, is that portion of the sky lying between the position of the sun (i.e., sun angle or azimuth) when it is 45 degrees to either side of true south (i.e., the portion of the sky covered or traversed by the sun between 9:00 a.m. and 3:00 p.m.). It should be noted that the hours of 9:00 a.m. to 3:00 p.m. (for October through early April when daylight exposure occurs for a shorter period of time) and 9:00 a.m. and 5:00 p.m. (for early April through October when daylight exposure occurs for a longer period of time) are utilized as a threshold for shade/shadow impacts, as these hours of the day are the most likely to include activities where the sunlight is important to its function.

4.2 IMPACTS AND MITIGATION MEASURES

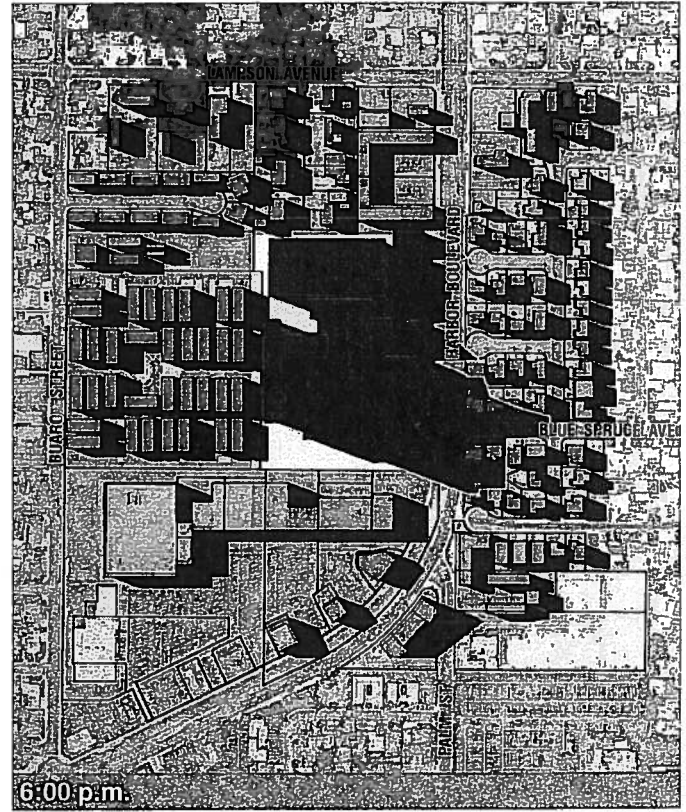
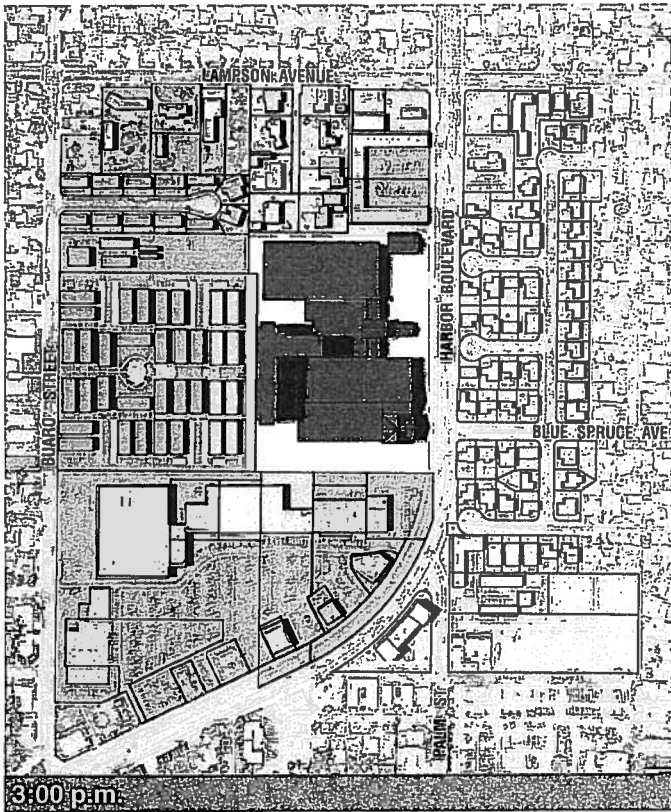
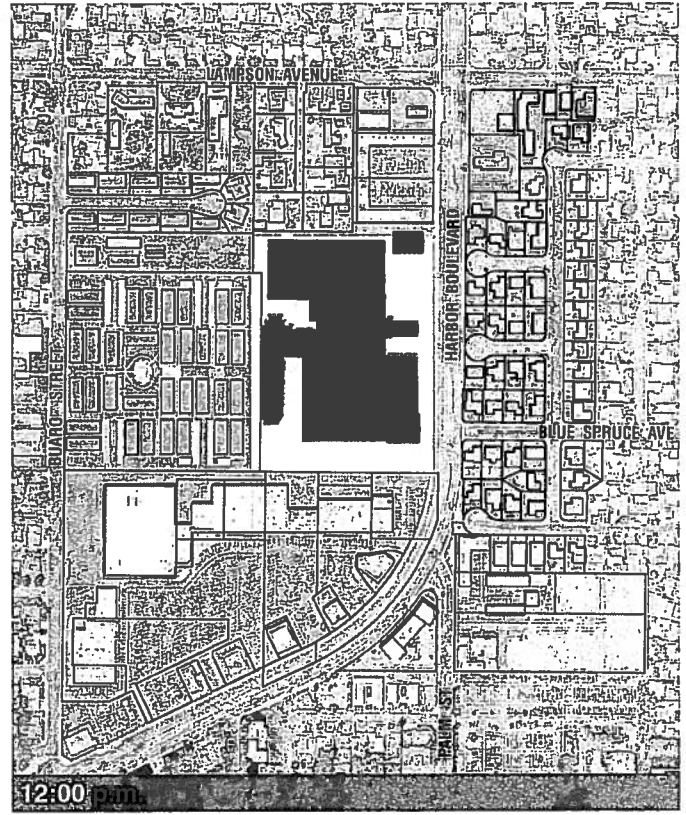
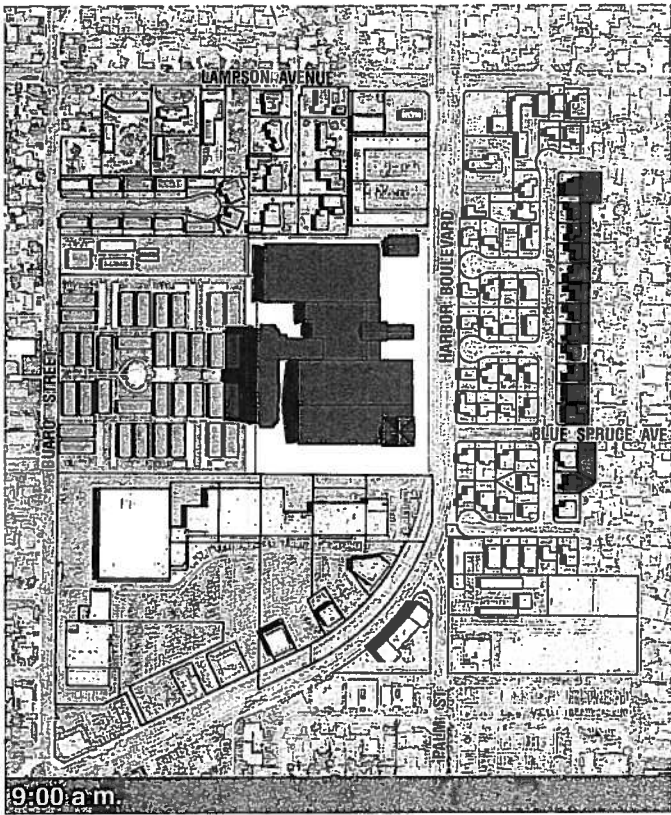
DEVELOPMENT OF THE PROPOSED PROJECT WOULD INTRODUCE SHADE/SHADOW ONTO ADJACENT BUILDINGS. HOWEVER, SHADE CAST BY THE PROPOSED PROJECT WOULD NOT OCCUR WITHIN SHADOW-SENSITIVE AREAS.

Less Than Significant Impact.

Impact Analysis: The project would construct a hotel structure with a conference center (up to 12 floors and 162 feet in height), water park (three floors and 70 feet in height), restaurant (one floor), and parking garage (five floors and 50 feet in height). Construction of the new buildings would cast shadows on nearby residential, institution, and commercial uses. The following analysis describes the proposed shadow conditions from the project onto surrounding uses during the summer/winter solstices and the vernal/autumnal equinoxes.

June 21. On June 21, shadows cast by buildings within the project site are typically limited to the confines of the site; refer to Exhibit 5, Proposed Summer Shadow Patterns. Shadows cast

² Jaffe, M., *Protecting Solar Access: A Guidebook for California Communities*, March 1980.



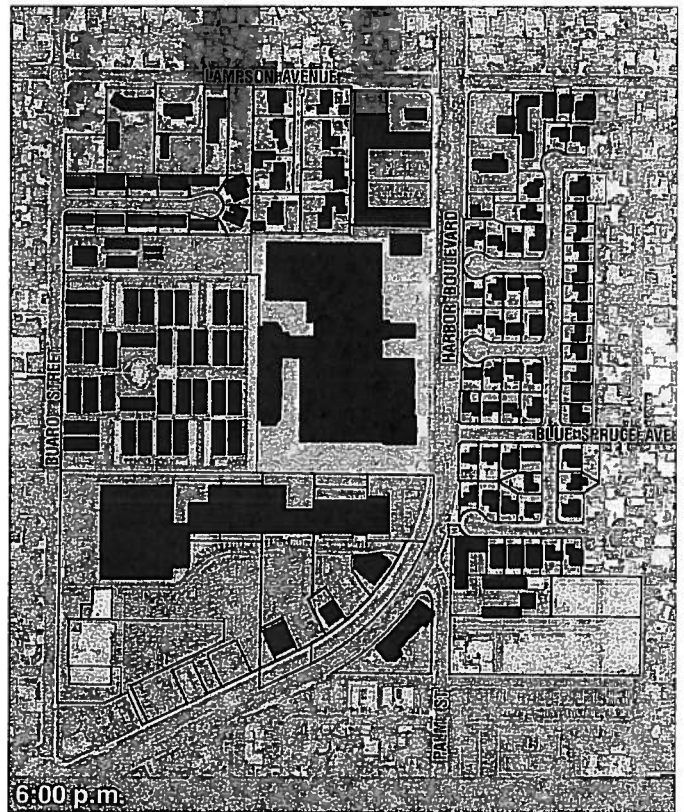
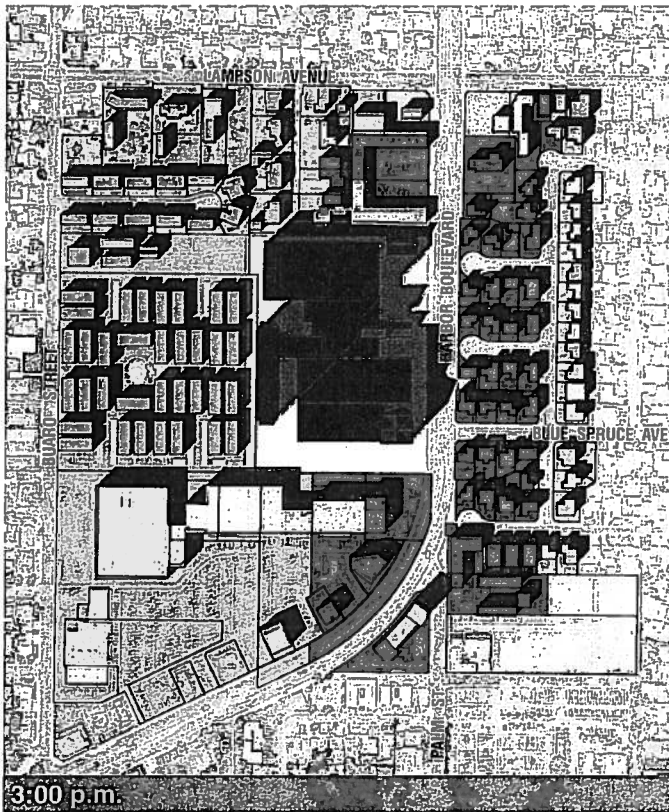
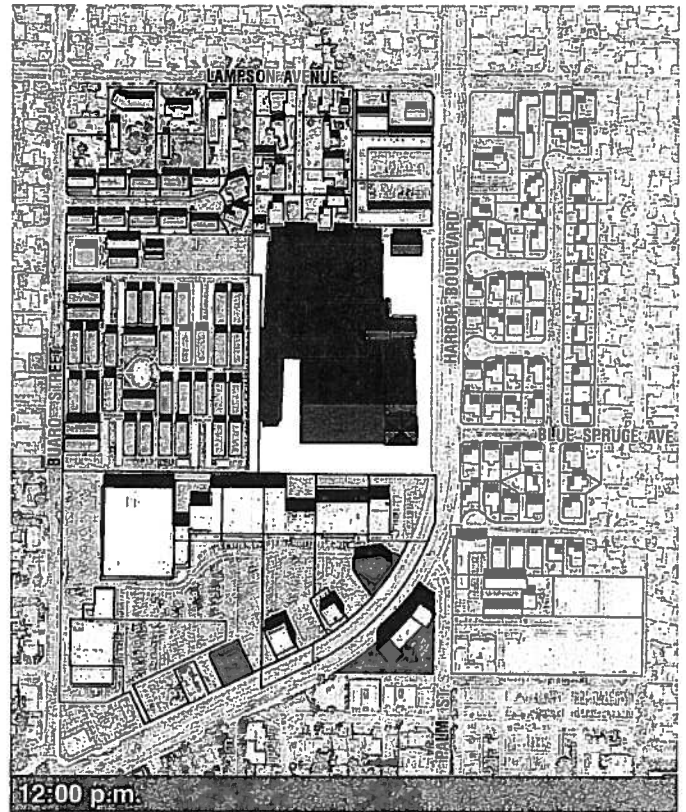
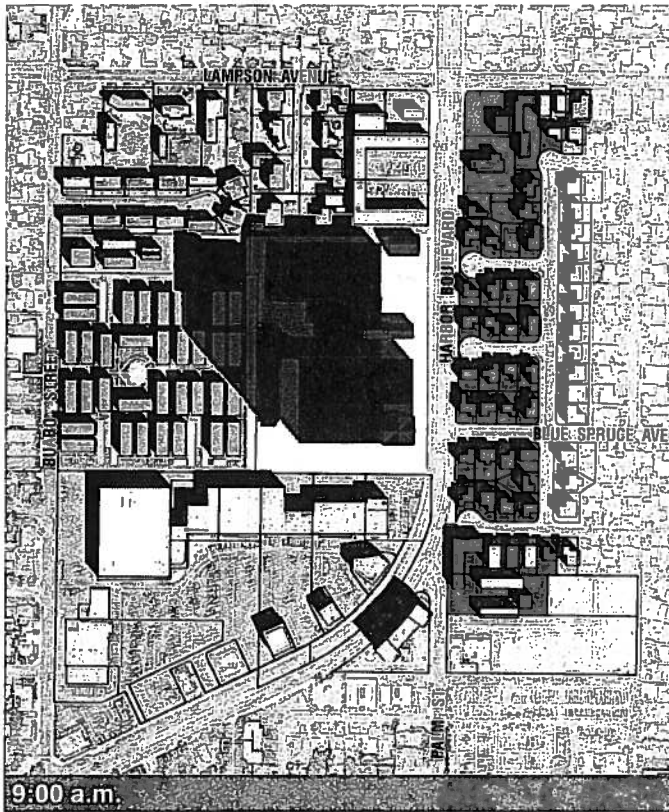
during morning hours (9:00 a.m.) would impact two apartment buildings and outdoor common areas to the west of the site. Between 12:00 p.m. and 3:00 p.m., the shadow patterns would be confined within the boundaries of the project site. Shadow coverage of areas surrounding the project site is most prominent during the evening hours (6:00 p.m.). Off-site uses that would be impacted by the project in the evening hours include six single-family residential units to the east of the project site. Evening hour shadows would also be cast upon Harbor Boulevard and Blue Spruce Avenue rights-of-way and sidewalks. Although shadows would be cast onto these off-site uses, the proposed summer shadow patterns would not impact shadow-sensitive uses for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Therefore, impacts in this regard would be less than significant.

December 21. On December 21, shadows are widespread within and around the project site during the morning (9:00 a.m.) and late afternoon (3:00 p.m.) hours; refer to Exhibit 6, Proposed Winter Shadow Patterns. Morning shadows would be present to the north, west, and northwest of the project site. During this period, the project would affect five single-family residential uses to the north and northwest, eight apartment buildings and outdoor common areas to the west, and the parking lot area of the institutional use to the west of the project site (Young Nak Presbyterian Church). The project would result in shading of approximately 50 percent of the southern portions of two of the residential properties (northeast and northwest residences) adjoining the project site to the north during the morning hours.

During noon, the sun shines above from a southerly direction, casting shadows in a northerly fashion. At this time, shadows would be cast upon adjoining uses to the north. Two residences would be affected: shadows would be cast upon the side yard and the southern portion of the front yard at the northwest residence, and onto the side yard and the southern portions of the front and rear yards at the northeast residence. In the early afternoon (i.e., 3:00 p.m.) these two single-family residential properties to the north of the project site are affected by shadows. The northwest residence is only impacted by shadows on a portion of the front yard. The northeast residence would experience shade throughout the side yard, the majority of the front yard, and the entire rear yard.

Currently, the shadow-sensitive rear yard use of the northeast residence has mature trees located in the area that would be shaded. The mature trees currently cast shadows at this portion of the residence. Thus, the portion of the residence that would be shaded by the project for three hours or more in the winter months is not considered to be shadow-sensitive. Also, between approximately the hours of 10:00 a.m. and 2:00 p.m., the northern portion of the rear yard (areas sensitive to shadow exposure) at the northeast residence would experience sunlight. Therefore, as new shadows would not substantially affect shadow-sensitive use areas, a less than significant impact would occur in this regard.

Shadows cast by proposed structures during the morning, afternoon, and late afternoon hours minimally impact the commercial uses to the north. Proposed shadows would be cast upon the rear of the adjoining commercial building as well as the parking lot for more than three hours between 9:00 a.m. and 3:00 p.m. During the late afternoon hours, shadows are also cast upon



Harbor Boulevard. However, these shaded areas are not considered to be shadow-sensitive. Therefore, no impact would result. Note that shadows are not readily apparent at dusk.

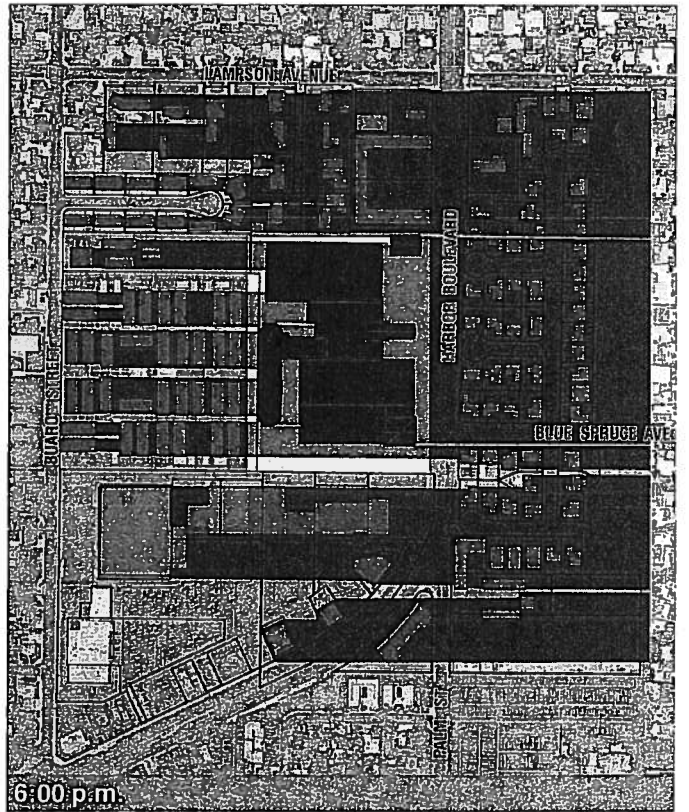
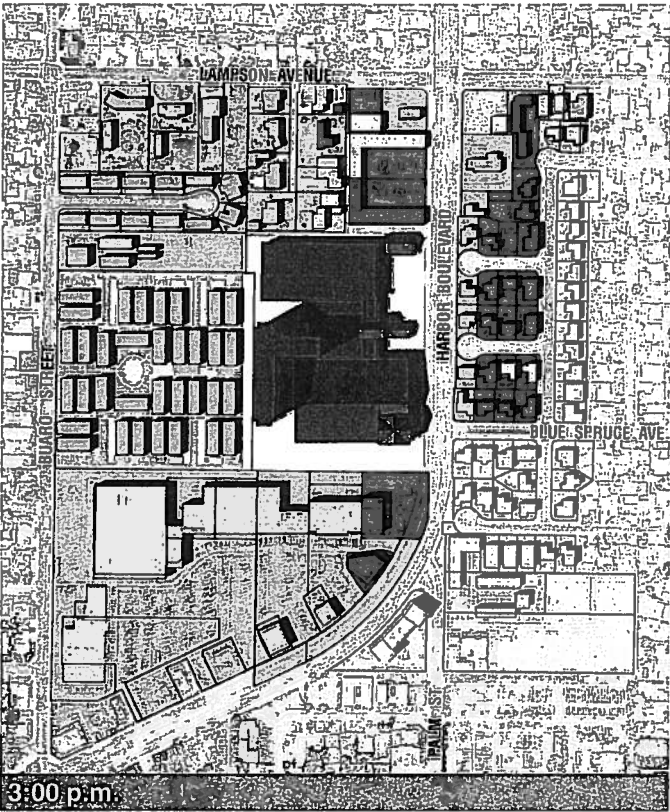
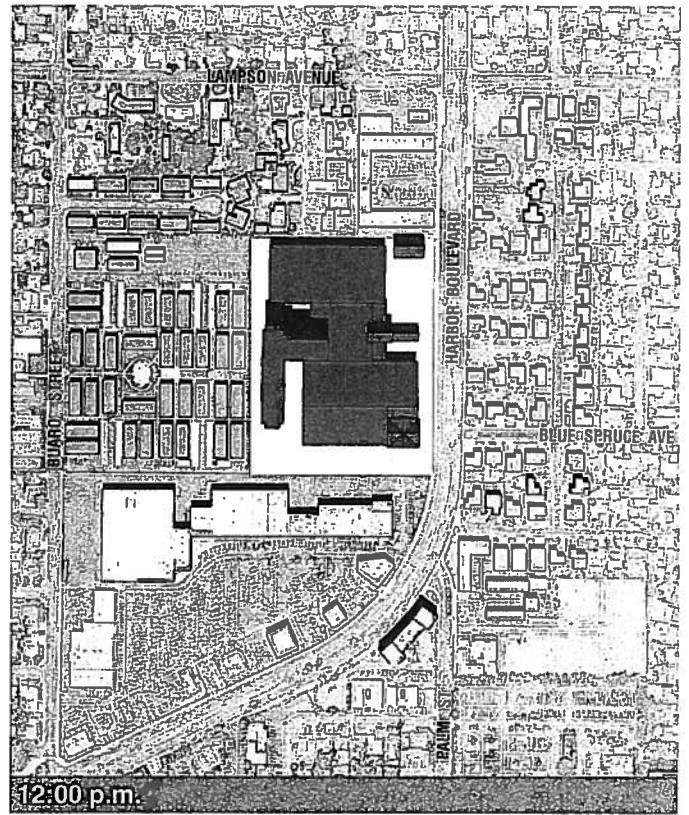
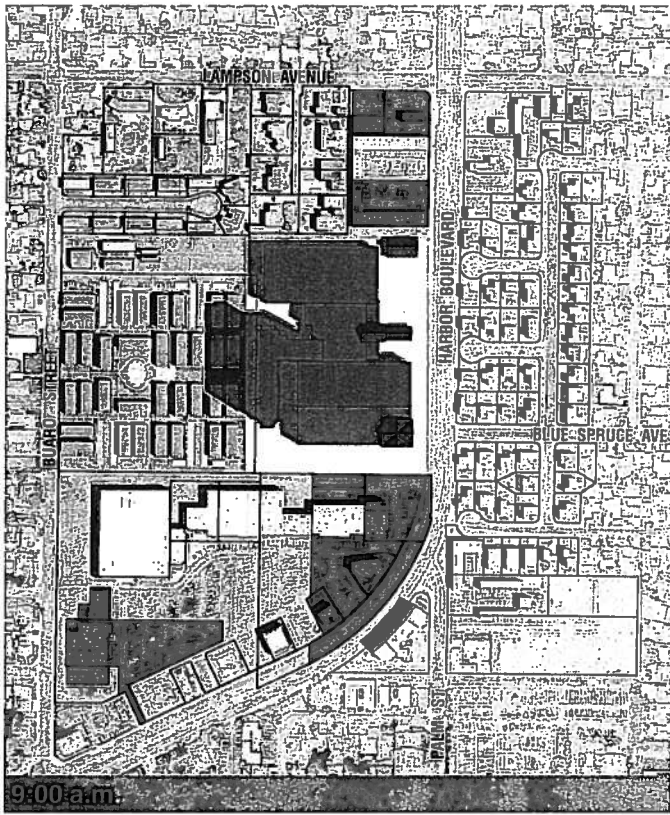
March 21/September 21. Shadows generated by buildings are similar on March 21 and September 21, when the sun shines at a moderate angle at noon; refer to Exhibit 7, Proposed Vernal Shadow Patterns, and Exhibit 8, Proposed Autumnal Shadow Patterns. Morning shadows on these dates generated from buildings within the project site would be cast upon six apartment buildings and outdoor common areas to the west of the project site. During the afternoon hours of 12:00 p.m. and 3:00 p.m. on March 21 and September 21, shadows would be generally confined to within the project site, and would be minimally cast upon Harbor Boulevard sidewalks. During the evening hours in the vernal period, shadows would be cast onto multiple single-family residential units to the east of the project site (across Harbor Boulevard), as well as onto Harbor Boulevard, Twinleaf Lane, Sandalwood Lane, and Blue Spruce Avenue. However, during the evening hours of the autumnal period, shadows would be cast onto single-family residential units to the east and southeast and also onto Harbor Boulevard, Sandalwood Lane, and Blue Spruce Avenue rights-of-way and sidewalks. Proposed vernal shadow patterns would not impact shadow-sensitive uses for more than three hours between the hours of 9:00 a.m. and 3:00 p.m., and proposed autumnal shadow patterns would not impact sensitive uses for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Therefore, a less than significant impact would occur in this regard.

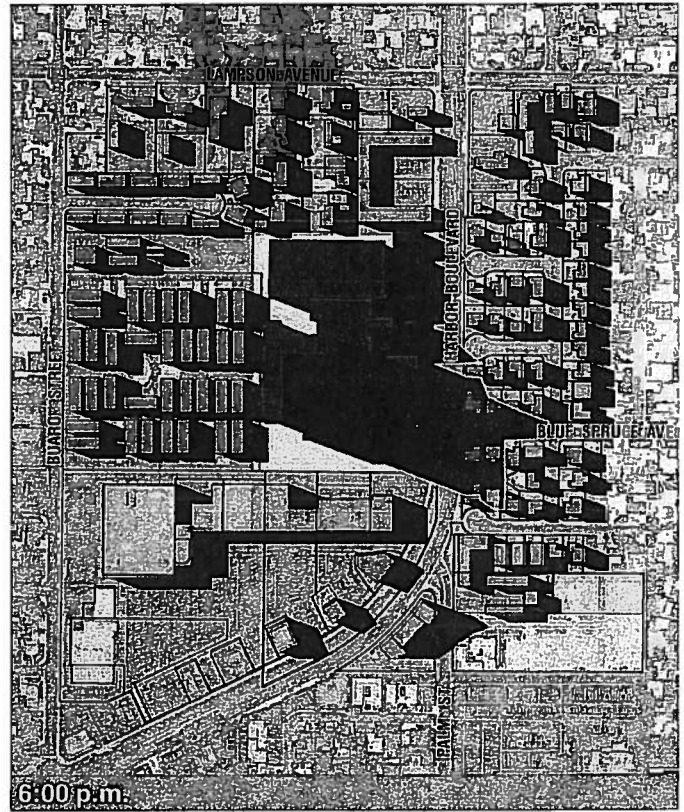
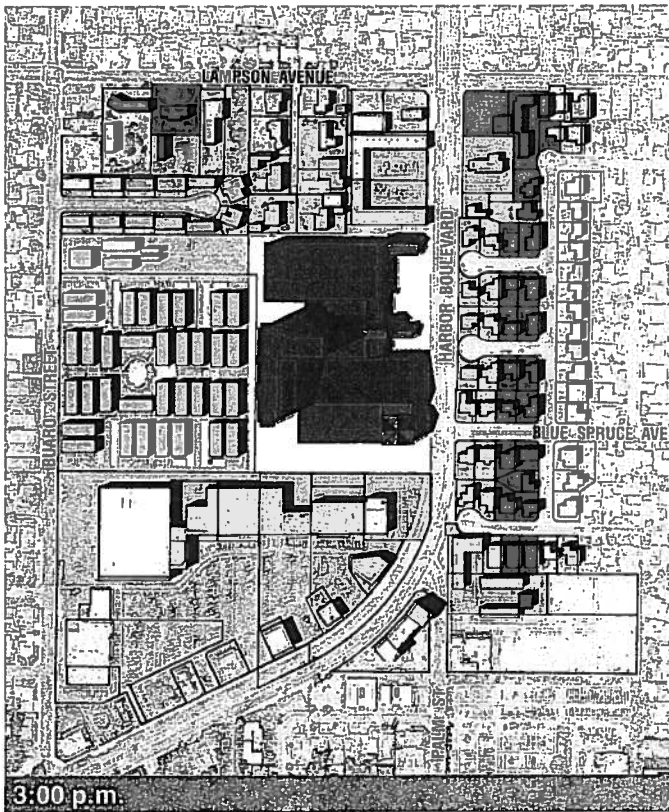
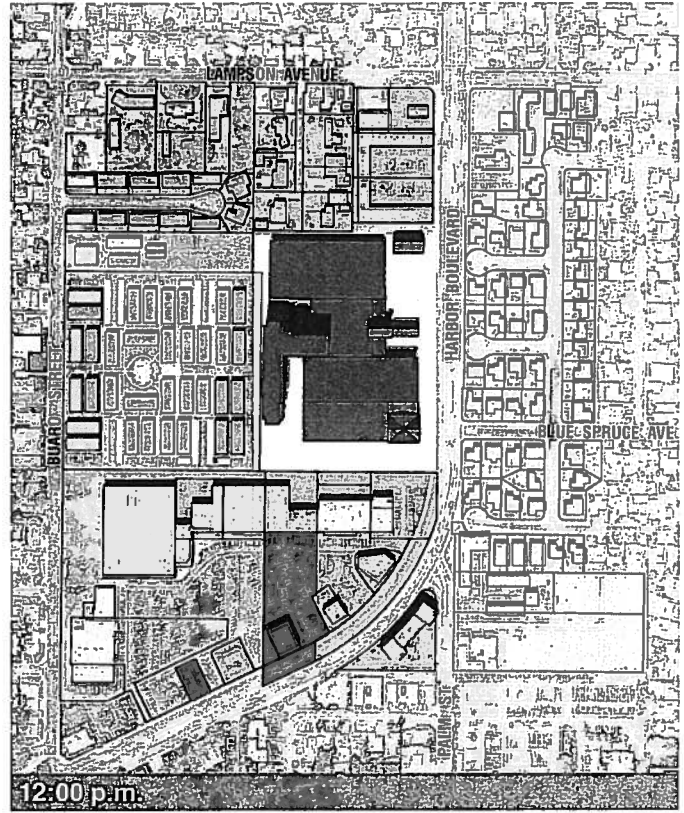
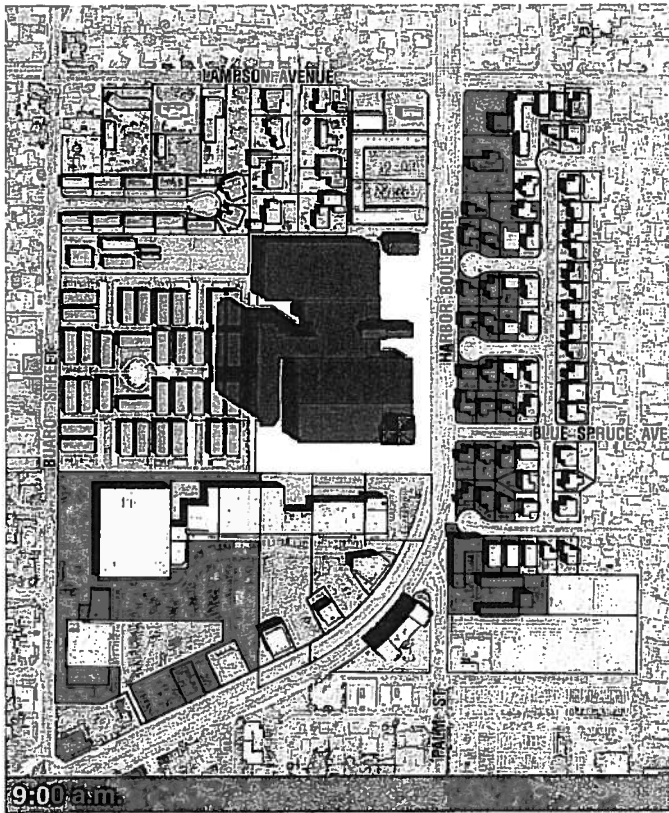
Impact Conclusion

The project would result in new shadows cast onto surrounding residential, commercial, and institutional uses, as well as onto adjacent roadways and sidewalks. The proposed project would not result in shadow impacts to off-site areas for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. during spring, or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. during summer and fall, compared to existing conditions. Therefore, during three-quarters of the year, surrounding uses would not experience shadow impacts as a result of the proposed project. However, the project would cast shadows onto two residential properties adjoining the project site to the north for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. during the winter months.

As illustrated on Exhibit 6, the proposed buildings would cast shade onto two residences adjoining the project site to the north during the winter solstice for more than three hours between 9:00 a.m. and 3:00 p.m. However, the areas of the northwest residence that would experience shade for more than three hours include the side and front yards. These areas are not considered to be shadow-sensitive areas. Therefore, impacts would be less than significant with regard to the northwest residence.

The portion of the northeast residence affected by project-related shadows for more than three hours include the side and front yard areas (areas not sensitive to shadows), and rear yard area (a potentially shadow-sensitive area). However, the area of the rear yard affected by shadows for more than three hours is occupied by mature trees which currently cast shadows at this





portion of the residence. Although the proposed structures would increase the amount of shadow cover at this portion of the property, any activities (where the sunlight is important to its function) would likely occur within the northern portion of the rear yard (not covered by shadow as a result of the proposed structures). Thus, the portion of the residence that would be shaded by the project for three hours or more in the winter months is not considered to be shadow-sensitive. Also, a portion of the rear yard currently experiences shade from an adjoining on-site residence during the 3:00 p.m. hour. Therefore, shadow-sensitive areas of the rear yard at the northeast residence would not be shaded for more than three hours between 9:00 a.m. and 3:00 p.m. A less than significant impact would occur in this regard.

Mitigation Measures

As no significant impacts would result upon project implementation, no mitigation measures are required.

5.0 REFERENCES

5.1 PREPARERS

RBF CONSULTING

14725 Alton Parkway
Irvine, California 92618
949/472-3505

Eddie Torres, INCE, REA, Director of Technical Services
Kristen Bogue, CEI, REA, Environmental Analyst
John Shetland, Landscape Planner
Kelly Chiene, Environmental Analyst
Gary Gick, Word Processor
Debby Hutchinson, Graphic Artist

5.2 DOCUMENTS

Architectural Design Consultants, Inc., *Building Massing Study*, undated.

Architectural Design Consultants, Inc., *Site Plan*, September 10, 2010.

City of Garden Grove, *City of Garden Grove General Plan*, May 2008.

City of Garden Grove, *City of Garden Grove Municipal Code*, undated.

Jaffe, M., *Protecting Solar Access: A Guidebook for California Communities*, March 1980.

Knitter Partners International, Inc., *Shadow Study*, July 26, 2010.

Tait & Associates, Inc., *AutoCAD and ArchiCAD files*, multiple dates.

Tait, *Tentative Parcel Map No. 2010-1178*, June 24, 2010.

Water Technology, Inc., *Garden Grove Waterpark Concept Plan*, May 25, 2010.

5.3 WEB SITES

The Weather Channel, *Average Weather for Garden Grove, CA*,
[http://www.weather.com/outlook/health/airquality/wxclimatology/monthly/graph/USCA0635?r
ole=](http://www.weather.com/outlook/health/airquality/wxclimatology/monthly/graph/USCA0635?role=), accessed August 18, 2010.

Subject: Re: Revised Site C Site Plan

From: Matthew Reid <matt.reid@landanddesign.com>

Date: Wed, 27 Jul 2011 06:06:38 -0700

To: Bryan Estrada <be@rkengineer.com>

CC: Robert Kahn <rk@rkengineer.com>, Rogier Goedecke <rg@rkengineer.com>, Michael Dickerson <md@rkengineer.com>, "Morgan, Jayna" <Jayna.Morgan@aecom.com>, <mswan@psomas.com>, Dave Rose <drose3@charter.net>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>

Bryan,

Thank you. We are going to work on the "interior" of the site to better handle the traffic issue from a single entrance. We did change the single entrance to 4 lanes (per request) however we are not going to add a right in off Harbor.

Please use the plan recently revised.

Thanks.

Matthew Reid

Land & Design, Inc.

8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942

619.335.5896 Google voice | 619.462.4144 fax

Skype – matthew.reid.ca

matt.reid@landanddesign.com

From: Bryan Estrada <be@rkengineer.com>

Date: Tue, 26 Jul 2011 10:26:04 -0700

To: Matthew Reid <matt.reid@landanddesign.com>

Cc: Robert Kahn <rk@rkengineer.com>, Rogier Goedecke <rg@rkengineer.com>, Michael Dickerson <md@rkengineer.com>, "Morgan, Jayna" <Jayna.Morgan@aecom.com>, <mswan@psomas.com>

Subject: RE: Revised Site C Site Plan

Hello Matt,

We are preparing to move forward with the revised traffic analysis and need to confirm the access onto Harbor Boulevard.

Please let us know whether we should assume the single access point, or if you anticipate revising the site plan to include a second driveway as previously discussed.

Thanks,

Bryan Estrada

transportation planner



transportation planning / traffic engineering & design

acoustical engineering / community traffic calming

4000 Westerly Place, Suite 280

Newport Beach, CA 92660

tel. 949.474.0809

cell 949.293-9639
fax 949.474.0902
www.rkengineer.com

From: Mike Swan [<mailto:mswan@psomas.com>]
Sent: Thursday, July 21, 2011 11:54 AM
To: Morgan, Jayna; Matthew Reid; Bob Kahn
Cc: Rogier Goedecke; Greg Blodgett; Smith, Don (Irvine); Paul Guerrero; Chang, Jane
Subject: RE: Revised Site C Site Plan

I just have a question on the statistics.

From the previous emails I understand we want to hold the cap at 769 keys as far as the hotel rooms go and it sounds like someone is going to make the site plan graphic match that total. However, the DDA lists "a minimum of 10,000 sf of meeting space" and a "maximum of 65,000 sf of retail/restaurant/entertainment". It doesn't appear to include a maximum on the meeting space, which I would think it should (unless I'm reading it wrong).

The site plan currently shows a total of 40,000 sf of meeting and ballroom space which I assume correlates to the 10,000 sf minimum in the DDA (is this OK?). And the site plan currently totals 50,000 sf of restaurant/entertainment (1 - 5,000 sf and 4 - 7,500 sf restaurants, and 1 - 15,000 sf entertainment/restaurant) versus a maximum of 65,000 sf in the DDA.

Just want to confirm which maximum stats to use.

Michael D. Swan, PE
PSOMAS | *Balancing the Natural and Built Environment*
Senior Project Manager
Water & Wastewater Infrastructure
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707 714.751.7373
Direct 714.481.7979

From: Morgan, Jayna [<mailto:Jayna.Morgan@aecom.com>]
Sent: Thursday, July 21, 2011 11:36 AM
To: Matthew Reid; Robert Kahn
Cc: Rogier Goedecke; Greg Blodgett; Smith, Don (Irvine); Paul Guerrero; Mike Swan; Chang, Jane
Subject: RE: Revised Site C Site Plan

Hi Matt,

Hope you are having a good week.

I just wanted to see if we are going to be getting a revised site plan that at least gives a range of the keys which would total the 769 on the high end. I want the plan and technical reports to be consistent.

Also, I wanted to follow up and see if we should be expecting the shade/shadow from your architects or are you going to get us something in CADD that we can manipulate to do the analysis.

Let me know.
Thanks!

Jayna Morgan
AECOM
T. 949.660.8044

From: Matthew Reid [<mailto:matt.reid@landanddesign.com>]
Sent: Tuesday, July 19, 2011 4:02 PM
To: Morgan, Jayna; Robert Kahn
Cc: Rogier Goedecke; Greg Blodgett; Paul Guerrero; Mike Swan; Chang, Jane
Subject: Re: Revised Site C Site Plan

Even though we are showing less hotel rooms, we want to keep the entitlement at 769 keys...

Matthew Reid

Land & Design, Inc.
8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942
619.335.5896 Google voice | 619.462.4144 fax
Skype – matthew.reid.ca
matt.reid@landanddesign.com

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Tue, 19 Jul 2011 15:50:00 -0700
To: Robert Kahn <rk@rkengineer.com>
Cc: Rogier Goedecke <rg@rkengineer.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Paul Guerrero <paulg@ci.garden-grove.ca.us>, Matthew Reid <matt.reid@landanddesign.com>, Mike Swan <mswan@psomas.com>, "Chang, Jane" <Jane.Chang@aecom.com>
Subject: RE: Revised Site C Site Plan

Hey Guys,

I just got a call from Mike Swan at Psomas and he said the new site plan shows less hotel rooms which will cancel out the increase in Water demand from the added restaurant square footage.

I asked him to confirm this with everyone tomorrow as I want to make sure we are all using the same development assumptions.

Thanks,

Jayna Morgan
AECOM
T. 949.660.8044

From: Bob Kahn [<mailto:rk@rkengineer.com>]
Sent: Tuesday, July 19, 2011 11:09 AM
To: Matthew Reid (Land & Design); Rogier Goedecke
Cc: drose3@charter.net; Morgan, Jayna; Greg Blodgett
Subject: RE: Revised Site C Site Plan

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Principal



transportation planning / traffic engineering & design
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4000 Westerly Place, Suite 280
Newport Beach, CA 92660
tel. 949.474.0809
cell 949.293-9639
fax 949.474.0902
www.rkengineer.com

From: Matthew Reid (Land & Design) [<mailto:matt.reid@landanddesign.com>]
Sent: Tuesday, July 19, 2011 10:54 AM
To: Rogier Goedecke
Cc: <drose3@charter.net>; Morgan, Jayna; Bob Kahn; Greg Blodgett
Subject: Re: Revised Site C Site Plan

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619.335.5896 Google voice | 619.462.4144 f
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<image001.jpg>

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Sent: Monday, July 18, 2011 5:24 PM

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Subject: Re: Revised Site C Site Plan

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Jayna Morgan
AECOM
T. 949.660.8044

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Subject: Re: Revised Site C Site Plan

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Date: Wed, 27 Jul 2011 09:24:54 -0700

To: Matthew Reid <matt.reid@landanddesign.com>

CC: Bryan Estrada <be@rkengineer.com>, Robert Kahn <rk@rkengineer.com>, Rogier Goedecke <rg@rkengineer.com>, Michael Dickerson <md@rkengineer.com>, <mswan@psomas.com>, Dave Rose <drose3@charter.net>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>

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From: Bryan Estrada <be@rkengineer.com>

Date: Tue, 26 Jul 2011 10:26:04 -0700

To: Matthew Reid <matt.reid@landanddesign.com>

Cc: Robert Kahn <rk@rkengineer.com>, Rogier Goedecke <rg@rkengineer.com>, Michael Dickerson <md@rkengineer.com>, "Morgan, Jayna" <Jayna.Morgan@aecom.com>, <mswan@psomas.com>

Subject: RE: Revised Site C Site Plan

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Please let us know whether we should assume the single access point, or if you anticipate revising the site plan to include a second driveway as previously discussed.

Thanks,

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transportation planner

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From: Mike Swan [<mailto:mswan@psomas.com>]
Sent: Thursday, July 21, 2011 11:54 AM
To: Morgan, Jayna; Matthew Reid; Bob Kahn
Cc: Rogier Goedecke; Greg Blodgett; Smith, Don (Irvine); Paul Guerrero; Chang, Jane
Subject: RE: Revised Site C Site Plan

I just have a question on the statistics.

From the previous emails I understand we want to hold the cap at 769 keys as far as the hotel rooms go and it soundslike someone is going to make the site plan graphic match that total. However, the DDA lists "a minimum of 10,000 sf of meeting space" and a "maximum of 65,000 sf of retail/restaurant/entertainment". It doesn't appear to include a maximum on the meeting space, which I would think it should (unless I'm reading it wrong).

The site plan currently shows a total of 40,000 sf of meeting and ballroom space which I assume correlates to the 10,000 sf minimum in the DDA (is this OK?). And the site plan currently totals 50,000 sf of restaurant/entertainment (1 - 5,000 sf and 4 - 7,500 sf restaurants, and 1 - 15,000 sf entertainment/restaurant) versus a maximum of 65,000 sf in the DDA.

Just want to confirm which maximum stats to use.

Michael D. Swan, PE
PSOMAS | *Balancing the Natural and Built Environment*
Senior Project Manager
Water & Wastewater Infrastructure
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707 714.751.7373
Direct 714.481.7979

From: Morgan, Jayna [<mailto:Jayna.Morgan@aecom.com>]
Sent: Thursday, July 21, 2011 11:36 AM
To: Matthew Reid; Robert Kahn
Cc: Rogier Goedecke; Greg Blodgett; Smith, Don (Irvine); Paul Guerrero; Mike Swan; Chang, Jane
Subject: RE: Revised Site C Site Plan

Hi Matt,

Hope you are having a good week.

I just wanted to see if we are going to be getting a revised site plan that at least gives a range of the keys which would total the 769 on the high end. I want the plan and technical reports to be consistent.

Also, I wanted to follow up and see if we should be expecting the shade/shadow from your architects or are you going to get us something in CADD that we can manipulate to do the analysis.

Let me know.

Thanks!

Jayna Morgan

AECOM

T. 949.660.8044

From: Matthew Reid [<mailto:matt.reid@landanddesign.com>]

Sent: Tuesday, July 19, 2011 4:02 PM

To: Morgan, Jayna; Robert Kahn

Cc: Rogier Goedecke; Greg Blodgett; Paul Guerrero; Mike Swan; Chang, Jane

Subject: Re: Revised Site C Site Plan

Even though we are showing less hotel rooms, we want to keep the entitlement at 769 keys...

Matthew Reid

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Date: Tue, 19 Jul 2011 15:50:00 -0700

To: Robert Kahn <rk@rkengineer.com>

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Subject: RE: Revised Site C Site Plan

Hey Guys,

I just got a call from Mike Swan at Psomas and he said the new site plan shows less hotel rooms which will cancel out the increase in Water demand from the added restaurant square footage.

I asked him to confirm this with everyone tomorrow as I want to make sure we are all using the same development assumptions.

Thanks,

Jayna Morgan

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T. 949.660.8044

From: Bob Kahn [<mailto:rk@rkengineer.com>]
Sent: Tuesday, July 19, 2011 11:09 AM
To: Matthew Reid (Land & Design); Rogier Goedecke
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Ok will do.
Thank you!

Sent from my iPhone

On Jul 27, 2011, at 9:41 AM, "Matthew Reid" <matt.reid@landanddesign.com> wrote:

I have that being done now. My arch should be able to get it to you within the next day or so. You may want to call him directly.

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cell 949.293-9639

fax 949.474.0902

www.rkengineer.com

From: Mike Swan [<mailto:mswan@psomas.com>]

Sent: Thursday, July 21, 2011 11:54 AM

To: Morgan, Jayna; Matthew Reid; Bob Kahn

Cc: Rogier Goedecke; Greg Blodgett; Smith, Don (Irvine); Paul Guerrero; Chang, Jane

Subject: RE: Revised Site C Site Plan

I just have a question on the statistics.

From the previous emails I understand we want to hold the cap at 769 keys as far as the hotel rooms go and it soundslike someone is going to make the site plan graphic match that total. However, the DDA lists "a minimum of 10,000 sf of meeting space" and a "maximum of 65,000 sf of retail/restaurant/entertainment". It doesn't appear to include a maximum on the meeting space, which I would think it should (unless I'm reading it wrong).

The site plan currently shows a total of 40,000 sf of meeting and ballroom space which I assume correlates to the 10,000 sf minimum in the DDA (is this OK?). And the site plan currently totals 50,000 sf of restaurant/entertainment (1 - 5,000 sf and 4 - 7,500 sf restaurants, and 1 - 15,000 sf entertainment/restaurant) versus a maximum of 65,000 sf in the DDA.

Just want to confirm which maximum stats to use.

Michael D. Swan, PE

PSOMAS | *Balancing the Natural and Built Environment*
Senior Project Manager
Water & Wastewater Infrastructure
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707 714.751.7373
Direct 714.481.7979

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Sent: Thursday, July 21, 2011 11:36 AM

To: Matthew Reid; Robert Kahn

Cc: Rogier Goedecke; Greg Blodgett; Smith, Don (Irvine); Paul Guerrero; Mike Swan; Chang, Jane

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Let me know.

Thanks!

Jayna Morgan

AECOM

T. 949.660.8044

From: Matthew Reid [<mailto:matt.reid@landanddesign.com>]

Sent: Tuesday, July 19, 2011 4:02 PM

To: Morgan, Jayna; Robert Kahn

Cc: Rogier Goedecke; Greg Blodgett; Paul Guerrero; Mike Swan; Chang, Jane

Subject: Re: Revised Site C Site Plan

Even though we are showing less hotel rooms, we want to keep the entitlement at 769 keys...

Matthew Reid

Land & Design, Inc.

8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942

619.335.5896 Google voice | 619.462.4144 fax

Skype – [matthew.reid.ca](https://www.skype.com/user/matthew.reid.ca)

matt.reid@landanddesign.com

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Tue, 19 Jul 2011 15:50:00 -0700
To: Robert Kahn <rk@rkengineer.com>
Cc: Rogier Goedecke <rg@rkengineer.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Paul Guerrero <paulg@ci.garden-grove.ca.us>, Matthew Reid <matt.reid@landanddesign.com>, Mike Swan <mswan@psomas.com>, "Chang, Jane" <Jane.Chang@aecom.com>
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Sent: Tuesday, July 19, 2011 11:09 AM
To: Matthew Reid (Land & Design); Rogier Goedecke
Cc: drose3@charter.net; Morgan, Jayna; Greg Blodgett
Subject: RE: Revised Site C Site Plan

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Principal

<image002.jpg>
transportation planning / traffic engineering & design
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From: Matthew Reid (Land & Design) [<mailto:matt.reid@landanddesign.com>]

Sent: Tuesday, July 19, 2011 10:54 AM

To: Rogier Goedecke

Cc: <drose3@charter.net>; Morgan, Jayna; Bob Kahn; Greg Blodgett

Subject: Re: Revised Site C Site Plan

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Sent from my iPad

Matthew W Reid

619.335.5896 Google voice | 619.462.4144 f

Skype - matthew.reid.ca

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Vice President Operations

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Cc: Greg Blodgett; Karl Hill; Smith, Don (Irvine); Yang, Wendy; Suthiwan, Popy; Bob Kahn; Chang, Jane; Dan Candelaria; David Rose
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Please advise.

Thanks.

Dave

Sent via BlackBerry by AT&T

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Date: Mon, 18 Jul 2011 15:59:35 -0700
To: Matthew Reid<matt.reid@landanddesign.com>; Morgan, Jayna<Jayna.Morgan@aecom.com>; Dave Rose<drose3@charter.net>
Cc: Greg Blodgett<greg1@ci.garden-grove.ca.us>; Karl Hill<karlh@ci.garden-grove.ca.us>; Smith, Don (Irvine)<Don.E.Smith@aecom.com>; Yang, Wendy<Wendy.Yang@aecom.com>; Suthiwan, Popy<Popy.Suthiwan@aecom.com>; Bob Kahn<rk@rkengineer.com>; Chang, Jane<Jane.Chang@aecom.com>; Dan Candelaria<danc@ci.garden-grove.ca.us>
Subject: RE: Revised Site C Site Plan

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Please provide clarification and/or confirmation of the above assumptions so we can revise the technical reports.

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Vice President Operations

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Subject: Re: Revised Site C Site Plan

All new site plan per our conversation last week. We will reserve the right to make geometrical adjustments for the final plan....

Thank you.

Matthew Reid

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Date: Mon, 18 Jul 2011 11:25:44 -0700
To: Matthew Reid <matt.reid@landanddesign.com>, Dave Rose <drose3@charter.net>
Cc: Rogier Goedecke <rg@rkengineer.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, "Smith, Don (Irvine)" <Don.E.Smith@aecom.com>, "Yang, Wendy" <Wendy.Yang@aecom.com>, "Suthiwan, Popy" <Popy.Suthiwan@aecom.com>, Robert Kahn <rk@rkengineer.com>, "Chang, Jane" <Jane.Chang@aecom.com>
Subject: RE: Revised Site C Site Plan

Great!

Jayna Morgan
AECOM
T. 949.660.8044

From: Matthew Reid [<mailto:matt.reid@landanddesign.com>]
Sent: Monday, July 18, 2011 11:23 AM
To: Morgan, Jayna; Dave Rose
Cc: Rogier Goedecke; Greg Blodgett; Karl Hill; Smith, Don (Irvine); Yang, Wendy; Suthiwan, Popy; Robert Kahn; Chang, Jane
Subject: Re: Revised Site C Site Plan

We should have this plan for you today.

Matthew Reid

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From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Mon, 18 Jul 2011 11:04:17 -0700
To: Matthew Reid <matt.reid@landanddesign.com>, Dave Rose <drose3@charter.net>
Cc: Rogier Goedecke <rg@rkengineer.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, "Smith, Don (Irvine)" <Don.E.Smith@aecom.com>, "Yang, Wendy" <Wendy.Yang@aecom.com>, "Suthiwan, Popy" <Popy.Suthiwan@aecom.com>, Robert Kahn <rk@rkengineer.com>, "Chang, Jane" <Jane.Chang@aecom.com>
Subject: Revised Site C Site Plan

Hi All,

Hope you had a nice weekend!

In our meeting last Thursday, we discussed the revised site plan which would show the additional retail square footage for the pads along Harbor Blvd.

We also talked about adding an another access along Harbor. Our traffic consultants have talked with the City traffic engineer and presented the additional access. He is in agreement that this would help the project's traffic flow.

Matt/David- can you please coordinate with Roger Godecke to get the sketch plan he and Bob Kahn prepared on the secondary access so it can be incorporated into the revised site plan.

Thanks,

Jayna Morgan
Environmental Planner
Design + Planning
jayna.morgan@aecom.com
AECOM
2737 Campus Drive, Irvine, CA 92612 USA
T 949.660.8044 F 949.660.1046
www.aecom.com

||| <image001.gif>
||| <image002.jpg>

Subject: RE: Revised Site C Site Plan

From: Mike Swan <mswan@psomas.com>

Date: Wed, 27 Jul 2011 10:05:05 -0700

To: Matthew Reid <matt.reid@landanddesign.com>, "Morgan, Jayna" <Jayna.Morgan@aecom.com>

CC: Bryan Estrada <be@rkengineer.com>, Robert Kahn <rk@rkengineer.com>, RogierGoedecke <rg@rkengineer.com>, Michael Dickerson <md@rkengineer.com>, Dave Rose <drose3@charter.net>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Michael Labasan <mjlgfa@gmail.com>

I know we have settled on the 769 rooms but don't recall getting an answer re: the discrepancy between the DDA and latest site plan on the other uses square footages (restaurants, meetings/banquet). See attached email.

Michael D. Swan, PE

PSOMAS | *Balancing the Natural and Built Environment*

Senior Project Manager

Water & Wastewater Infrastructure

3 Hutton Centre Drive, Suite 200

Santa Ana, CA 92707 714.751.7373

Direct 714.481.7979

From: Matthew Reid [mailto:matt.reid@landanddesign.com]

Sent: Wednesday, July 27, 2011 9:41 AM

To: Morgan, Jayna

Cc: Bryan Estrada; Robert Kahn; RogierGoedecke; Michael Dickerson; Mike Swan; Dave Rose; Greg Blodgett; Michael Labasan

Subject: Re: Revised Site C Site Plan

I have that being done now. My arch should be able to get it to you within the next day or so. You may want to call him directly.

Thanks.

Sent from my iPhone

Matthew Reid

619.335.5896 Google voice

Skype: [matthew.reid.ca](https://www.skype.com/user/matthew.reid.ca)

On Jul 27, 2011, at 9:24 AM, "Morgan, Jayna" <Jayna.Morgan@aecom.com> wrote:

Thanks Matt,

We still need to have the plan revised to show room count range for the hotels as the plan needs to match the 769 total you want analyzed.

When will we receive this revision?

Sent from my iPhone

On Jul 27, 2011, at 6:06 AM, "Matthew Reid" <matt.reid@landanddesign.com> wrote:

Bryan,

Thank you. We are going to work on the "interior" of the site to better handle the traffic issue from a single entrance. We did change the single entrance to 4 lanes (per request) however we are not going to add a right in off Harbor.

Please use the plan recently revised.

Thanks.

Matthew Reid

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From: Bryan Estrada <be@rkengineer.com>
Date: Tue, 26 Jul 2011 10:26:04 -0700
To: Matthew Reid <matt.reid@landanddesign.com>
Cc: Robert Kahn <rk@rkengineer.com>, Rogier Goedecke <rg@rkengineer.com>, Michael Dickerson <md@rkengineer.com>, "Morgan, Jayna" <Jayna.Morgan@aecom.com>, <mswan@psomas.com>
Subject: RE: Revised Site C Site Plan

Hello Matt,

We are preparing to move forward with the revised traffic analysis and need to confirm the access onto Harbor Boulevard.

Please let us know whether we should assume the single access point, or if you anticipate revising the site plan to include a second driveway as previously discussed.

Thanks,

Bryan Estrada

transportation planner

<image001.gif>

transportation planning / traffic engineering & design
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<Popy.Suthiwan@aecom.com>, Robert Kahn <rk@rkengineer.com>, "Chang, Jane" <Jane.Chang@aecom.com>

Subject: RE: Revised Site C Site Plan

Great!

Jayna Morgan
AECOM
T. 949.660.8044

From: Matthew Reid [<mailto:matt.reid@landanddesign.com>]

Sent: Monday, July 18, 2011 11:23 AM

To: Morgan, Jayna; Dave Rose

Cc: Rogier Goedecke; Greg Blodgett; Karl Hill; Smith, Don (Irvine); Yang, Wendy;

Suthiwan, Popy; Robert Kahn; Chang, Jane

Subject: Re: Revised Site C Site Plan

We should have this plan for you today.

Matthew Reid

Land & Design, Inc.

8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942

619.335.5896 Google voice | 619.462.4144 fax

Skype – matthew.reid.ca

matt.reid@landanddesign.com

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>

Date: Mon, 18 Jul 2011 11:04:17 -0700

To: Matthew Reid <matt.reid@landanddesign.com>, Dave Rose <drose3@charter.net>

Cc: Rogier Goedecke <rg@rkengineer.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, "Smith, Don (Irvine)" <Don.E.Smith@aecom.com>, "Yang, Wendy" <Wendy.Yang@aecom.com>, "Suthiwan, Popy" <Popy.Suthiwan@aecom.com>, Robert Kahn <rk@rkengineer.com>, "Chang, Jane" <Jane.Chang@aecom.com>

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We also talked about adding an another access along Harbor. Our traffic consultants have talked with the City traffic engineer and presented the additional access. He is in agreement that this would help the project's traffic flow.

Matt/David- can you please coordinate with Roger Godecke to get the sketch plan he and Bob Kahn prepared on the secondary access so it can be incorporated into the revised site plan.

Thanks,

Jayna Morgan

Environmental Planner

Design + Planning

jayna.morgan@aecom.com

AECOM

2737 Campus Drive, Irvine, CA 92612 USA

T 949.660.8044 F 949.660.1046

www.aecom.com

<image001.gif>

<image002.jpg>

Subject: RE: Revised Site C Site Plan

From: Mike Swan <mswan@psomas.com>

Date: Thu, 21 Jul 2011 11:53:39 -0700

To: "'Morgan, Jayna'" <Jayna.Morgan@aecom.com>, 'Matthew Reid' <matt.reid@landanddesign.com>, 'Robert Kahn' <rk@rkengineer.com>

CC: 'Rogier Goedecke' <rg@rkengineer.com>, 'Greg Blodgett' <greg1@ci.garden-grove.ca.us>, "'Smith, Don (Irvine)'" <Don.E.Smith@aecom.com>, 'Paul Guerrero' <paulg@ci.garden-grove.ca.us>, "'Chang, Jane'" <Jane.Chang@aecom.com>

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From the previous emails I understand we want to hold the cap at 769 keys as far as the hotel rooms go and it sounds like someone is going to make the site plan graphic match that total. However, the DDA lists "a minimum of 10,000 sf of meeting space" and a "maximum of 65,000 sf of retail/restaurant/entertainment". It doesn't appear to include a maximum on the meeting space, which I would think it should (unless I'm reading it wrong).

The site plan currently shows a total of 40,000 sf of meeting and ballroom space which I assume correlates to the 10,000 sf minimum in the DDA (is this OK?). And the site plan currently totals 50,000 sf of restaurant/entertainment (1 - 5,000 sf and 4 - 7,500 sf restaurants, and 1 - 15,000 sf entertainment/restaurant) versus a maximum of 65,000 sf in the DDA.

Just want to confirm which maximum stats to use.

Michael D. Swan, PE

PSOMAS | *Balancing the Natural and Built Environment*

Senior Project Manager

Water & Wastewater Infrastructure

3 Hutton Centre Drive, Suite 200

Santa Ana, CA 92707 714.751.7373

Direct 714.481.7979

From: Morgan, Jayna [mailto:Jayna.Morgan@aecom.com]

Sent: Thursday, July 21, 2011 11:36 AM

To: Matthew Reid; Robert Kahn

Cc: Rogier Goedecke; Greg Blodgett; Smith, Don (Irvine); Paul Guerrero; Mike Swan; Chang, Jane

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Hi Matt,

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I just wanted to see if we are going to be getting a revised site plan that at least gives a range of the keys which would total the 769 on the high end. I want the plan and technical reports to be consistent.

Also, I wanted to follow up and see if we should be expecting the shade/shadow from your architects or are you going to get us something in CADD that we can manipulate to do the analysis.

Let me know.

Thanks!

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T. 949.660.8044

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Sent: Tuesday, July 19, 2011 4:02 PM

To: Morgan, Jayna; Robert Kahn

Cc: Rogier Goedecke; Greg Blodgett; Paul Guerrero; Mike Swan; Chang, Jane

Subject: Re: Revised Site C Site Plan

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Matthew Reid

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619.335.5896 Google voice | 619.462.4144 fax
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matt.reid@landanddesign.com

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Date: Tue, 19 Jul 2011 15:50:00 -0700
To: Robert Kahn <rk@rkengineer.com>
Cc: Rogier Goedecke <rg@rkengineer.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Paul Guerrero <paulg@ci.garden-grove.ca.us>, Matthew Reid <matt.reid@landanddesign.com>, Mike Swan <mswan@psomas.com>, "Chang, Jane" <Jane.Chang@aecom.com>
Subject: RE: Revised Site C Site Plan

Hey Guys,

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I asked him to confirm this with everyone tomorrow as I want to make sure we are all using the same development assumptions.

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From: Bob Kahn [mailto:rk@rkengineer.com]
Sent: Tuesday, July 19, 2011 11:09 AM
To: Matthew Reid (Land & Design); Rogier Goedecke
Cc: drose3@charter.net; Morgan, Jayna; Greg Blodgett
Subject: RE: Revised Site C Site Plan

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If the decision is to stick with the single access we will move forward accordingly and identify any required improvements in our revised traffic study, once our contract amendment has been approved.

Thanks,

Robert Kahn PE
Principal



transportation planning / traffic engineering & design
acoustical engineering / community traffic calming
4000 Westerly Place, Suite 280

Newport Beach, CA 92660
tel. 949.474.0809
cell 949.293-9639
fax 949.474.0902
www.rkengineer.com

From: Matthew Reid (Land & Design) [<mailto:matt.reid@landanddesign.com>]
Sent: Tuesday, July 19, 2011 10:54 AM
To: Rogier Goedecke
Cc: <drose3@charter.net>; Morgan, Jayna; Bob Kahn; Greg Blodgett
Subject: Re: Revised Site C Site Plan

Regarding the 15,000 sf, assume it is restaurant.

The reluctance(now) to add the drive isn't that staff didn't want it, but more of an issue now that we are running out of real estate.... The majority of traffic coming to the site will be from the North....coming from the 5 freeway. That is the reason for the 4 way main drive.

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We would like not to have to shift and re-do the entire site again unless absolutely, without question, is necessary.

Sent from my iPad

Matthew W Reid
619.335.5896 Google voice | 619.462.4144 f
Skype - [matthew.reid.ca](https://www.skype.com/people/matthew.reid.ca)

On Jul 19, 2011, at 8:47 AM, "Rogier Goedecke" <rg@rkengineer.com> wrote:

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Kind regards,

Rogier Goedecke
Vice President Operations

<[image001.jpg](#)>
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From: drose3@charter.net [mailto:drose3@charter.net]

Sent: Monday, July 18, 2011 5:24 PM

To: Rogier Goedecke; Matthew Reid; Morgan, Jayna

Cc: Greg Blodgett; Karl Hill; Smith, Don (Irvine); Yang, Wendy; Suthiwan, Popy; Bob Kahn; Chang, Jane; Dan Candelaria; David Rose

Subject: Re: Revised Site C Site Plan

- 1) Shown on new site plan;
- 2) City had indicated a driveway between Twintree and proposed new signal could NOT occur; and
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Please advise.

Thanks.

Dave

Sent via BlackBerry by AT&T

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Date: Mon, 18 Jul 2011 15:59:35 -0700

To: Matthew Reid<matt.reid@landanddesign.com>; Morgan, Jayna<Jayna.Morgan@aecom.com>; Dave Rose<drose3@charter.net>

Cc: Greg Blodgett<greg1@ci.garden-grove.ca.us>; Karl Hill<karlh@ci.garden-grove.ca.us>; Smith, Don (Irvine)<Don.E.Smith@aecom.com>; Yang, Wendy<Wendy.Yang@aecom.com>; Suthiwan, Popy<Popy.Suthiwan@aecom.com>; Bob Kahn<rk@rkengineer.com>; Chang, Jane<Jane.Chang@aecom.com>; Dan Candelaria<danc@ci.garden-grove.ca.us>

Subject: RE: Revised Site C Site Plan

Hi Matthew,

Thanks for sending us the updated site plan today. We have provided a few comments for you to consider (see attached). All of these comments were discussed in last Thursday's meeting at AECOM.

1. Access from Twintree Ave. will be restricted to Right Out and Left In only. This will be further clarified in the updated traffic impact study report.
2. Based on the meeting last week and with the City Traffic Engineer today, an additional driveway on Harbor Boulevard is recommended. This will improve internal circulation within the site and decrease the traffic volumes at the main driveway.
3. The site plan is indicating 15,000 SF of Entertainment Venue. Should this be calculated as Restaurant Use? This was also covered in last weeks meeting and it was agreed that restaurant use was acceptable. We can calculate the vehicle trip generation as a

restaurant or live venue use. The Live Entertainment use will most likely increase the parking requirements for the site. Please clarify.

Please provide clarification and/or confirmation of the above assumptions so we can revise the technical reports.

Kind regards,

Rogier Goedecke
Vice President Operations

<image001.jpg>

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From: Matthew Reid [<mailto:matt.reid@landanddesign.com>]
Sent: Monday, July 18, 2011 3:22 PM
To: Morgan, Jayna; Dave Rose
Cc: Rogier Goedecke; Greg Blodgett; Karl Hill; Smith, Don (Irvine); Yang, Wendy; Suthiwan, Popy; Bob Kahn; Chang, Jane
Subject: Re: Revised Site C Site Plan

All new site plan per our conversation last week. We will reserve the right to make geometrical adjustments for the final plan....

Thank you.

Matthew Reid

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8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942
619.335.5896 Google voice | 619.462.4144 fax
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From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Mon, 18 Jul 2011 11:25:44 -0700
To: Matthew Reid <matt.reid@landanddesign.com>, Dave Rose <drose3@charter.net>
Cc: Rogier Goedecke <rg@rkengineer.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, "Smith, Don (Irvine)" <Don.E.Smith@aecom.com>, "Yang, Wendy" <Wendy.Yang@aecom.com>, "Suthiwan, Popy" <Popy.Suthiwan@aecom.com>, Robert Kahn <rk@rkengineer.com>, "Chang, Jane" <Jane.Chang@aecom.com>
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RE: Revised Site C Site Plan.eml	Content-Type: message/rfc822
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Subject: Re: Revised Site C Site Plan

From: drose3@charter.net

Date: Wed, 27 Jul 2011 18:13:52 +0000

To: "Bob Kahn" <rk@rkengineer.com>, "Morgan, Jayna" <Jayna.Morgan@aecom.com>

CC: "Matthew Reid" <matt.reid@landanddesign.com>, "Bryan Estrada" <be@rkengineer.com>, "Rogier Goedecke" <rg@rkengineer.com>, "Michael Dickerson" <md@rkengineer.com>, mswan@psomas.com, "Greg Blodgett" <Greg1@ci.garden-grove.ca.us>, "Michael Labasan" <mjlgfa@gmail.com>

Yes that is correct, 4 pads @ 7500 each and one @ 15K

Sent via BlackBerry by AT&T

From: "Bob Kahn" <rk@rkengineer.com>

Date: Wed, 27 Jul 2011 11:01:06 -0700

To: Morgan, Jayna<Jayna.Morgan@aecom.com>

Cc: Matthew Reid<matt.reid@landanddesign.com>; Bryan Estrada<be@rkengineer.com>; Rogier Goedecke<rg@rkengineer.com>; Michael Dickerson<md@rkengineer.com>; <mswan@psomas.com>; Dave Rose<drose3@charter.net>; Greg Blodgett<Greg1@ci.garden-grove.ca.us>; Michael Labasan<mjlgfa@gmail.com>

Subject: Re: Revised Site C Site Plan

I thought we settled on 769 rooms and 45,000 sf of restaurant on the pad spaces. Please confirm before we move forward.

Sent from my iPhone

On Jul 27, 2011, at 9:40 AM, "Morgan, Jayna" <Jayna.Morgan@aecom.com> wrote:

Ok will do.

Thank you!

Sent from my iPhone

On Jul 27, 2011, at 9:41 AM, "Matthew Reid" <matt.reid@landanddesign.com> wrote:

I have that being done now. My arch should be able to get it to you within the next day or so. You may want to call him directly.

Thanks.

Sent from my iPhone

Matthew Reid

619.335.5896 Google voice

Skype: matthew.reid.ca

On Jul 27, 2011, at 9:24 AM, "Morgan, Jayna" <Jayna.Morgan@aecom.com> wrote:

Thanks Matt,

We still need to have the plan revised to show room count range for the hotels as the plan needs to match the 769 total you want analyzed.

When will we receive this revision?

Sent from my iPhone

On Jul 27, 2011, at 6:06 AM, "Matthew Reid" <matt.reid@landanddesign.com> wrote:

Bryan,

Thank you. We are going to work on the "interior" of the site to better handle the traffic issue from a single entrance. We did change the single entrance to 4 lanes (per request) however we are not going to add a right in off Harbor.

Please use the plan recently revised.

Thanks.

Matthew Reid

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Skype – matthew.reid.ca

matt.reid@landanddesign.com

From: Bryan Estrada <be@rkengineer.com>

Date: Tue, 26 Jul 2011 10:26:04 -0700

To: Matthew Reid <matt.reid@landanddesign.com>

Cc: Robert Kahn <rk@rkengineer.com>, Rogier Goedecke <rg@rkengineer.com>, Michael Dickerson <md@rkengineer.com>, "Morgan, Jayna" <Jayna.Morgan@aec.com>, <mswan@psomas.com>

Subject: RE: Revised Site C Site Plan

Hello Matt,

We are preparing to move forward with the revised traffic analysis and need to confirm the access onto Harbor Boulevard.

Please let us know whether we should assume the single access point, or if you anticipate revising the site plan to include a second driveway as previously discussed.

Thanks,

Bryan Estrada

transportation planner

<image001.gif>

transportation planning / traffic engineering & design

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4000 Westerly Place, Suite 280
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Vice President Operations

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Date: Mon, 18 Jul 2011 15:59:35 -0700
To: Matthew Reid<matt.reid@landanddesign.com>; Morgan, Jayna<Jayna.Morgan@aecom.com>; Dave Rose<drose3@charter.net>
Cc: Greg Blodgett<greg1@ci.garden-grove.ca.us>; Karl Hill<karlh@ci.garden-grove.ca.us>; Smith, Don (Irvine)<Don.E.Smith@aecom.com>; Yang,

Wendy<Wendy.Yang@aecom.com>; Suthiwan, Popy<Popy.Suthiwan@aecom.com>;
Bob Kahn<rk@rkengineer.com>; Chang, Jane<Jane.Chang@aecom.com>; Dan
Candelaria<danc@ci.garden-grove.ca.us>
Subject: RE: Revised Site C Site Plan

Hi Matthew,

Thanks for sending us the updated siteplan today. We have provided a few comments for you to consider (see attached). All of these comments were discussed in last Thursday's meeting at AECOM.

1. Access from Twintree Ave. will be restricted to Right Out and Left In only. This will be further clarified in the updated traffic impact study report.
2. Based on the meeting last week and with the City Traffic Engineer today, an additional driveway on Harbor Boulevard is recommended. This will improve internal circulation within the site and decrease the traffic volumes at the main driveway.
3. The site plan is indicating 15,000 SF of Entertainment Venue. Should this be calculated as Restaurant Use? This was also covered in last weeks meeting and it was agreed that restaurant use was acceptable. We can calculate the vehicle trip generation as a restaurant or live venue use. The Live Entertainment use will most likely increase the parking requirements for the site. Please clarify.

Please provide clarification and/or confirmation of the above assumptions so we can revise the technical reports.

Kind regards,

Rogier Goedecke
Vice President Operations

<image001.jpg>

transportation planning / traffic engineering & design
acoustical engineering / community traffic calming

4000 Westerly Place, Suite 280
Newport Beach, CA 92660
tel. 949.474.0809
fax 949.474.0902

www.rkengineer.com

From: Matthew Reid [<mailto:matt.reid@landanddesign.com>]
Sent: Monday, July 18, 2011 3:22 PM
To: Morgan, Jayna; Dave Rose
Cc: Rogier Goedecke; Greg Blodgett; Karl Hill; Smith, Don (Irvine); Yang, Wendy; Suthiwan, Popy; Bob Kahn; Chang, Jane
Subject: Re: Revised Site C Site Plan

All new site plan per our conversation last week. We will reserve the right to make geometrical adjustments for the final plan....

Thank you.

Matthew Reid

Land & Design, Inc.
8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942
619.335.5896 Google voice | 619.462.4144 fax
Skype – [matthew.reid.ca](https://www.skype.com/user/matthew.reid.ca)
matt.reid@landanddesign.com

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Mon, 18 Jul 2011 11:25:44 -0700
To: Matthew Reid <matt.reid@landanddesign.com>, Dave Rose <drose3@charter.net>
Cc: Rogier Goedecke <rg@rkengineer.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, "Smith, Don (Irvine)" <Don.E.Smith@aecom.com>, "Yang, Wendy" <Wendy.Yang@aecom.com>, "Suthiwan, Popy" <Popy.Suthiwan@aecom.com>, Robert Kahn <rk@rkengineer.com>, "Chang, Jane" <Jane.Chang@aecom.com>
Subject: RE: Revised Site C Site Plan

Great!

Jayna Morgan
AECOM
T. 949.660.8044

From: Matthew Reid [<mailto:matt.reid@landanddesign.com>]
Sent: Monday, July 18, 2011 11:23 AM
To: Morgan, Jayna; Dave Rose
Cc: Rogier Goedecke; Greg Blodgett; Karl Hill; Smith, Don (Irvine); Yang, Wendy; Suthiwan, Popy; Robert Kahn; Chang, Jane
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matt.reid@landanddesign.com

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Mon, 18 Jul 2011 11:04:17 -0700
To: Matthew Reid <matt.reid@landanddesign.com>, Dave Rose <drose3@charter.net>
Cc: Rogier Goedecke <rg@rkengineer.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, "Smith, Don (Irvine)" <Don.E.Smith@aecom.com>, "Yang, Wendy" <Wendy.Yang@aecom.com>, "Suthiwan, Popy" <Popy.Suthiwan@aecom.com>, Robert Kahn <rk@rkengineer.com>, "Chang, Jane" <Jane.Chang@aecom.com>
Subject: Revised Site C Site Plan

Hi All,

Hope you had a nice weekend!

In our meeting last Thursday, we discussed the revised site plan which would show the additional retail square footage for the pads along Harbor Blvd.

We also talked about adding an another access along Harbor. Our traffic consultants have talked with the City traffic engineer and presented the additional access. He is in agreement that this would help the project's traffic flow.

Matt/David- can you please coordinate with Roger Godecke to get the sketch plan he and Bob Kahn prepared on the secondary access so it can be incorporated into the revised site plan.

Thanks,

Jayna Morgan
Environmental Planner
Design + Planning
jayna.morgan@aecom.com
AECOM
2737 Campus Drive, Irvine, CA 92612 USA
T 949.660.8044 F 949.660.1046
www.aecom.com

<image001.gif>

<image002.jpg>

Subject: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>

Date: Thu, 28 Jul 2011 09:36:43 -0700

To: Greg Blodgett <greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, Matthew Reid <matt.reid@landanddesign.com>, Maria Parra <mariap@ci.garden-grove.ca.us>

CC: "Chang, Jane" <Jane.Chang@aecom.com>

Conference Call 866- 203- 6896

Code 9607121256

Leader pin 3092

Jayna Morgan

Environmental Planner

Design + Planning

jayna.morgan@aecom.com

AECOM

2737 Campus Drive, Irvine, CA 92612 USA

T 949.660.8044 F 949.660.1046

www.aecom.com

Change to 10 am Conference call to discuss Site C Addendum and Sha...

Subject: Change to 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>

Date: Thu, 28 Jul 2011 10:09:59 -0700

To: Greg Blodgett <greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, Matthew Reid <matt.reid@landanddesign.com>, Maria Parra <mariap@ci.garden-grove.ca.us>

CC: "Chang, Jane" <Jane.Chang@aecom.com>

I have been on the call since 10, but need to take another call at 10:30, so let's re-schedule to 11 am today.

Jayna Morgan

AECOM

T. 949.660.8044

From: Morgan, Jayna

Sent: Thursday, July 28, 2011 9:37 AM

To: Greg Blodgett; 'Karl Hill'; 'Matthew Reid'; Maria Parra

Cc: Chang, Jane

Subject: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue

Conference Call 866- 203- 6896

Code 9607121256

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T 949.660.8044 F 949.660.1046

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Subject: Re: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue
From: drose3@charter.net
Date: Thu, 28 Jul 2011 18:54:22 +0000
To: "Morgan, Jayna" <Jayna.Morgan@aecom.com>, "Karl Hill" <karlh@ci.garden-grove.ca.us>, "Maria Parra" <mariap@ci.garden-grove.ca.us>
CC: "Matthew Reid" <matt.reid@landanddesign.com>, "Greg Blodgett" <greg1@ci.garden-grove.ca.us>, "Chang, Jane" <Jane.Chang@aecom.com>

I'm available the rest of the day.

Please advise.

Dave

Sent via BlackBerry by AT&T

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Thu, 28 Jul 2011 11:32:02 -0700
To: <drose3@charter.net>; Karl Hill<karlh@ci.garden-grove.ca.us>; Maria Parra<mariap@ci.garden-grove.ca.us>
Cc: Matthew Reid<matt.reid@landanddesign.com>; Greg Blodgett<greg1@ci.garden-grove.ca.us>; Chang, Jane<Jane.Chang@aecom.com>
Subject: RE: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue

The call was today, but no one has called in so I think we should re-schedule for this afternoon (1PM or 4PM) or tomorrow am.

I will not be available tomorrow afternoon and I am on vacation next week.

Let me know your availability.

Thanks,

Jayna Morgan

AECOM

T. 949.660.8044

From: drose3@charter.net [mailto:drose3@charter.net]
Sent: Thursday, July 28, 2011 11:20 AM
To: Morgan, Jayna
Subject: Re: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue

What day is the call?

Sent via BlackBerry by AT&T

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Thu, 28 Jul 2011 09:39:26 -0700
To: <drose3@charter.net>
Subject: FW: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue

Sorry, I forgot to include you.

Jayna Morgan
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T. 949.660.8044

From: Morgan, Jayna
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Cc: Chang, Jane
Subject: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue

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RE: 10 am Conference call to discuss Site C Addendum and Shade Sh...

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To: <drose3@charter.net>, Karl Hill <karlh@ci.garden-grove.ca.us>, Maria Parra <mariap@ci.garden-grove.ca.us>

CC: Matthew Reid <matt.reid@landanddesign.com>, Greg Blodgett <greg1@ci.garden-grove.ca.us>, "Chang, Jane" <Jane.Chang@aecom.com>

Thank you Dave. You are the only one who has replied thus far. I will be in a meeting from 12 to 1 but will check e-mail as soon as I get out.

I know the city had an off-site meeting this am that has probably gone over.

Jayna Morgan

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T. 949.660.8044

From: drose3@charter.net [mailto:drose3@charter.net]

Sent: Thursday, July 28, 2011 11:54 AM

To: Morgan, Jayna; Karl Hill; Maria Parra

Cc: Matthew Reid; Greg Blodgett; Chang, Jane

Subject: Re: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue

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Please advise.

Dave

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To: <drose3@charter.net>; Karl Hill<karlh@ci.garden-grove.ca.us>; Maria Parra<mariap@ci.garden-grove.ca.us>

Cc: Matthew Reid<matt.reid@landanddesign.com>; Greg Blodgett<greg1@ci.garden-grove.ca.us>; Chang, Jane<Jane.Chang@aecom.com>

Subject: RE: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue

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Thanks,

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Sorry, I forgot to include you.

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To: Greg Blodgett; 'Karl Hill'; 'Matthew Reid'; Maria Parra

Cc: Chang, Jane

Subject: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue

Conference Call 866- 203- 6896

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Leader pin 3092

Jayna Morgan

Environmental Planner

Design + Planning

jayna.morgan@aecom.com

AECOM

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www.aecom.com

Subject: Re: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue
From: Matthew Reid <matt.reid@landanddesign.com>
Date: Thu, 28 Jul 2011 12:40:59 -0700
To: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
CC: "<drose3@charter.net>" <drose3@charter.net>, Karl Hill <karlh@ci.garden-grove.ca.us>, Maria Parra <mariap@ci.garden-grove.ca.us>, Greg Blodgett <greg1@ci.garden-grove.ca.us>, "Chang, Jane" <Jane.Chang@aecom.com>

Wasn't aware of a call today....sorry. Can do tomorrow at 11am.

Sent from my iPhone

Matthew Reid
619.335.5896 Google voice
Skype: [matthew.reid.ca](https://www.skype.com/user/matthew.reid.ca)

On Jul 28, 2011, at 11:32 AM, "Morgan, Jayna" <Jayna.Morgan@aecom.com> wrote:

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RE: 10 am Conference call to discuss Site C Addendum and Shade Sh...

Subject: RE: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue
From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Thu, 28 Jul 2011 12:56:30 -0700
To: Matthew Reid <matt.reid@landanddesign.com>
CC: <drose3@charter.net>, Karl Hill <karlh@ci.garden-grove.ca.us>, Maria Parra <maria@ci.garden-grove.ca.us>, Greg Blodgett <greg1@ci.garden-grove.ca.us>, "Chang, Jane" <Jane.Chang@aecom.com>

Ok, let's see if the City will be available tomorrow. Are you available at 4 today?

Jayna Morgan
AECOM
T. 949.660.8044

From: Matthew Reid [mailto:matt.reid@landanddesign.com]
Sent: Thursday, July 28, 2011 12:41 PM
To: Morgan, Jayna
Cc: <drose3@charter.net>; Karl Hill; Maria Parra; Greg Blodgett; Chang, Jane
Subject: Re: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue

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Jayna Morgan

Environmental Planner

Design + Planning

jayna.morgan@aecom.com

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2737 Campus Drive, Irvine, CA 92612 USA

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Re: 10 am Conference call to discuss Site C Addendum and Shade Sh...

Subject: Re: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue
From: Matthew Reid <matt.reid@landanddesign.com>
Date: Thu, 28 Jul 2011 13:14:16 -0700
To: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
CC: "<drose3@charter.net>" <drose3@charter.net>, Karl Hill <karlh@ci.garden-grove.ca.us>, Maria Parra <mariap@ci.garden-grove.ca.us>, Greg Blodgett <greg1@ci.garden-grove.ca.us>, "Chang, Jane" <Jane.Chang@aecom.com>

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Well it looks like our call will be best tomorrow (Friday) at 11:00. I will forward the call in information and we should not need more than 30 to 45-minutes.

Jayna Morgan
AECOM
T. 949.660.8044

From: Matthew Reid [mailto:matt.reid@landanddesign.com]
Sent: Thursday, July 28, 2011 1:14 PM
To: Morgan, Jayna
Cc: <drose3@charter.net>; Karl Hill; Maria Parra; Greg Blodgett; Chang, Jane
Subject: Re: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue

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T 949.660.8044 F 949.660.1046
www.aecom.com

Subject: FW: Revised Site C Site Plan
From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Thu, 28 Jul 2011 13:42:35 -0700
To: Matthew Reid <matt.reid@landanddesign.com>, <drose3@charter.net>, <mlabasan@gfaarchitects.com>
CC: Greg Blodgett <greg1@ci.garden-grove.ca.us>, Mike Swan <mswan@psomas.com>

Please see below.

Jayna Morgan
AECOM
T. 949.660.8044

From: Mike Swan [mailto:mswan@psomas.com]
Sent: Thursday, July 28, 2011 1:34 PM
To: Morgan, Jayna
Cc: Smith, Don (Irvine)
Subject: RE: Revised Site C Site Plan

Not quite. The rooms now add up but under Conference Center in the right hand margin it shows Ballroom and Meeting Rooms at 38,000 sf which I assume is the third floor of the Parking Structure but that only shows Ballroom and Prefunction of 19,000 sf in the graphic. Is there another 19,000 sf of Meeting Rooms on the third floor of the Full Service Hotel as it shows them on the graphic but doesn't include a square footage? If so, they should add the 19,000 sf where shown on the attached Markup. Or put more sf of meeting rooms somewhere else on the graphic.

And why is this pdf so fuzzy and a showing sized close to a 3x5 card?

Michael D. Swan, PE
PSOMAS | *Balancing the Natural and Built Environment*
Senior Project Manager
Water & Wastewater Infrastructure
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707 714.751.7373
Direct 714.481.7979

From: Morgan, Jayna [mailto:Jayna.Morgan@aecom.com]
Sent: Thursday, July 28, 2011 11:58 AM
To: Mike Swan
Cc: Smith, Don (Irvine)
Subject: FW: Revised Site C Site Plan

I think the numbers all add up on this one.

Jayna Morgan
AECOM
T. 949.660.8044

From: MJL [mailto:mjlgfa@gmail.com]
Sent: Wednesday, July 27, 2011 11:26 PM
To: Morgan, Jayna; Matt Reid; olagopack@gmail.com
Subject: Re: Revised Site C Site Plan

Jayna

Attached is revised master plan

On Wed, Jul 27, 2011 at 5:17 PM, Morgan, Jayna <Jayna.Morgan@aecom.com> wrote:
Great! Thank you! Will you also tell Matt we are going to have a conference call with the City at 10am.
I will send out the call # in the morning.
Have a good evening,
Jayna

Sent from my iPhone

On Jul 27, 2011, at 5:09 PM, "MJL" <mjlgfa@gmail.com> wrote:

Jayna

Just got a confirmation on a few items from Matt, will send you the revised plan and numbers in the morning.

On Wed, Jul 27, 2011 at 9:41 AM, Morgan, Jayna <Jayna.Morgan@aecom.com> wrote:
Ok will do.
Thank you!

Sent from my iPhone

On Jul 27, 2011, at 9:41 AM, "Matthew Reid" <matt.reid@landanddesign.com> wrote:

I have that being done now. My arch should be able to get it to you within the next day or so. You may want to call him directly.

Thanks.

Sent from my iPhone

Matthew Reid
[619.335.5896](tel:619.335.5896) Google voice
Skype: [matthew.reid.ca](https://www.skype.com/people/matthew.reid.ca)

On Jul 27, 2011, at 9:24 AM, "Morgan, Jayna" <Jayna.Morgan@aecom.com> wrote:

Thanks Matt,

We still need to have the plan revised to show room count range for the hotels as the plan needs to match the 769 total you want analyzed.

When will we receive this revision?

Sent from my iPhone

On Jul 27, 2011, at 6:06 AM, "Matthew Reid"
<matt.reid@landanddesign.com> wrote:

Bryan,

Thank you. We are going to work on the "interior" of the site to better handle the traffic issue from a single entrance. We did change the single entrance to 4 lanes (per request) however we are not going to add a right in off Harbor.

Please use the plan recently revised.

Thanks.

Matthew Reid

Land & Design, Inc.

8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942

[619.335.5896](tel:619.335.5896) Google voice | [619.462.4144](tel:619.462.4144) fax

Skype – mattthew.reid.ca

matt.reid@landanddesign.com

From: Bryan Estrada <be@rkengineer.com>

Date: Tue, 26 Jul 2011 10:26:04 -0700

To: Matthew Reid <matt.reid@landanddesign.com>

Cc: Robert Kahn <rk@rkengineer.com>, Rogier Goedecke
<rg@rkengineer.com>, Michael Dickerson

<md@rkengineer.com>, "Morgan, Jayna"

<Jayna.Morgan@aecom.com>, <mswan@psomas.com>

Subject: RE: Revised Site C Site Plan

Hello Matt,

We are preparing to move forward with the revised traffic analysis and need to confirm the access onto Harbor Boulevard.

Please let us know whether we should assume the single access point, or if you anticipate revising the site plan to include a second driveway as previously discussed.

Thanks,

Bryan Estrada
transportation planner

<image001.gif>

transportation planning / traffic engineering & design
acoustical engineering / community traffic calming
4000 Westerly Place, Suite 280
Newport Beach, CA 92660
tel. [949.474.0809](tel:949.474.0809)
cell [949.293-9639](tel:949.293-9639)
fax [949.474.0902](tel:949.474.0902)
www.rkengineer.com

From: Mike Swan [<mailto:mswan@psomas.com>]
Sent: Thursday, July 21, 2011 11:54 AM
To: Morgan, Jayna; Matthew Reid; Bob Kahn
Cc: Rogier Goedecke; Greg Blodgett; Smith, Don (Irvine); Paul Guerrero; Chang, Jane
Subject: RE: Revised Site C Site Plan

I just have a question on the statistics.

From the previous emails I understand we want to hold the cap at 769 keys as far as the hotel rooms go and it sounds like someone is going to make the site plan graphic match that total. However, the DDA lists "a minimum of 10,000 sf of meeting space" and a "maximum of 65,000 sf of retail/restaurant/entertainment". It doesn't appear to include a maximum on the meeting space, which I would think it should (unless I'm reading it wrong).

The site plan currently shows a total of 40,000 sf of meeting and ballroom space which I assume correlates to the 10,000 sf minimum in the DDA (is this OK?). And the site plan currently totals 50,000 sf of restaurant/entertainment (1 - 5,000 sf and 4 - 7,500 sf restaurants, and 1 - 15,000 sf entertainment/restaurant) versus a maximum of 65,000 sf in the DDA.

Just want to confirm which maximum stats to use.

Michael D. Swan, PE
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Senior Project Manager
Water & Wastewater Infrastructure
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707 [714.751.7373](tel:714.751.7373)
Direct [714.481.7979](tel:714.481.7979)

From: Morgan, Jayna [<mailto:Jayna.Morgan@aecom.com>]
Sent: Thursday, July 21, 2011 11:36 AM
To: Matthew Reid; Robert Kahn
Cc: Rogier Goedecke; Greg Blodgett; Smith, Don (Irvine); Paul Guerrero; Mike Swan; Chang, Jane
Subject: RE: Revised Site C Site Plan

Hi Matt,

Hope you are having a good week.

I just wanted to see if we are going to be getting a revised site plan that at least gives a range of the keys which would total the 769 on the high end. I want the plan and technical reports to be consistent.

Also, I wanted to follow up and see if we should be expecting the shade/shadow from your architects or are you going to get us something in CADD that we can manipulate to do the analysis.

Let me know.
Thanks!

Jayna Morgan
AECOM
T. 949.660.8044

From: Matthew Reid
[mailto:matt.reid@landanddesign.com]
Sent: Tuesday, July 19, 2011 4:02 PM
To: Morgan, Jayna; Robert Kahn
Cc: Rogier Goedecke; Greg Blodgett; Paul Guerrero; Mike Swan; Chang, Jane
Subject: Re: Revised Site C Site Plan

Even though we are showing less hotel rooms, we want to keep the entitlement at 769 keys...

Matthew Reid
Land & Design, Inc.
8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942
619.335.5896 Google voice | 619.462.4144 fax
Skype – matthew.reid.ca
matt.reid@landanddesign.com

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Tue, 19 Jul 2011 15:50:00 -0700
To: Robert Kahn <rk@rkengineer.com>
Cc: Rogier Goedecke <rg@rkengineer.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Paul Guerrero <paulg@ci.garden-grove.ca.us>, Matthew Reid <matt.reid@landanddesign.com>, Mike Swan <mswan@psomas.com>, "Chang, Jane" <Jane.Chang@aecom.com>
Subject: RE: Revised Site C Site Plan

Hey Guys,

I just got a call from Mike Swan at Psomas and he said the

new site plan shows less hotel rooms which will cancel out the increase in Water demand from the added restaurant square footage.

I asked him to confirm this with everyone tomorrow as I want to make sure we are all using the same development assumptions.

Thanks,

Jayna Morgan
AECOM
T. 949.660.8044

From: Bob Kahn [<mailto:rk@rkengineer.com>]
Sent: Tuesday, July 19, 2011 11:09 AM
To: Matthew Reid (Land & Design); Rogier Goedecke
Cc: drose3@charter.net; Morgan, Jayna; Greg Blodgett
Subject: RE: Revised Site C Site Plan

We understand the concern for the loss of property, but our concern is that now nearly all of the traffic will be directed to the main signalized access which will create some internal queuing within the site . The proximity to the first internal drive aisle intersection parallel Harbor Blvd. does not leave a substantial amount of storage space without blocking this intersection. Also, the elimination of the additional access will most likely also require the widening of Harbor Blvd. to provide a separate right turn lane at the signalized access.

If the decision is to stick with the single access we will move forward accordingly and identify any required improvements in our revised traffic study, once our contract amendment has been approved.

Thanks,

Robert Kahn PE
Principal

<image002.jpg>
transportation planning / traffic engineering & design
acoustical engineering / community traffic calming
4000 Westerly Place, Suite 280
Newport Beach, CA 92660
tel. 949.474.0809
cell 949.293-9639
fax 949.474.0902
www.rkengineer.com

From: Matthew Reid (Land & Design)
[\[mailto:matt.reid@landanddesign.com\]](mailto:matt.reid@landanddesign.com)
Sent: Tuesday, July 19, 2011 10:54 AM
To: Rogier Goedecke

Cc: <drose3@charter.net>; Morgan, Jayna; Bob Kahn; Greg Blodgett
Subject: Re: Revised Site C Site Plan

Regarding the 15,000 sf, assume it is restaurant.

The reluctance(now) to add the drive isn't that staff didn't want it, but more of an issue now that we are running out of real estate.... The majority of traffic coming to the site will be from the North....coming from the 5 freeway. That is the reason for the 4 way main drive.

I think a good example of a single drive that works is the Hyatt at Chapman and Harbor. This single drive concept seems to be working well with a second (exit) further down Chapman.

We would like not to have to shift and re-do the entire site again unless absolutely, without question, is necessary.

Sent from my iPad

Matthew W Reid
[619.335.5896](tel:619.335.5896) Google voice | [619.462.4144](tel:619.462.4144) f
Skype - [matthew.reid.ca](https://www.skype.com/people/matthew.reid.ca)

On Jul 19, 2011, at 8:47 AM, "Rogier Goedecke"
<rg@rkengineer.com> wrote:

Hi Dave,

Bob Kahn and I spoke with Dan Candelaria (City Traffic Engineer) yesterday and it was agreed that the additional driveway on Harbor Boulevard would be beneficial to the project. Perhaps you can confirm this with the city staff member who is opposed to the driveway.

Matt, please provide us with direction on the 15,000 square feet of restaurant use or entertainment use. In order to update the technical reports, we will need to know the land uses. From a traffic impact point of view, the live entertainment land use will have lower peak hour traffic volumes as compared to the restaurant use.

Kind regards,

Rogier Goedecke
Vice President Operations

<image001.jpg>

transportation planning / traffic engineering &
design
acoustical engineering / community traffic calming

4000 Westerly Place, Suite 280
Newport Beach, CA 92660
tel. 949.474.0809
fax 949.474.0902

www.rkengineer.com

From: drose3@charter.net
[<mailto:drose3@charter.net>]
Sent: Monday, July 18, 2011 5:24 PM
To: Rogier Goedecke; Matthew Reid; Morgan,
Jayna
Cc: Greg Blodgett; Karl Hill; Smith, Don
(Irvine); Yang, Wendy; Suthiwan, Popy; Bob
Kahn; Chang, Jane; Dan Candelaria; David
Rose
Subject: Re: Revised Site C Site Plan

- 1) Shown on new site plan;
- 2) City had indicated a driveway between
Twintree and proposed new signal could
NOT occur; and
- 3) Assume its restaurant, unless Matt
strongly disagrees or IF we have to do
EIR, then assume entertainment venue.

Please advise.

Thanks.

Dave

Sent via BlackBerry by AT&T

From: "Rogier Goedecke"
<rg@rkengineer.com>
Date: Mon, 18 Jul 2011 15:59:35 -0700
To: Matthew
Reid<matt.reid@landanddesign.com>;
Morgan,
Jayna<Jayna.Morgan@aecom.com>;
Dave Rose<drose3@charter.net>
Cc: Greg Blodgett<greg1@ci.garden-grove.ca.us>; Karl Hill<karlh@ci.garden-grove.ca.us>; Smith, Don (Irvine)

<Don.E.Smith@aecom.com>; Yang,
Wendy<Wendy.Yang@aecom.com>;
Suthiwan,
Popy<Popy.Suthiwan@aecom.com>; Bob
Kahn<rk@rkengineer.com>; Chang,
Jane<Jane.Chang@aecom.com>; Dan
Candelaria<danc@ci.garden-grove.ca.us>
Subject: RE: Revised Site C Site Plan

Hi Matthew,

Thanks for sending us the updated siteplan today. We have provided a few comments for you to consider (see attached). All of these comments were discussed in last Thursday's meeting at AECOM.

1. Access from Twintree Ave. will be restricted to Right Out and Left In only. This will be further clarified in the updated traffic impact study report.
2. Based on the meeting last week and with the City Traffic Engineer today, an additional driveway on Harbor Boulevard is recommended. This will improve internal circulation within the site and decrease the traffic volumes at the main driveway.
3. The site plan is indicating 15,000 SF of Entertainment Venue. Should this be calculated as Restaurant Use? This was also covered in last weeks meeting and it was agreed that restaurant use was acceptable. We can calculate the vehicle trip generation as a restaurant or live venue use. The Live Entertainment use will most likely increase the parking requirements for the site. Please clarify.

Please provide clarification and/or confirmation of the above assumptions so we can revise the technical reports.

Kind regards,

Rogier Goedecke
Vice President Operations

<image001.jpg>
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tel. 949.474.0809
fax 949.474.0902

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From: Matthew Reid
[mailto:matt.reid@landanddesign.com]
Sent: Monday, July 18, 2011 3:22 PM
To: Morgan, Jayna; Dave Rose
Cc: Rogier Goedecke; Greg Blodgett; Karl Hill; Smith, Don (Irvine); Yang, Wendy; Suthiwan, Popy; Bob Kahn; Chang, Jane
Subject: Re: Revised Site C Site Plan

All new site plan per our conversation last week. We will reserve the right to make geometrical adjustments for the final plan....

Thank you.

Matthew Reid

Land & Design, Inc.
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91942
[619.335.5896](tel:619.335.5896) Google voice | [619.462.4144](tel:619.462.4144) fax
Skype – matt.reid.ca
matt.reid@landanddesign.com

From: "Morgan, Jayna"
<Jayna.Morgan@aecom.com>
Date: Mon, 18 Jul 2011 11:25:44 -0700
To: Matthew Reid
<matt.reid@landanddesign.com>, Dave Rose <drose3@charter.net>
Cc: Rogier Goedecke <rg@rkengineer.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, "Smith, Don (Irvine)" <Don.E.Smith@aecom.com>, "Yang, Wendy" <Wendy.Yang@aecom.com>, "Suthiwan, Popy" <Popy.Suthiwan@aecom.com>, Robert Kahn <rk@rkengineer.com>, "Chang, Jane" <Jane.Chang@aecom.com>
Subject: RE: Revised Site C Site Plan

Great!

Jayna Morgan
AECOM
T. [949.660.8044](tel:949.660.8044)

From: Matthew Reid
[mailto:matt.reid@landanddesign.com]
Sent: Monday, July 18, 2011 11:23 AM
To: Morgan, Jayna; Dave Rose
Cc: Rogier Goedecke; Greg Blodgett;
Karl Hill; Smith, Don (Irvine); Yang,
Wendy; Suthiwan, Popy; Robert Kahn;
Chang, Jane
Subject: Re: Revised Site C Site Plan

We should have this plan for you today.

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matt.reid@landanddesign.com

From: "Morgan, Jayna"
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Date: Mon, 18 Jul 2011 11:04:17 -0700
To: Matthew Reid
<matt.reid@landanddesign.com>, Dave
Rose <drose3@charter.net>
Cc: Rogier Goedecke <rg@rkengineer.com>, Greg Blodgett
<Greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, "Smith, Don (Irvine)"
<Don.E.Smith@aecom.com>, "Yang,
Wendy" <Wendy.Yang@aecom.com>, "Suthiwan, Popy"
<Popy.Suthiwan@aecom.com>, Robert
Kahn <rk@rkengineer.com>, "Chang, Jane"
<Jane.Chang@aecom.com>
Subject: Revised Site C Site Plan

Hi All,

Hope you had a nice weekend!

In our meeting last Thursday, we discussed the revised site plan which would show the additional retail square footage for the pads along Harbor Blvd.

We also talked about adding an another access along Harbor. Our traffic consultants have talked with the City traffic engineer and presented the additional access. He is in agreement that this would help the project's traffic flow.

Matt/David- can you please coordinate with Roger Godecke to get the sketch plan he and Bob Kahn prepared on the secondary access so it can be incorporated into the revised site plan.

Thanks,

Jayna Morgan
Environmental Planner
Design + Planning
jayna.morgan@aecom.com
AECOM
2737 Campus Drive, Irvine, CA 92612 USA
T [949.660.8044](tel:949.660.8044) F [949.660.1046](tel:949.660.1046)
www.aecom.com

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SITE PLAN - SCHEME 3 110728aMarkup.pdf	Content-Description: SITE PLAN - SCHEME 3 110728aMarkup.pdf Content-Type: application/pdf Content-Encoding: base64
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 1000 BEESCKE AVENUE
 SUITE 100
 WASHINGTON, DC 20004

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 - 100% RECYCLED GLASS
 - 100% RECYCLED METAL
 - 100% RECYCLED PLASTIC
 - 100% RECYCLED RUBBER
 - 100% RECYCLED WOOD

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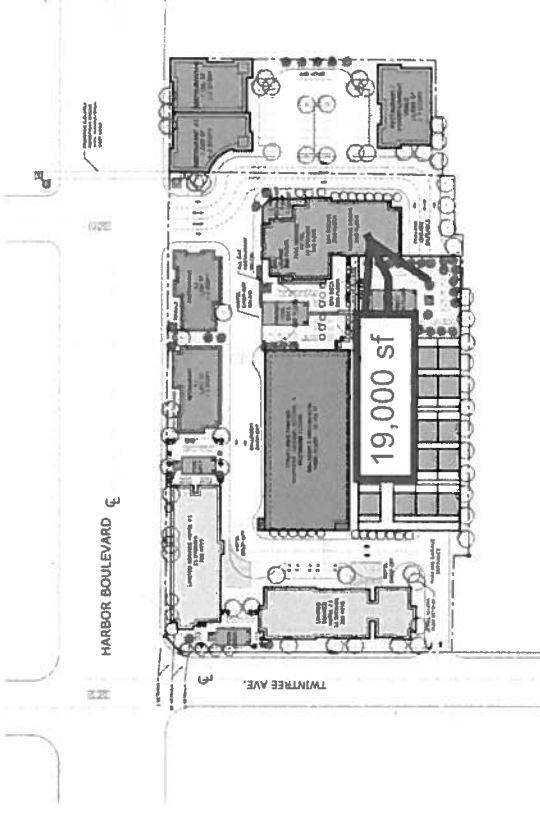
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07.27.11
 2011
 10:43 P

SITE PLAN - SCHEME 3.3
 SCALE: 1/8"=1'-0"

International WEST
 ARCHITECTS

Subject: RE: Revised Site C Site Plan
From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Thu, 28 Jul 2011 15:04:55 -0700
To: Mike Swan <mswan@psomas.com>
CC: Matthew Reid <matt.reid@landanddesign.com>, Michael Labasan <mlabasan@GFAARCHITECTS.com>, Greg Blodgett <greg1@ci.garden-grove.ca.us>

Ok, that sounds good. I am copying the applicant and their architect on this e-mail so they can get a final plan to you.

Jayna Morgan
AECOM
T. 949.660.8044

From: Mike Swan [mailto:mswan@psomas.com]
Sent: Thursday, July 28, 2011 2:53 PM
To: Morgan, Jayna
Subject: RE: Revised Site C Site Plan

I now see where the meeting space is but don't think we can use their mark-up in the report. I can revise our demands to match the stats in the right hand margin of the exhibit but a reader might question why the square footage notes on the buildings don't match the figures in the margins. I suggest they add 19,000 sf to the Full Service Hotel building below where it says Meeting Rooms Third Floor or, better yet, remove the 19,000 sf over on the Third Floor of the Structured Parking facility. Then it will be consistent with no meeting square footage shown on the buildings at all as the 1,000 sf of meeting space in each of the limited service hotels isn't shown either.

But for now, I will use this graphic (un-marked up) as the Site Plan and go with the stats in the right hand margin and if no one cares to revise it at least we will all be using the same figure.

Michael D. Swan, PE
PSOMAS | *Balancing the Natural and Built Environment*
Senior Project Manager
Water & Wastewater Infrastructure
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707 714.751.7373
Direct 714.481.7979

From: Morgan, Jayna [mailto:Jayna.Morgan@aecom.com]
Sent: Thursday, July 28, 2011 2:07 PM
To: Mike Swan
Subject: FW: Revised Site C Site Plan

Jayna Morgan
AECOM
T. 949.660.8044

From: Michael Labasan [mailto:mlabasan@GFAARCHITECTS.com]
Sent: Thursday, July 28, 2011 1:59 PM
To: Morgan, Jayna; Matthew Reid; drose3@charter.net

Subject: RE: Revised Site C Site Plan

See attached how we have meeting rooms ballroom and public circulation
The 19 k of mtg rooms to be from and to the hotel tower. See attached.

Michael J Labasan
Director of Design
mlabasan@gfaarchitects.com

GENE FONG ASSOCIATES | [1130 Westwood Blvd. Los Angeles, CA 90024](#) | T.310.209.7520 | F.310.209.7516

From: Morgan, Jayna [<mailto:Jayna.Morgan@aecom.com>]
Sent: Thursday, July 28, 2011 1:43 PM
To: Matthew Reid; drose3@charter.net; Michael Labasan
Cc: Greg Blodgett; Mike Swan
Subject: FW: Revised Site C Site Plan

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AECOM
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Sent from my iPhone

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Sent from my iPhone

Matthew Reid
619.335.5896 Google voice
Skype: matthew.reid.ca

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Matthew Reid

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8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942
[619.335.5896](tel:619.335.5896) Google voice | [619.462.4144](tel:619.462.4144) fax
Skype – [matthew.reid.ca](https://www.skype.com/people/matthew.reid.ca)
matt.reid@landanddesign.com

From: Bryan Estrada <be@rkengineer.com>
Date: Tue, 26 Jul 2011 10:26:04 -0700
To: Matthew Reid <matt.reid@landanddesign.com>
Cc: Robert Kahn <rk@rkengineer.com>, Rogier Goedecke <rg@rkengineer.com>, Michael Dickerson <md@rkengineer.com>, "Morgan, Jayna" <Jayna.Morgan@aecom.com>, <mswan@psomas.com>
Subject: RE: Revised Site C Site Plan

Hello Matt,

We are preparing to move forward with the revised traffic analysis and need to confirm the access onto Harbor Boulevard.

Please let us know whether we should assume the single access point, or if you anticipate revising the site plan to include a second driveway as previously discussed.

Thanks,

Bryan Estrada
transportation planner

<image001.gif>
transportation planning / traffic engineering & design
acoustical engineering / community traffic calming
4000 Westerly Place, Suite 280
Newport Beach, CA 92660
tel. [949.474.0809](tel:949.474.0809)
cell [949.293-9639](tel:949.293-9639)
fax [949.474.0902](tel:949.474.0902)
www.rkengineer.com

From: Mike Swan [<mailto:mswan@psomas.com>]
Sent: Thursday, July 21, 2011 11:54 AM
To: Morgan, Jayna; Matthew Reid; Bob Kahn
Cc: Rogier Goedecke; Greg Blodgett; Smith, Don (Irvine); Paul Guerrero; Chang, Jane
Subject: RE: Revised Site C Site Plan

I just have a question on the statistics.

From the previous emails I understand we want to hold the cap at 769 keys as far as the hotel rooms go and it sounds like someone is going to make the site plan graphic match that total. However, the DDA lists "a minimum of 10,000 sf of meeting space" and a "maximum of 65,000 sf of retail/restaurant/entertainment". It doesn't appear to include a maximum on the meeting space, which I would think it should (unless I'm reading it wrong).

The site plan currently shows a total of 40,000 sf of meeting and ballroom space which I assume correlates to the 10,000 sf minimum in the DDA (is this OK?). And the site plan currently totals 50,000 sf of restaurant/entertainment (1 - 5,000 sf and 4 - 7,500 sf restaurants, and 1 - 15,000 sf entertainment/restaurant) versus a maximum of 65,000 sf in the DDA.

Just want to confirm which maximum stats to use.

Michael D. Swan, PE
PSOMAS | *Balancing the Natural and Built Environment*
Senior Project Manager
Water & Wastewater Infrastructure
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707 [714.751.7373](tel:714.751.7373)
Direct [714.481.7979](tel:714.481.7979)

From: Morgan, Jayna [<mailto:Jayna.Morgan@aecom.com>]
Sent: Thursday, July 21, 2011 11:36 AM
To: Matthew Reid; Robert Kahn
Cc: Rogier Goedecke; Greg Blodgett; Smith, Don (Irvine); Paul Guerrero; Mike Swan; Chang, Jane
Subject: RE: Revised Site C Site Plan

Hi Matt,

Hope you are having a good week.

I just wanted to see if we are going to be getting a revised site plan that at least gives a range of the keys which would total the 769 on the high end. I want the plan and technical reports to be consistent.

Also, I wanted to follow up and see if we should be expecting the shade/shadow from your architects or are you going to get us something in CADD that we can manipulate to do the analysis.

Let me know.
Thanks!

Jayna Morgan
AECOM
T. [949.660.8044](tel:949.660.8044)

From: Matthew Reid
[<mailto:matt.reid@landanddesign.com>]
Sent: Tuesday, July 19, 2011 4:02 PM
To: Morgan, Jayna; Robert Kahn
Cc: Rogier Goedecke; Greg Blodgett; Paul Guerrero; Mike Swan; Chang, Jane
Subject: Re: Revised Site C Site Plan

Even though we are showing less hotel rooms, we want to keep the entitlement at 769 keys...

Matthew Reid
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Skype – [matthew.reid.ca](https://www.skype.com/people/matthew.reid.ca)
matt.reid@landanddesign.com

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Tue, 19 Jul 2011 15:50:00 -0700
To: Robert Kahn <rk@rkengineer.com>
Cc: Rogier Goedecke <rg@rkengineer.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Paul Guerrero <paulg@ci.garden-grove.ca.us>, Matthew

Reid <matt.reid@landanddesign.com>, Mike Swan
<mswan@psomas.com>, "Chang, Jane"
<Jane.Chang@aecom.com>
Subject: RE: Revised Site C Site Plan

Hey Guys,

I just got a call from Mike Swan at Psomas and he said the new site plan shows less hotel rooms which will cancel out the increase in Water demand from the added restaurant square footage.

I asked him to confirm this with everyone tomorrow as I want to make sure we are all using the same development assumptions.

Thanks,

Jayna Morgan
AECOM
T. [949.660.8044](tel:949.660.8044)

From: Bob Kahn [<mailto:rk@rkengineer.com>]
Sent: Tuesday, July 19, 2011 11:09 AM
To: Matthew Reid (Land & Design); Rogier Goedecke
Cc: drose3@charter.net; Morgan, Jayna; Greg Blodgett
Subject: RE: Revised Site C Site Plan

We understand the concern for the loss of property, but our concern is that now nearly all of the traffic will be directed to the main signalized access which will create some internal queuing within the site . The proximity to the first internal drive aisle intersection parallel Harbor Blvd. does not leave a substantial amount of storage space without blocking this intersection. Also, the elimination of the additional access will most likely also require the widening of Harbor Blvd. to provide a separate right turn lane at the signalized access.

If the decision is to stick with the single access we will move forward accordingly and identify any required improvements in our revised traffic study, once our contract amendment has been approved.

Thanks,

Robert Kahn PE
Principal

<[image002.jpg](#)>
transportation planning / traffic engineering & design
acoustical engineering / community traffic calming

4000 Westerly Place, Suite 280
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cell [949.293-9639](tel:949.293-9639)
fax [949.474.0902](tel:949.474.0902)
www.rkengineer.com

From: Matthew Reid (Land & Design)
[<mailto:matt.reid@landanddesign.com>]
Sent: Tuesday, July 19, 2011 10:54 AM
To: Rogier Goedecke
Cc: <drose3@charter.net>; Morgan, Jayna; Bob Kahn;
Greg Blodgett
Subject: Re: Revised Site C Site Plan

Regarding the 15,000 sf, assume it is restaurant.

The reluctance(now) to add the drive isn't that staff didn't want it, but more of an issue now that we are running out of real estate.... The majority of traffic coming to the site will be from the North....coming from the 5 freeway. That is the reason for the 4 way main drive.

I think a good example of a single drive that works is the Hyatt at Chapman and Harbor. This single drive concept seems to be working well with a second (exit) further down Chapman.

We would like not to have to shift and re-do the entire site again unless absolutely, without question, is necessary.

Sent from my iPad

Matthew W Reid
[619.335.5896](tel:619.335.5896) Google voice | [619.462.4144](tel:619.462.4144) f
Skype - matthew.reid.ca

On Jul 19, 2011, at 8:47 AM, "Rogier Goedecke"
<rg@rkengineer.com> wrote:

Hi Dave,

Bob Kahn and I spoke with Dan Candelaria (City Traffic Engineer) yesterday and it was agreed that the additional driveway on Harbor Boulevard would be beneficial to the project. Perhaps you can confirm this with the city staff member who is opposed to the driveway.

Matt, please provide us with direction on the 15,000 square feet of restaurant use or entertainment use. In order to update the technical reports, we will need to know the land uses. From a traffic impact point of view, the live entertainment land use will have lower

peak hour traffic volumes as compared to the restaurant use.

Kind regards,

Rogier Goedecke
Vice President Operations

<image001.jpg>

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design
acoustical engineering / community traffic calming

4000 Westerly Place, Suite 280
Newport Beach, CA 92660
tel. 949.474.0809
fax 949.474.0902

www.rkengineer.com

From: drose3@charter.net
[mailto:drose3@charter.net]
Sent: Monday, July 18, 2011 5:24 PM
To: Rogier Goedecke; Matthew Reid; Morgan, Jayna
Cc: Greg Blodgett; Karl Hill; Smith, Don (Irvine); Yang, Wendy; Suthiwan, Popy; Bob Kahn; Chang, Jane; Dan Candelaria; David Rose
Subject: Re: Revised Site C Site Plan

- 1) Shown on new site plan;
- 2) City had indicated a driveway between Twintree and proposed new signal could NOT occur; and
- 3) Assume its restaurant, unless Matt strongly disagrees or IF we have to do EIR, then assume entertainment venue.

Please advise.

Thanks.

Dave

Sent via BlackBerry by AT&T

From: "Rogier Goedecke"
<rg@rkengineer.com>
Date: Mon, 18 Jul 2011 15:59:35 -0700

To: Matthew
Reid<matt.reid@landanddesign.com>;
Morgan,
Jayna<Jayna.Morgan@aecom.com>;
Dave Rose<drose3@charter.net>
Cc: Greg Blodgett<greg1@ci.garden-grove.ca.us>; Karl Hill<karlh@ci.garden-grove.ca.us>; Smith, Don (Irvine)
<Don.E.Smith@aecom.com>; Yang,
Wendy<Wendy.Yang@aecom.com>;
Suthiwan,
Popy<Popy.Suthiwan@aecom.com>; Bob
Kahn<rk@rkengineer.com>; Chang,
Jane<Jane.Chang@aecom.com>; Dan
Candelaria<danc@ci.garden-grove.ca.us>
Subject: RE: Revised Site C Site Plan

Hi Matthew,

Thanks for sending us the updated siteplan today. We have provided a few comments for you to consider (see attached). All of these comments were discussed in last Thursday's meeting at AECOM.

1. Access from Twintree Ave. will be restricted to Right Out and Left In only. This will be further clarified in the updated traffic impact study report.
2. Based on the meeting last week and with the City Traffic Engineer today, an additional driveway on Harbor Boulevard is recommended. This will improve internal circulation within the site and decrease the traffic volumes at the main driveway.
3. The site plan is indicating 15,000 SF of Entertainment Venue. Should this be calculated as Restaurant Use? This was also covered in last weeks meeting and it was agreed that restaurant use was acceptable. We can calculate the vehicle trip generation as a restaurant or live venue use. The Live Entertainment use will most likely increase the parking requirements for the site. Please clarify.

Please provide clarification and/or confirmation of the above assumptions so we can revise the technical reports.

Kind regards,

Rogier Goedecke
Vice President Operations

<[image001.jpg](#)>

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From: Matthew Reid
[<mailto:matt.reid@landanddesign.com>]
Sent: Monday, July 18, 2011 3:22 PM
To: Morgan, Jayna; Dave Rose
Cc: Rogier Goedecke; Greg Blodgett; Karl Hill; Smith, Don (Irvine); Yang, Wendy; Suthiwan, Popy; Bob Kahn; Chang, Jane
Subject: Re: Revised Site C Site Plan

All new site plan per our conversation last week. We will reserve the right to make geometrical adjustments for the final plan....

Thank you.

Matthew Reid

Land & Design, Inc.
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91942
[619.335.5896](tel:619.335.5896) Google voice | [619.462.4144](tel:619.462.4144) fax
Skype – matt.reid.ca
matt.reid@landanddesign.com

From: "Morgan, Jayna"
<Jayna.Morgan@aecom.com>
Date: Mon, 18 Jul 2011 11:25:44 -0700
To: Matthew Reid
<matt.reid@landanddesign.com>, Dave Rose <drose3@charter.net>
Cc: Rogier Goedecke <rg@rkengineer.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, "Smith, Don (Irvine)" <Don.E.Smith@aecom.com>, "Yang, Wendy" <Wendy.Yang@aecom.com>,

"Suthiwan, Popy"
<Popy.Suthiwan@aecom.com>, Robert
Kahn <rk@rkengineer.com>, "Chang, Jane"
<Jane.Chang@aecom.com>
Subject: RE: Revised Site C Site Plan

Great!

Jayna Morgan
AECOM
T. 949.660.8044

From: Matthew Reid
[mailto:matt.reid@landanddesign.com]
Sent: Monday, July 18, 2011 11:23 AM
To: Morgan, Jayna; Dave Rose
Cc: Rogier Goedecke; Greg Blodgett;
Karl Hill; Smith, Don (Irvine); Yang,
Wendy; Suthiwan, Popy; Robert Kahn;
Chang, Jane
Subject: Re: Revised Site C Site Plan

We should have this plan for you today.

Matthew Reid
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matt.reid@landanddesign.com

From: "Morgan, Jayna"
<Jayna.Morgan@aecom.com>
Date: Mon, 18 Jul 2011 11:04:17 -0700
To: Matthew Reid
<matt.reid@landanddesign.com>, Dave
Rose <drose3@charter.net>
Cc: Rogier Goedecke <rg@rkengineer.com>,
Greg Blodgett <Greg1@ci.garden-
grove.ca.us>, Karl Hill <karlh@ci.garden-
grove.ca.us>, "Smith, Don (Irvine)"
<Don.E.Smith@aecom.com>, "Yang,
Wendy" <Wendy.Yang@aecom.com>,
"Suthiwan, Popy"
<Popy.Suthiwan@aecom.com>, Robert
Kahn <rk@rkengineer.com>, "Chang, Jane"
<Jane.Chang@aecom.com>
Subject: Revised Site C Site Plan

Hi All,

Hope you had a nice weekend!

In our meeting last Thursday, we discussed the revised site plan which would show the additional retail square footage for the pads along Harbor Blvd.

We also talked about adding an another access along Harbor. Our traffic consultants have talked with the City traffic engineer and presented the additional access. He is in agreement that this would help the project's traffic flow.

Matt/David- can you please coordinate with Roger Godecke to get the sketch plan he and Bob Kahn prepared on the secondary access so it can be incorporated into the revised site plan.

Thanks,

**Jayna Morgan
Environmental Planner
Design + Planning
jayna.morgan@aecom.com
AECOM
2737 Campus Drive, Irvine, CA 92612 USA
T [949.660.8044](tel:949.660.8044) F [949.660.1046](tel:949.660.1046)
www.aecom.com**

<image001.gif>

<image002.jpg>

Subject: RE: Revised Site C Site Plan
From: "Michael Labasan" <mlabasan@GFAARCHITECTS.com>
Date: Thu, 28 Jul 2011 15:10:45 -0700
To: "Morgan, Jayna" <Jayna.Morgan@aecom.com>, "Mike Swan" <mswan@psomas.com>
CC: "Matthew Reid" <matt.reid@landanddesign.com>, "Greg Blodgett" <greg1@ci.garden-grove.ca.us>

WE WILL REVISE THE PLAN AS NOTED..

Michael J Labasan
Director of Design
mlabasan@gfaarchitects.com

GENE FONG ASSOCIATES | 1130 Westwood Blvd. Los Angeles, CA 90024 | T.310.209.7520 | F.310.209.7516

From: Morgan, Jayna [mailto:Jayna.Morgan@aecom.com]
Sent: Thursday, July 28, 2011 3:05 PM
To: Mike Swan
Cc: Matthew Reid; Michael Labasan; Greg Blodgett
Subject: RE: Revised Site C Site Plan

Ok, that sounds good. I am copying the applicant and their architect on this e-mail so they can get a final plan to you.

Jayna Morgan
AECOM
T. 949.660.8044

From: Mike Swan [mailto:mswan@psomas.com]
Sent: Thursday, July 28, 2011 2:53 PM
To: Morgan, Jayna
Subject: RE: Revised Site C Site Plan

I now see where the meeting space is but don't think we can use their mark-up in the report. I can revise our demands to match the stats in the right hand margin of the exhibit but a reader might question why the square footage notes on the buildings don't match the figures in the margins. I suggest they add 19,000 sf to the Full Service Hotel building below where it says Meeting Rooms Third Floor or, better yet, remove the 19,000 sf over on the Third Floor of the Structured Parking facility. Then it will be consistent with no meeting square footage shown on the buildings at all as the 1,000 sf of meeting space in each of the limited service hotels isn't shown either.

But for now, I will use this graphic (un-marked up) as the Site Plan and go with the stats in the right hand margin and if no one cares to revise it at least we will all be using the same figure.

Michael D. Swan, PE
PSOMAS | *Balancing the Natural and Built Environment*
Senior Project Manager
Water & Wastewater Infrastructure
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707 714.751.7373
Direct 714.481.7979

From: Morgan, Jayna [mailto:Jayna.Morgan@aecom.com]
Sent: Thursday, July 28, 2011 2:07 PM

To: Mike Swan
Subject: FW: Revised Site C Site Plan

Jayna Morgan
AECOM
T. 949.660.8044

From: Michael Labasan [mailto:mlabasan@GFAARCHITECTS.com]
Sent: Thursday, July 28, 2011 1:59 PM
To: Morgan, Jayna; Matthew Reid; drose3@charter.net
Subject: RE: Revised Site C Site Plan

See attached how we have meeting rooms ballroom and public circulation
The 19 k of mtg rooms to be from and to the hotel tower. See attached.

Michael J Labasan
Director of Design
mlabasan@gfaarchitects.com

GENE FONG ASSOCIATES | 1130 Westwood Blvd. Los Angeles, CA 90024 | T.310.209.7520 | F.310.209.7516

From: Morgan, Jayna [mailto:Jayna.Morgan@aecom.com]
Sent: Thursday, July 28, 2011 1:43 PM
To: Matthew Reid; drose3@charter.net; Michael Labasan
Cc: Greg Blodgett; Mike Swan
Subject: FW: Revised Site C Site Plan

Please see below.

Jayna Morgan
AECOM
T. 949.660.8044

From: Mike Swan [mailto:mswan@psomas.com]
Sent: Thursday, July 28, 2011 1:34 PM
To: Morgan, Jayna
Cc: Smith, Don (Irvine)
Subject: RE: Revised Site C Site Plan

Not quite. The rooms now add up but under Conference Center in the right hand margin it shows Ballroom and Meeting Rooms at 38,000 sf which I assume is the third floor of the Parking Structure but that only shows Ballroom and Prefunction of 19,000 sf in the graphic. Is there another 19,000 sf of Meeting Rooms on the third floor of the Full Service Hotel as it shows them on the graphic but doesn't include a square footage? If so, they should add the 19,000 sf where shown on the attached Markup. Or put more sf of meeting rooms somewhere else on the graphic.

And why is this pdf so fuzzy and a showing sized close to a 3x5 card?

Michael D. Swan, PE
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Senior Project Manager
Water & Wastewater Infrastructure
3 Hutton Centre Drive, Suite 200

Santa Ana, CA 92707 714.751.7373
Direct 714.481.7979

From: Morgan, Jayna [mailto:Jayna.Morgan@aecom.com]
Sent: Thursday, July 28, 2011 11:58 AM
To: Mike Swan
Cc: Smith, Don (Irvine)
Subject: FW: Revised Site C Site Plan

I think the numbers all add up on this one.

Jayna Morgan
AECOM
T. 949.660.8044

From: MJL [mailto:mjlgfa@gmail.com]
Sent: Wednesday, July 27, 2011 11:26 PM
To: Morgan, Jayna; Matt Reid; olagopack@gmail.com
Subject: Re: Revised Site C Site Plan

Jayna

Attached is revised master plan

On Wed, Jul 27, 2011 at 5:17 PM, Morgan, Jayna <Jayna.Morgan@aecom.com> wrote:
Great! Thank you! Will you also tell Matt we are going to have a conference call with the City at 10am.
I will send out the call # in the morning.
Have a good evening,
Jayna

Sent from my iPhone

On Jul 27, 2011, at 5:09 PM, "MJL" <mjlgfa@gmail.com> wrote:

Jayna

Just got a confirmation on a few items from Matt, will send you the revise plan and numbers in the morning.

On Wed, Jul 27, 2011 at 9:41 AM, Morgan, Jayna <Jayna.Morgan@aecom.com> wrote:
Ok will do.
Thank you!

Sent from my iPhone

On Jul 27, 2011, at 9:41 AM, "Matthew Reid" <matt.reid@landanddesign.com> wrote:

I have that being done now. My arch should be able to get it to you within the next day or so. You may want to call him directly.

Thanks.

Sent from my iPhone

Matthew Reid
619.335.5896 Google voice
Skype: [matthew.reid.ca](https://www.skype.com/user/matthew.reid.ca)

On Jul 27, 2011, at 9:24 AM, "Morgan, Jayna" <Jayna.Morgan@aecom.com> wrote:

Thanks Matt,

We still need to have the plan revised to show room count range for the hotels as the plan needs to match the 769 total you want analyzed.

When will we receive this revision?

Sent from my iPhone

On Jul 27, 2011, at 6:06 AM, "Matthew Reid" <matt.reid@landanddesign.com> wrote:

Bryan,
Thank you. We are going to work on the "interior" of the site to better handle the traffic issue from a single entrance. We did change the single entrance to 4 lanes (per request) however we are not going to add a right in off Harbor.

Please use the plan recently revised.

Thanks.

Matthew Reid

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matt.reid@landanddesign.com

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Date: Tue, 26 Jul 2011 10:26:04 -0700
To: Matthew Reid <matt.reid@landanddesign.com>
Cc: Robert Kahn <rk@rkengineer.com>, Rogier Goedecke <rg@rkengineer.com>, Michael Dickerson <md@rkengineer.com>, "Morgan, Jayna" <Jayna.Morgan@aecom.com>, <mswan@psomas.com>

Subject: RE: Revised Site C Site Plan

Hello Matt,

We are preparing to move forward with the revised traffic analysis and need to confirm the access onto Harbor Boulevard.

Please let us know whether we should assume the single access point, or if you anticipate revising the site plan to include a second driveway as previously discussed.

Thanks,

Bryan Estrada
transportation planner

<image001.gif>
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fax [949.474.0902](tel:949.474.0902)
www.rkengineer.com

From: Mike Swan [<mailto:mswan@psomas.com>]
Sent: Thursday, July 21, 2011 11:54 AM
To: Morgan, Jayna; Matthew Reid; Bob Kahn
Cc: Rogier Goedecke; Greg Blodgett; Smith, Don (Irvine); Paul Guerrero; Chang, Jane
Subject: RE: Revised Site C Site Plan

I just have a question on the statistics.

From the previous emails I understand we want to hold the cap at 769 keys as far as the hotel rooms go and it sounds like someone is going to make the site plan graphic match that total. However, the DDA lists "a minimum of 10,000 sf of meeting space" and a "maximum of 65,000 sf of retail/restaurant/entertainment". It doesn't appear to include a maximum on the meeting space, which I would think it should (unless I'm reading it wrong).

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the DDA.

Just want to confirm which maximum stats to use.

Michael D. Swan, PE

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Senior Project Manager
Water & Wastewater Infrastructure
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Direct [714.481.7979](tel:714.481.7979)

From: Morgan, Jayna [<mailto:Jayna.Morgan@aecom.com>]

Sent: Thursday, July 21, 2011 11:36 AM

To: Matthew Reid; Robert Kahn

Cc: Rogier Goedecke; Greg Blodgett; Smith, Don (Irvine); Paul Guerrero; Mike Swan; Chang, Jane

Subject: RE: Revised Site C Site Plan

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I just wanted to see if we are going to be getting a revised site plan that at least gives a range of the keys which would total the 769 on the high end. I want the plan and technical reports to be consistent.

Also, I wanted to follow up and see if we should be expecting the shade/shadow from your architects or are you going to get us something in CADD that we can manipulate to do the analysis.

Let me know.

Thanks!

Jayna Morgan

AECOM

T. [949.660.8044](tel:949.660.8044)

From: Matthew Reid

[<mailto:matt.reid@landanddesign.com>]

Sent: Tuesday, July 19, 2011 4:02 PM

To: Morgan, Jayna; Robert Kahn

Cc: Rogier Goedecke; Greg Blodgett; Paul Guerrero; Mike Swan; Chang, Jane

Subject: Re: Revised Site C Site Plan

Even though we are showing less hotel rooms, we want to keep the entitlement at 769 keys...

Matthew Reid

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Skype – [matthew.reid.ca](https://www.skype.com/user/matthew.reid.ca)
matt.reid@landanddesign.com

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Tue, 19 Jul 2011 15:50:00 -0700
To: Robert Kahn <rk@rkengineer.com>
Cc: Rogier Goedecke <rg@rkengineer.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Paul Guerrero <paulg@ci.garden-grove.ca.us>, Matthew Reid <matt.reid@landanddesign.com>, Mike Swan <mswan@psomas.com>, "Chang, Jane" <Jane.Chang@aecom.com>
Subject: RE: Revised Site C Site Plan

Hey Guys,

I just got a call from Mike Swan at Psomas and he said the new site plan shows less hotel rooms which will cancel out the increase in Water demand from the added restaurant square footage.

I asked him to confirm this with everyone tomorrow as I want to make sure we are all using the same development assumptions.

Thanks,

Jayna Morgan
AECOM
T. [949.660.8044](tel:949.660.8044)

From: Bob Kahn [<mailto:rk@rkengineer.com>]
Sent: Tuesday, July 19, 2011 11:09 AM
To: Matthew Reid (Land & Design); Rogier Goedecke
Cc: drose3@charter.net; Morgan, Jayna; Greg Blodgett
Subject: RE: Revised Site C Site Plan

We understand the concern for the loss of property, but our concern is that now nearly all of the traffic will be directed to the main signalized access which will create some internal queuing within the site. The proximity to the first internal drive aisle intersection parallel Harbor Blvd. does not leave a substantial amount of storage space without blocking this intersection. Also, the elimination of the additional access will most likely also require the widening of Harbor Blvd. to provide a separate right turn lane at the signalized access.

If the decision is to stick with the single access we will move forward accordingly and identify any required improvements in our revised traffic study, once our contract amendment has been approved.

Thanks,

Robert Kahn PE
Principal

<image002.jpg>
transportation planning / traffic engineering & design
acoustical engineering / community traffic calming
4000 Westerly Place, Suite 280
Newport Beach, CA 92660
tel. 949.474.0809
cell 949.293-9639
fax 949.474.0902
www.rkengineer.com

From: Matthew Reid (Land & Design)
[mailto:matt.reid@landanddesign.com]
Sent: Tuesday, July 19, 2011 10:54 AM
To: Rogier Goedecke
Cc: <drose3@charter.net>; Morgan, Jayna; Bob Kahn;
Greg Blodgett
Subject: Re: Revised Site C Site Plan

Regarding the 15,000 sf, assume it is restaurant.

The reluctance(now) to add the drive isn't that staff didn't want it, but more of an issue now that we are running out of real estate.... The majority of traffic coming to the site will be from the North....coming from the 5 freeway. That is the reason for the 4 way main drive.

I think a good example of a single drive that works is the Hyatt at Chapman and Harbor. This single drive concept seems to be working well with a second (exit) further down Chapman.

We would like not to have to shift and re-do the entire site again unless absolutely, without question, is necessary.

Sent from my iPad

Matthew W Reid
619.335.5896 Google voice | 619.462.4144 f
Skype - matthew.reid.ca

On Jul 19, 2011, at 8:47 AM, "Rogier Goedecke"
<rg@rkengineer.com> wrote:

Hi Dave,

Bob Kahn and I spoke with Dan Candelaria (City Traffic Engineer) yesterday and it was agreed that the additional driveway on Harbor Boulevard would be beneficial to the project. Perhaps you can confirm this with the city staff member who is opposed to the driveway.

Matt, please provide us with direction on the 15,000 square feet of restaurant use or entertainment use. In order to update the technical reports, we will need to know the land uses. From a traffic impact point of view, the live entertainment land use will have lower peak hour traffic volumes as compared to the restaurant use.

Kind regards,

Rogier Goedecke
Vice President Operations

<image001.jpg>

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fax 949.474.0902

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From: drose3@charter.net
[<mailto:drose3@charter.net>]
Sent: Monday, July 18, 2011 5:24 PM
To: Rogier Goedecke; Matthew Reid; Morgan, Jayna
Cc: Greg Blodgett; Karl Hill; Smith, Don (Irvine); Yang, Wendy; Suthiwan, Popy; Bob Kahn; Chang, Jane; Dan Candelaria; David Rose
Subject: Re: Revised Site C Site Plan

- 1) Shown on new site plan;
- 2) City had indicated a driveway between Twintree and proposed new signal could NOT occur; and
- 3) Assume its restaurant, unless Matt strongly disagrees or IF we have to do EIR, then assume entertainment venue.

Please advise.

Thanks.

Dave

Sent via BlackBerry by AT&T

From: "Rogier Goedecke"
<rg@rkengineer.com>
Date: Mon, 18 Jul 2011 15:59:35 -0700
To: Matthew
Reid<matt.reid@landanddesign.com>;
Morgan,
Jayna<Jayna.Morgan@aecom.com>;
Dave Rose<drose3@charter.net>
Cc: Greg Blodgett<greg1@ci.garden-grove.ca.us>; Karl Hill<karlh@ci.garden-grove.ca.us>; Smith, Don (Irvine)
<Don.E.Smith@aecom.com>; Yang,
Wendy<Wendy.Yang@aecom.com>;
Suthiwan,
Popy<Popy.Suthiwan@aecom.com>; Bob
Kahn<rk@rkengineer.com>; Chang,
Jane<Jane.Chang@aecom.com>; Dan
Candelaria<danc@ci.garden-grove.ca.us>
Subject: RE: Revised Site C Site Plan

Hi Matthew,

Thanks for sending us the updated siteplan today. We have provided a few comments for you to consider (see attached). All of these comments were discussed in last Thursday's meeting at AECOM.

1. Access from Twintree Ave. will be restricted to Right Out and Left In only. This will be further clarified in the updated traffic impact study report.
2. Based on the meeting last week and with the City Traffic Engineer today, an additional driveway on Harbor Boulevard is recommended. This will improve internal circulation within the site and decrease the traffic volumes at the main driveway.
3. The site plan is indicating 15,000 SF of Entertainment

Venue. Should this be calculated as Restaurant Use? This was also covered in last weeks meeting and it was agreed that restaurant use was acceptable. We can calculate the vehicle trip generation as a restaurant or live venue use. The Live Entertainment use will most likely increase the parking requirements for the site. Please clarify.

Please provide clarification and/or confirmation of the above assumptions so we can revise the technical reports.

Kind regards,

Rogier Goedecke
Vice President Operations

<*image001.jpg*>
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From: Matthew Reid
[<mailto:matt.reid@landanddesign.com>]
Sent: Monday, July 18, 2011 3:22 PM
To: Morgan, Jayna; Dave Rose
Cc: Rogier Goedecke; Greg Blodgett; Karl Hill; Smith, Don (Irvine); Yang, Wendy; Suthiwan, Popy; Bob Kahn; Chang, Jane
Subject: Re: Revised Site C Site Plan

All new site plan per our conversation last week. We will reserve the right to make geometrical adjustments for the final plan....

Thank you.

Matthew Reid
Land & Design, Inc.
8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942
619.335.5896 Google voice | 619.462.4144 fax
Skype – [matthew.reid.ca](https://www.skype.com/user/matthew.reid.ca)
matt.reid@landanddesign.com

From: "Morgan, Jayna"
<Jayna.Morgan@aecom.com>
Date: Mon, 18 Jul 2011 11:25:44 -0700
To: Matthew Reid
<matt.reid@landanddesign.com>, Dave
Rose <drose3@charter.net>
Cc: Rogier Goedecke <rg@rkengineer.com>,
Greg Blodgett <Greg1@ci.garden-grove.ca.us>,
Karl Hill <karlh@ci.garden-grove.ca.us>,
"Smith, Don (Irvine)" <Don.E.Smith@aecom.com>,
"Yang, Wendy" <Wendy.Yang@aecom.com>,
"Suthiwan, Popy" <Popy.Suthiwan@aecom.com>,
Robert Kahn <rk@rkengineer.com>,
"Chang, Jane" <Jane.Chang@aecom.com>
Subject: RE: Revised Site C Site Plan

Great!

Jayna Morgan
AECOM
T. [949.660.8044](tel:949.660.8044)

From: Matthew Reid
[<mailto:matt.reid@landanddesign.com>]
Sent: Monday, July 18, 2011 11:23 AM
To: Morgan, Jayna; Dave Rose
Cc: Rogier Goedecke; Greg Blodgett;
Karl Hill; Smith, Don (Irvine); Yang,
Wendy; Suthiwan, Popy; Robert Kahn;
Chang, Jane
Subject: Re: Revised Site C Site Plan

We should have this plan for you today.

Matthew Reid
Land & Design, Inc.
8130 La Mesa Blvd | Suite 808 | La Mesa, CA
91942
[619.335.5896](tel:619.335.5896) Google voice | [619.462.4144](tel:619.462.4144)
fax
Skype – [matthew.reid.ca](https://www.skype.com/people/matthew.reid.ca)
matt.reid@landanddesign.com

From: "Morgan, Jayna"
<Jayna.Morgan@aecom.com>
Date: Mon, 18 Jul 2011 11:04:17 -0700
To: Matthew Reid
<matt.reid@landanddesign.com>, Dave

Rose <drose3@charter.net>
Cc: Rogier Goedecke <rg@rkengineer.com>,
Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, "Smith, Don (Irvine)" <Don.E.Smith@aecom.com>, "Yang, Wendy" <Wendy.Yang@aecom.com>,
"Suthiwan, Popy" <Popy.Suthiwan@aecom.com>, Robert Kahn <rk@rkengineer.com>, "Chang, Jane" <Jane.Chang@aecom.com>
Subject: Revised Site C Site Plan

Hi All,

Hope you had a nice weekend!

In our meeting last Thursday, we discussed the revised site plan which would show the additional retail square footage for the pads along Harbor Blvd.

We also talked about adding an another access along Harbor. Our traffic consultants have talked with the City traffic engineer and presented the additional access. He is in agreement that this would help the project's traffic flow.

Matt/David- can you please coordinate with Roger Godecke to get the sketch plan he and Bob Kahn prepared on the secondary access so it can be incorporated into the revised site plan.

Thanks,

Jayna Morgan
Environmental Planner
Design + Planning
jayna.morgan@aecom.com
AECOM
2737 Campus Drive, Irvine, CA 92612 USA
T [949.660.8044](tel:949.660.8044) F [949.660.1046](tel:949.660.1046)
www.aecom.com

<image001.gif>

<image002.jpg>

Subject: RE: Revised Site C Site Plan
From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Thu, 28 Jul 2011 15:16:03 -0700
To: Michael Labasan <mlabasan@GFAARCHITECTS.com>, Mike Swan <mswan@psomas.com>
CC: Matthew Reid <matt.reid@landanddesign.com>, Greg Blodgett <gregl@ci.garden-grove.ca.us>

Great, thank you!

Jayna Morgan
AECOM
T. 949.660.8044

From: Michael Labasan [mailto:mlabasan@GFAARCHITECTS.com]
Sent: Thursday, July 28, 2011 3:11 PM
To: Morgan, Jayna; Mike Swan
Cc: Matthew Reid; Greg Blodgett
Subject: RE: Revised Site C Site Plan

WE WILL REVISE THE PLAN AS NOTED..

Michael J Labasan
Director of Design
mlabasan@gfaarchitects.com

GENE FONG ASSOCIATES | 1130 Westwood Blvd. Los Angeles, CA 90024 | T.310.209.7520 | F.310.209.7516

From: Morgan, Jayna [mailto:Jayna.Morgan@aecom.com]
Sent: Thursday, July 28, 2011 3:05 PM
To: Mike Swan
Cc: Matthew Reid; Michael Labasan; Greg Blodgett
Subject: RE: Revised Site C Site Plan

Ok, that sounds good. I am copying the applicant and their architect on this e-mail so they can get a final plan to you.

Jayna Morgan
AECOM
T. 949.660.8044

From: Mike Swan [mailto:mswan@psomas.com]
Sent: Thursday, July 28, 2011 2:53 PM
To: Morgan, Jayna
Subject: RE: Revised Site C Site Plan

I now see where the meeting space is but don't think we can use their mark-up in the report. I can revise our demands to match the stats in the right hand margin of the exhibit but a reader might question why the square footage notes on the buildings don't match the figures in the margins. I suggest they add 19,000 sf to the Full Service Hotel building below where it says Meeting Rooms Third Floor or, better yet, remove the 19,000 sf over on the Third Floor of the Structured Parking facility. Then it will be consistent with no meeting square footage shown on the buildings at all as the 1,000 sf of meeting space in each of the limited service hotels isn't shown either.

But for now, I will use this graphic (un-marked up) as the Site Plan and go with the stats in the right hand margin and if no one cares to revise it at least we will all be using the same figure.

Michael D. Swan, PE

PSOMAS | *Balancing the Natural and Built Environment*

Senior Project Manager

Water & Wastewater Infrastructure

3 Hutton Centre Drive, Suite 200

Santa Ana, CA 92707 714.751.7373

Direct 714.481.7979

From: Morgan, Jayna [mailto:Jayna.Morgan@aecom.com]

Sent: Thursday, July 28, 2011 2:07 PM

To: Mike Swan

Subject: FW: Revised Site C Site Plan

Jayna Morgan

AECOM

T. 949.660.8044

From: Michael Labasan [mailto:mlabasan@GFAARCHITECTS.com]

Sent: Thursday, July 28, 2011 1:59 PM

To: Morgan, Jayna; Matthew Reid; drose3@charter.net

Subject: RE: Revised Site C Site Plan

See attached how we have meeting rooms ballroom and public circulation

The 19 k of mtg rooms to be from and to the hotel tower. See attached.

Michael J Labasan

Director of Design

mlabasan@gfaarchitects.com

GENE FONG ASSOCIATES | 1130 Westwood Blvd. Los Angeles, CA 90024 | T.310.209.7520 | F.310.209.7516

From: Morgan, Jayna [mailto:Jayna.Morgan@aecom.com]

Sent: Thursday, July 28, 2011 1:43 PM

To: Matthew Reid; drose3@charter.net; Michael Labasan

Cc: Greg Blodgett; Mike Swan

Subject: FW: Revised Site C Site Plan

Please see below.

Jayna Morgan

AECOM

T. 949.660.8044

From: Mike Swan [mailto:mswan@psomas.com]

Sent: Thursday, July 28, 2011 1:34 PM

To: Morgan, Jayna

Cc: Smith, Don (Irvine)

Subject: RE: Revised Site C Site Plan

Not quite. The rooms now add up but under Conference Center in the right hand margin it shows Ballroom and

Meeting Rooms at 38,000 sf which I assume is the third floor of the Parking Structure but that only shows Ballroom and Prefunction of 19,000 sf in the graphic. Is there another 19,000 sf of Meeting Rooms on the third floor of the Full Service Hotel as it shows them on the graphic but doesn't include a square footage? If so, they should add the 19,000 sf where shown on the attached Markup. Or put more sf of meeting rooms somewhere else on the graphic.

And why is this pdf so fuzzy and a showing sized close to a 3x5 card?

Michael D. Swan, PE

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Senior Project Manager

Water & Wastewater Infrastructure

3 Hutton Centre Drive, Suite 200

Santa Ana, CA 92707 714.751.7373

Direct 714.481.7979

From: Morgan, Jayna [mailto:Jayna.Morgan@aecom.com]

Sent: Thursday, July 28, 2011 11:58 AM

To: Mike Swan

Cc: Smith, Don (Irvine)

Subject: FW: Revised Site C Site Plan

I think the numbers all add up on this one.

Jayna Morgan

AECOM

T. 949.660.8044

From: MJL [mailto:mjlgfa@gmail.com]

Sent: Wednesday, July 27, 2011 11:26 PM

To: Morgan, Jayna; Matt Reid; olagopack@gmail.com

Subject: Re: Revised Site C Site Plan

Jayna

Attached is revised master plan

On Wed, Jul 27, 2011 at 5:17 PM, Morgan, Jayna <Jayna.Morgan@aecom.com> wrote:

Great! Thank you! Will you also tell Matt we are going to have a conference call with the City at 10am.

I will send out the call # in the morning.

Have a good evening,

Jayna

Sent from my iPhone

On Jul 27, 2011, at 5:09 PM, "MJL" <mjlgfa@gmail.com> wrote:

Jayna

Just got a confirmation on a few items from Matt, will send you the revised plan and numbers in the morning.

On Wed, Jul 27, 2011 at 9:41 AM, Morgan, Jayna <Jayna.Morgan@aecom.com> wrote:
Ok will do.
Thank you!

Sent from my iPhone

On Jul 27, 2011, at 9:41 AM, "Matthew Reid" <matt.reid@landanddesign.com> wrote:

I have that being done now. My arch should be able to get it to you within the next day or so. You may want to call him directly.

Thanks.

Sent from my iPhone

Matthew Reid
[619.335.5896](tel:619.335.5896) Google voice
Skype: [matthew.reid.ca](https://www.skype.com/user/matthew.reid.ca)

On Jul 27, 2011, at 9:24 AM, "Morgan, Jayna" <Jayna.Morgan@aecom.com> wrote:

Thanks Matt,

We still need to have the plan revised to show room count range for the hotels as the plan needs to match the 769 total you want analyzed.

When will we receive this revision?

Sent from my iPhone

On Jul 27, 2011, at 6:06 AM, "Matthew Reid" <matt.reid@landanddesign.com> wrote:

Bryan,
Thank you. We are going to work on the "interior" of the site to better handle the traffic issue from a single entrance. We did change the single entrance to 4 lanes (per request) however we are not going to add a right in off Harbor.

Please use the plan recently revised.

Thanks.

Matthew Reid
Land & Design, Inc.
8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942
[619.335.5896](tel:619.335.5896) Google voice | [619.462.4144](tel:619.462.4144) fax

Skype – matthew.reid.ca
matt.reid@landanddesign.com

From: Bryan Estrada <be@rkengineer.com>
Date: Tue, 26 Jul 2011 10:26:04 -0700
To: Matthew Reid <matt.reid@landanddesign.com>
Cc: Robert Kahn <rk@rkengineer.com>, Rogier Goedecke <rg@rkengineer.com>, Michael Dickerson <md@rkengineer.com>, "Morgan, Jayna" <Jayna.Morgan@acocom.com>, <mswan@psomas.com>
Subject: RE: Revised Site C Site Plan

Hello Matt,

We are preparing to move forward with the revised traffic analysis and need to confirm the access onto Harbor Boulevard.

Please let us know whether we should assume the single access point, or if you anticipate revising the site plan to include a second driveway as previously discussed.

Thanks,

Bryan Estrada
transportation planner

<image001.gif>
transportation planning / traffic engineering & design
acoustical engineering / community traffic calming
4000 Westerly Place, Suite 280
Newport Beach, CA 92660
tel. [949.474.0809](tel:949.474.0809)
cell [949.293-9639](tel:949.293-9639)
fax [949.474.0902](tel:949.474.0902)
www.rkengineer.com

From: Mike Swan [<mailto:mswan@psomas.com>]
Sent: Thursday, July 21, 2011 11:54 AM
To: Morgan, Jayna; Matthew Reid; Bob Kahn
Cc: Rogier Goedecke; Greg Blodgett; Smith, Don (Irvine); Paul Guerrero; Chang, Jane
Subject: RE: Revised Site C Site Plan

I just have a question on the statistics.

From the previous emails I understand we want to hold the cap at 769 keys as far as the hotel rooms go and it soundslike someone is going to make the site plan graphic match that total. However, the DDA lists "a minimum of

10,000 sf of meeting space" and a "maximum of 65,000 sf of retail/restaurant/entertainment". It doesn't appear to include a maximum on the meeting space, which I would think it should (unless I'm reading it wrong).

The site plan currently shows a total of 40,000 sf of meeting and ballroom space which I assume correlates to the 10,000 sf minimum in the DDA (is this OK?). And the site plan currently totals 50,000 sf of restaurant/entertainment (1 - 5,000 sf and 4 - 7,500 sf restaurants, and 1 - 15,000 sf entertainment/restaurant) versus a maximum of 65,000 sf in the DDA.

Just want to confirm which maximum stats to use.

Michael D. Swan, PE

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Senior Project Manager
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Santa Ana, CA 92707 [714.751.7373](tel:714.751.7373)
Direct [714.481.7979](tel:714.481.7979)

From: Morgan, Jayna [<mailto:Jayna.Morgan@aecom.com>]
Sent: Thursday, July 21, 2011 11:36 AM
To: Matthew Reid; Robert Kahn
Cc: Rogier Goedecke; Greg Blodgett; Smith, Don (Irvine); Paul Guerrero; Mike Swan; Chang, Jane
Subject: RE: Revised Site C Site Plan

Hi Matt,

Hope you are having a good week.

I just wanted to see if we are going to be getting a revised site plan that at least gives a range of the keys which would total the 769 on the high end. I want the plan and technical reports to be consistent.

Also, I wanted to follow up and see if we should be expecting the shade/shadow from your architects or are you going to get us something in CADD that we can manipulate to do the analysis.

Let me know.
Thanks!

Jayna Morgan
AECOM
T. [949.660.8044](tel:949.660.8044)

From: Matthew Reid

[mailto:matt.reid@landanddesign.com]

Sent: Tuesday, July 19, 2011 4:02 PM

To: Morgan, Jayna; Robert Kahn

Cc: Rogier Goedecke; Greg Blodgett; Paul Guerrero; Mike Swan; Chang, Jane

Subject: Re: Revised Site C Site Plan

Even though we are showing less hotel rooms, we want to keep the entitlement at 769 keys...

Matthew Reid

Land & Design, Inc.

8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942

619.335.5896 Google voice | 619.462.4144 fax

Skype – [matthew.reid.ca](https://www.skype.com/people/matthew.reid.ca)

matt.reid@landanddesign.com

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>

Date: Tue, 19 Jul 2011 15:50:00 -0700

To: Robert Kahn <rk@rkengineer.com>

Cc: Rogier Goedecke <rg@rkengineer.com>, Greg

Blodgett <Greg1@ci.garden-grove.ca.us>, Paul

Guerrero <paulg@ci.garden-grove.ca.us>, Matthew

Reid <matt.reid@landanddesign.com>, Mike Swan

<mswan@psomas.com>, "Chang, Jane"

<Jane.Chang@aecom.com>

Subject: RE: Revised Site C Site Plan

Hey Guys,

I just got a call from Mike Swan at Psomas and he said the new site plan shows less hotel rooms which will cancel out the increase in Water demand from the added restaurant square footage.

I asked him to confirm this with everyone tomorrow as I want to make sure we are all using the same development assumptions.

Thanks,

Jayna Morgan

AECOM

T. [949.660.8044](tel:949.660.8044)

From: Bob Kahn [<mailto:rk@rkengineer.com>]

Sent: Tuesday, July 19, 2011 11:09 AM

To: Matthew Reid (Land & Design); Rogier Goedecke

Cc: drose3@charter.net; Morgan, Jayna; Greg Blodgett

Subject: RE: Revised Site C Site Plan

We understand the concern for the loss of property, but our concern is that now nearly all of the traffic will be directed to the main signalized access which will create some internal queuing within the site . The proximity to the first internal drive aisle intersection parallel Harbor Blvd. does not leave a substantial amount of storage space without blocking this intersection. Also, the elimination of the additional access will most likely also require the widening of Harbor Blvd. to provide a separate right turn lane at the signalized access.

If the decision is to stick with the single access we will move forward accordingly and identify any required improvements in our revised traffic study, once our contract amendment has been approved.

Thanks,

Robert Kahn PE
Principal

<image002.jpg>

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Newport Beach, CA 92660
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cell 949.293-9639
fax 949.474.0902
www.rkengineer.com

From: Matthew Reid (Land & Design)
[mailto:matt.reid@landanddesign.com]
Sent: Tuesday, July 19, 2011 10:54 AM
To: Rogier Goedecke
Cc: <drose3@charter.net>; Morgan, Jayna; Bob Kahn;
Greg Blodgett
Subject: Re: Revised Site C Site Plan

Regarding the 15,000 sf, assume it is restaurant.

The reluctance(now) to add the drive isn't that staff didn't want it, but more of an issue now that we are running out of real estate.... The majority of traffic coming to the site will be from the North....coming from the 5 freeway. That is the reason for the 4 way main drive.

I think a good example of a single drive that works is the Hyatt at Chapman and Harbor. This single drive concept seems to be working well with a second (exit) further down Chapman.

We would like not to have to shift and re-do the entire site again unless absolutely, without question, is necessary.

Sent from my iPad

Matthew W Reid
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Skype - [matthew.reid.ca](https://www.skype.com/people/matthew.reid.ca)

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Matt, please provide us with direction on the 15,000 square feet of restaurant use or entertainment use. In order to update the technical reports, we will need to know the land uses. From a traffic impact point of view, the live entertainment land use will have lower peak hour traffic volumes as compared to the restaurant use.

Kind regards,

Rogier Goedecke
Vice President Operations

<[image001.jpg](#)>
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From: drose3@charter.net
[<mailto:drose3@charter.net>]
Sent: Monday, July 18, 2011 5:24 PM
To: Rogier Goedecke; Matthew Reid; Morgan, Jayna
Cc: Greg Blodgett; Karl Hill; Smith, Don (Irvine); Yang, Wendy; Suthiwan, Popy; Bob Kahn; Chang, Jane; Dan Candelaria; David Rose
Subject: Re: Revised Site C Site Plan

- 1) Shown on new site plan;
- 2) City had indicated a driveway between Twintree and proposed new signal could NOT occur; and
- 3) Assume its restaurant, unless Matt strongly disagrees or IF we have to do EIR, then assume entertainment venue.

Please advise.

Thanks.

Dave

Sent via BlackBerry by AT&T

From: "Rogier Goedecke"
<rg@rkengineer.com>
Date: Mon, 18 Jul 2011 15:59:35 -0700
To: Matthew
Reid<matt.reid@landanddesign.com>;
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Jayna<Jayna.Morgan@aecom.com>;
Dave Rose<drose3@charter.net>
Cc: Greg Blodgett<greg1@ci.garden-grove.ca.us>; Karl Hill<karlh@ci.garden-grove.ca.us>; Smith, Don (Irvine)
<Don.E.Smith@aecom.com>; Yang,
Wendy<Wendy.Yang@aecom.com>;
Suthiwan,
Popy<Popy.Suthiwan@aecom.com>; Bob
Kahn<rk@rkengineer.com>; Chang,
Jane<Jane.Chang@aecom.com>; Dan
Candelaria<danc@ci.garden-grove.ca.us>
Subject: RE: Revised Site C Site Plan

Hi Matthew,

Thanks for sending us the updated siteplan today. We have provided a few comments for you to consider (see attached). All of these comments were discussed in last Thursday's meeting at AECOM.

1. Access from Twintree Ave. will be restricted to Right Out and Left In only. This will be further clarified in the updated traffic

impact study report.

2. Based on the meeting last week and with the City Traffic Engineer today, an additional driveway on Harbor Boulevard is recommended. This will improve internal circulation within the site and decrease the traffic volumes at the main driveway.

3. The site plan is indicating 15,000 SF of Entertainment Venue. Should this be calculated as Restaurant Use? This was also covered in last weeks meeting and it was agreed that restaurant use was acceptable.

We can calculate the vehicle trip generation as a restaurant or live venue use. The Live Entertainment use will most likely increase the parking requirements for the site.

Please clarify.

Please provide clarification and/or confirmation of the above assumptions so we can revise the technical reports.

Kind regards,

Rogier Goedecke
Vice President Operations

<image001.jpg>

transportation planning / traffic engineering & design

acoustical engineering / community traffic calming

4000 Westerly Place, Suite 280

Newport Beach, CA 92660

tel. 949.474.0809

fax 949.474.0902

www.rkengineer.com

From: Matthew Reid

[<mailto:matt.reid@landanddesign.com>]

Sent: Monday, July 18, 2011 3:22 PM

To: Morgan, Jayna; Dave Rose

Cc: Rogier Goedecke; Greg Blodgett; Karl Hill; Smith, Don (Irvine); Yang, Wendy; Suthiwan, Popy; Bob Kahn; Chang, Jane

Subject: Re: Revised Site C Site Plan

All new site plan per our conversation last week. We will reserve the right to make geometrical adjustments for the final plan....

Thank you.

Matthew Reid

Land & Design, Inc.

8130 La Mesa Blvd | Suite 808 | La Mesa, CA
91942

619.335.5896 Google voice | 619.462.4144 fax

Skype – matthew.reid.ca

matt.reid@landanddesign.com

From: "Morgan, Jayna"

<Jayna.Morgan@aecom.com>

Date: Mon, 18 Jul 2011 11:25:44 -0700

To: Matthew Reid

**<matt.reid@landanddesign.com>, Dave
Rose <drose3@charter.net>**

**Cc: Rogier Goedecke <rg@rkengineer.com>,
Greg Blodgett <[**\[ci.garden-
grove.ca.us\]\(mailto:Greg1@ci.garden-grove.ca.us\)>, Karl Hill <\[**\\[ci.garden-
grove.ca.us\\]\\(mailto:karlh@ci.garden-grove.ca.us\\)>, "Smith, Don \\(Irvine\\)"**\]\(mailto:karlh@ci.garden-</p></div><div data-bbox=\)**](mailto:Greg1@ci.garden-</p></div><div data-bbox=)**

<Don.E.Smith@aecom.com>, "Yang,

**Wendy" <Wendy.Yang@aecom.com>,
"Suthiwan, Popy"**

<Popy.Suthiwan@aecom.com>, Robert

Kahn <rk@rkengineer.com>, "Chang, Jane"

<Jane.Chang@aecom.com>

Subject: RE: Revised Site C Site Plan

Great!

Jayna Morgan

AECOM

T. [949.660.8044](tel:949.660.8044)

From: Matthew Reid

[<mailto:matt.reid@landanddesign.com>]

Sent: Monday, July 18, 2011 11:23 AM

To: Morgan, Jayna; Dave Rose

Cc: Rogier Goedecke; Greg Blodgett;

Karl Hill; Smith, Don (Irvine); Yang,

Wendy; Suthiwan, Popy; Robert Kahn;

Chang, Jane

Subject: Re: Revised Site C Site Plan

We should have this plan for you today.

Matthew Reid

Land & Design, Inc.

8130 La Mesa Blvd | Suite 808 | La Mesa, CA
91942

619.335.5896 Google voice | 619.462.4144

fax
Skype – matthew.reid.ca
matt.reid@landanddesign.com

From: "Morgan, Jayna"
<Jayna.Morgan@aecom.com>
Date: Mon, 18 Jul 2011 11:04:17 -0700
To: Matthew Reid
<matt.reid@landanddesign.com>, Dave
Rose <drose3@charter.net>
Cc: Rogier Goedecke <rg@rkengineer.com>,
Greg Blodgett <Greg1@ci.garden-grove.ca.us>,
Karl Hill <karlh@ci.garden-grove.ca.us>,
"Smith, Don (Irvine)" <Don.E.Smith@aecom.com>,
"Yang, Wendy" <Wendy.Yang@aecom.com>,
"Suthiwan, Popy" <Popy.Suthiwan@aecom.com>,
Robert Kahn <rk@rkengineer.com>,
"Chang, Jane" <Jane.Chang@aecom.com>
Subject: Revised Site C Site Plan

Hi All,

Hope you had a nice weekend!

In our meeting last Thursday, we discussed the revised site plan which would show the additional retail square footage for the pads along Harbor Blvd.

We also talked about adding an another access along Harbor. Our traffic consultants have talked with the City traffic engineer and presented the additional access. He is in agreement that this would help the project's traffic flow.

Matt/David- can you please coordinate with Roger Godecke to get the sketch plan he and Bob Kahn prepared on the secondary access so it can be incorporated into the revised site plan.

Thanks,

Jayna Morgan
Environmental Planner
Design + Planning
jayna.morgan@aecom.com
AECOM

2737 Campus Drive, Irvine, CA 92612 USA
T 949.660.8044 F 949.660.1046
www.aecom.com

<image001.gif>

<image002.jpg>

Tomorrow- 11 am Conference call to discuss Site C Addendum and Sh...

Subject: Tomorrow- 11 am Conference call to discuss Site C Addendum and Shade Shadow Issue

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>

Date: Thu, 28 Jul 2011 15:46:02 -0700

To: Greg Blodgett <greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, Matthew Reid <matt.reid@landanddesign.com>, Maria Parra <mariap@ci.garden-grove.ca.us>, <drose3@charter.net>

CC: "Chang, Jane" <Jane.Chang@aecom.com>

Hi All,

Below is the call in information for tomorrows call. Look forward to speaking with you then.

Conference Call 866- 203- 6896

Code 9607121256

Leader pin 3092

Jayna Morgan

Environmental Planner

Design + Planning

jayna.morgan@aecom.com

AECOM

2737 Campus Drive, Irvine, CA 92612 USA

T 949.660.8044 F 949.660.1046

www.aecom.com

Re:

Subject: Re:

From: Matthew Reid <matt.reid@landanddesign.com>

Date: Mon, 1 Aug 2011 09:15:48 -0700

To: Greg Blodgett <greg1@ci.garden-grove.ca.us>

Yes, get some info on the conference.

We are working on a solution regarding the residential. Let's talk today about that.

Sent from my iPhone

Matthew Reid
619.335.5896 Google voice
Skype: matthew.reid.ca

On Jul 31, 2011, at 12:00 PM, Greg Blodgett <greg1@ci.garden-grove.ca.us> wrote:

Matt hope your move is going well

we have had interest for residence adjacent tot the project that may want to sell
. We are willing and obligated to to pick up all parcels user the DDA

would you consider these purchases. lets discuss monday.

2. Lodging Conference is coming up do you want me to get a cost for a exhibit space.

Greg Blodgett
SR Project Manager
City of Garden Grove
Economic Development

Subject: Re: x-site_3.3-110731.dwg was shared with you
From: Matthew Reid <matt.reid@landanddesign.com>
Date: Wed, 03 Aug 2011 12:25:41 -0700
To: "Yang, Wendy" <Wendy.Yang@aecom.com>
CC: Dave Rose <drose3@charter.net>, "Morgan, Jayna" <Jayna.Morgan@aecom.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>

Wendy,
The Full Service hotel will be approximately 263' tall.
Limited Service hotels will be approximately 150' tall
Parking structure will be approximately 75' tall

Let me know if you have any other questions.

Matthew Reid

Land & Design, Inc.
8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942
619.335.5896 Google voice | 619.462.4144 fax
Skype – matthew.reid.ca
matt.reid@landanddesign.com

From: "Yang, Wendy" <Wendy.Yang@aecom.com>
Date: Mon, 1 Aug 2011 12:19:52 -0700
To: Matthew Reid <matt.reid@landanddesign.com>
CC: Dave Rose <drose3@charter.net>, "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Subject: RE: x-site_3.3-110731.dwg was shared with you

Matt,

Thanks for the Auto CAD file.

Just want to confirm you are also providing building height for each structure on site so AECOM can construct the massing model in 3D.

Thanks,

Wendy Yang
Urban Designer
Associate Principal
D +1 949.756.6964
wendy.yang@aecom.com

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2737 Campus Drive
Irvine, CA 92612 USA
T +1 949.660.8044 F +1 949.660.1046
www.aecom.com

From: Matthew Reid [<mailto:matt.reid@landanddesign.com>]

Sent: Monday, August 01, 2011 6:35 AM
To: Yang, Wendy
Cc: Dave Rose; Morgan, Jayna
Subject: Fwd: x-site_3.3-110731.dwg was shared with you

Autocad....

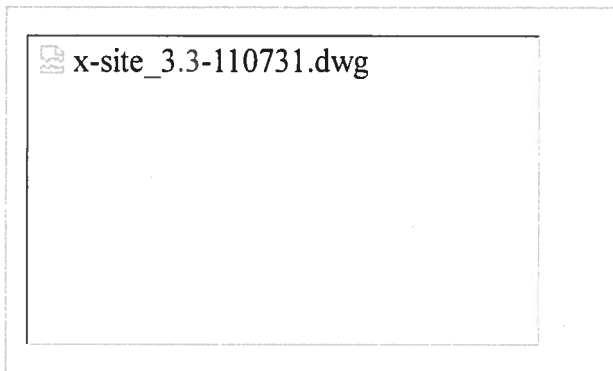
Sent from my iPhone

Matthew Reid
619.335.5896 Google voice
Skype: matthew.reid.ca

Begin forwarded message:

From: Jeremy Grant <messages@autocadws.com>
Date: July 31, 2011 6:05:34 PM PDT
To: matt.reid@landanddesign.com
Subject: x-site_3.3-110731.dwg was shared with you
Reply-To: Jeremy Grant <jeremy.jgrant@gmail.com>

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image002.jpg

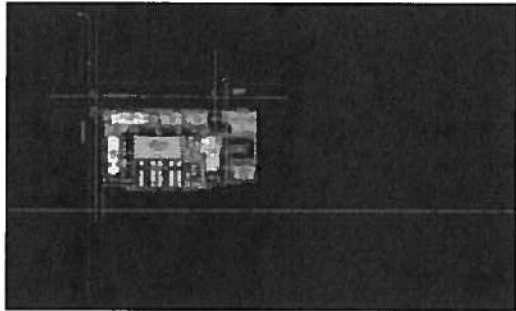


image002.jpg	Content-Type: image/jpeg Content-Encoding: base64
--------------	--

Subject: RE: x-site_3.3-110731.dwg was shared with you
From: "Yang, Wendy" <Wendy.Yang@aecom.com>
Date: Wed, 3 Aug 2011 13:44:27 -0700
To: Matthew Reid <matt.reid@landanddesign.com>
CC: Dave Rose <drose3@charter.net>, "Morgan, Jayna" <Jayna.Morgan@aecom.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>

Matt,

Thanks for the information provided, I do have the following questions:

Height of pool deck along Harbor and Twentree
Height of pool deck between casitas and full service hotel
Height of casitas on top of parking garage
Height of restaurants along Harbor, and NE corner

It will be helpful to mark the respective height on the site plan at each corner of the building so we can extract the 3D massing accurately.

Thank you for your help.

Wendy

From: Matthew Reid [mailto:matt.reid@landanddesign.com]
Sent: Wednesday, August 03, 2011 12:26 PM
To: Yang, Wendy
Cc: Dave Rose; Morgan, Jayna; Greg Blodgett
Subject: Re: x-site_3.3-110731.dwg was shared with you

Wendy,
The Full Service hotel will be approximately 263' tall.
Limited Service hotels will be approximately 150' tall
Parking structure will be approximately 75' tall

Let me know if you have any other questions.

Matthew Reid

Land & Design, Inc.
8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942
619.335.5896 Google voice | 619.462.4144 fax
Skype – matthew.reid.ca
matt.reid@landanddesign.com

From: "Yang, Wendy" <Wendy.Yang@aecom.com>
Date: Mon, 1 Aug 2011 12:19:52 -0700
To: Matthew Reid <matt.reid@landanddesign.com>
Cc: Dave Rose <drose3@charter.net>, "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Subject: RE: x-site_3.3-110731.dwg was shared with you

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Thanks,

Wendy Yang
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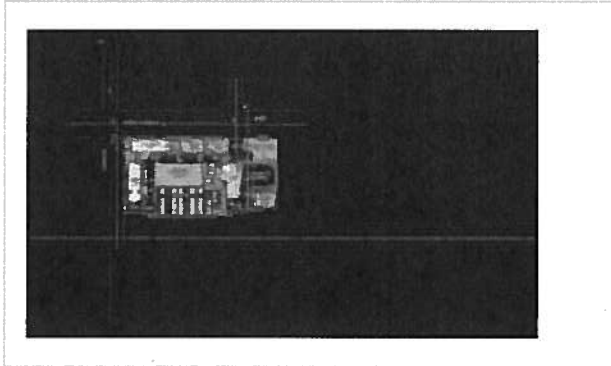
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Skype: [matthew.reid.ca](https://www.skype.com/user/matthew.reid.ca)

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Date: July 31, 2011 6:05:34 PM PDT
To: matt.reid@landanddesign.com
Subject: x-site_3.3-110731.dwg was shared with you
Reply-To: Jeremy Grant <jeremy.jgrant@gmail.com>

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Subject: Re: x-site_3.3-110731.dwg was shared with you

From: drose3@charter.net

Date: Thu, 4 Aug 2011 18:35:09 +0000

To: "Yang, Wendy" <Wendy.Yang@aecom.com>, "Matthew Reid" <matt.reid@landanddesign.com>

CC: "Morgan, Jayna" <Jayna.Morgan@aecom.com>, "Greg Blodgett" <Greg1@ci.garden-grove.ca.us>, "David Rose" <drose3@hotmail.com>

1. The pool deck on Twintree is at grade level, the same for the pool deck on Harbor;
2. The height of the pool deck between the full service hotel and casitas is the same as the parking structure itself;
3. For the height of the casitas on top of the parking garage, use 15 feet above garage height;
4. For the height of restaurants along Harbor use 20 feet; and
5. For the height of the restaurant/venue at the Northeast corner of the site use 75 feet.

Please advise.

Thanks.

Dave

Sent via BlackBerry by AT&T

From: "Yang, Wendy" <Wendy.Yang@aecom.com>

Date: Wed, 3 Aug 2011 13:44:27 -0700

To: Matthew Reid<matt.reid@landanddesign.com>

Cc: Dave Rose<drose3@charter.net>; Morgan, Jayna<Jayna.Morgan@aecom.com>; Greg Blodgett<Greg1@ci.garden-grove.ca.us>

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Thank you for your help.

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Cc: Dave Rose; Morgan, Jayna; Greg Blodgett
Subject: Re: x-site_3.3-110731.dwg was shared with you

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Associate Principal
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Date: Thu, 4 Aug 2011 21:09:32 -0700
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CC: "Morgan, Jayna" <Jayna.Morgan@aecom.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, David Rose <drose3@hotmail.com>, "Suthiwan, Popy" <Popy.Suthiwan@aecom.com>

Matt,

Thanks for the information. We will start constructing the massing and get back to you with any additional questions.

Greg,

We should have a draft of the 3D massing by end of next week. I will work with Jayna once I have the 3D constructed and get the shad and shadow analysis started.

Thanks,

Wendy

From: drose3@charter.net [mailto:drose3@charter.net]
Sent: Thursday, August 04, 2011 11:35 AM
To: Yang, Wendy; Matthew Reid
Cc: Morgan, Jayna; Greg Blodgett; David Rose
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Subject: Lease

From: Matthew Reid <matt.reid@landanddesign.com>

Date: Tue, 9 Aug 2011 09:18:14 -0700

To: Greg Blodgett <Greg1@ci.garden-grove.ca.us>

Greg,

I don't recall getting the draft lease from you. Please resend and I'll review.

Sent from my iPhone

Matthew Reid

619.335.5896 Google voice

Skype: matthew.reid.ca

Subject: RE: x-site_3.3-110731.dwg was shared with you
From: "Dubon, Jennifer" <Jennifer.Dubon@aecom.com>
Date: Wed, 10 Aug 2011 17:04:25 -0700
To: <drose3@charter.net>, "Yang, Wendy" <Wendy.Yang@aecom.com>, Matthew Reid <matt.reid@landanddesign.com>
CC: "Morgan, Jayna" <Jayna.Morgan@aecom.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, David Rose <drose3@hotmail.com>, "Suthiwan, Popy" <Popy.Suthiwan@aecom.com>

Dave,

Could you please provide us with the height of the Structured Parking (with ballroom) noted in the attached PDF. We are currently creating the massing model and are unsure if the height of that parking structure is the same as the one with the Casitas.

Thanks,

Jennifer

From: drose3@charter.net [mailto:drose3@charter.net]
Sent: Thursday, August 04, 2011 11:35 AM
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Cc: Morgan, Jayna; Greg Blodgett; David Rose
Subject: Re: x-site_3.3-110731.dwg was shared with you

1. The pool deck on Twintree is at grade level, the same for the pool deck on Harbor;
2. The height of the pool deck between the full service hotel and casitas is the same as the parking structure itself;
3. For the height of the casitas on top of the parking garage, use 15 feet above garage height;
4. For the height of restaurants along Harbor use 20 feet; and
5. For the height of the restaurant/venue at the Northeast corner of the site use 75 feet.

Please advise.

Thanks.

Dave

Sent via BlackBerry by AT&T

From: "Yang, Wendy" <Wendy.Yang@aecom.com>
Date: Wed, 3 Aug 2011 13:44:27 -0700
To: Matthew Reid<matt.reid@landanddesign.com>
Cc: Dave Rose<drose3@charter.net>; Morgan, Jayna<Jayna.Morgan@aecom.com>; Greg Blodgett<Greg1@ci.garden-grove.ca.us>

Subject: RE: x-site_3.3-110731.dwg was shared with you

Matt,

Thanks for the information provided, I do have the following questions:

Height of pool deck along Harbor and Twentree
Height of pool deck between casitas and full service hotel
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Height of restaurants along Harbor, and NE corner

It will be helpful to mark the respective height on the site plan at each corner of the building so we can extract the 3D massing accurately.

Thank you for your help.

Wendy

From: Matthew Reid [mailto:matt.reid@landanddesign.com]
Sent: Wednesday, August 03, 2011 12:26 PM
To: Yang, Wendy
Cc: Dave Rose; Morgan, Jayna; Greg Blodgett
Subject: Re: x-site_3.3-110731.dwg was shared with you

Wendy,
The Full Service hotel will be approximately 263' tall.
Limited Service hotels will be approximately 150' tall
Parking structure will be approximately 75' tall

Let me know if you have any other questions.

Matthew Reid

Land & Design, Inc.
8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942
619.335.5896 Google voice | 619.462.4144 fax
Skype – matthew.reid.ca
matt.reid@landanddesign.com

From: "Yang, Wendy" <Wendy.Yang@aecom.com>
Date: Mon, 1 Aug 2011 12:19:52 -0700
To: Matthew Reid <matt.reid@landanddesign.com>
Cc: Dave Rose <drose3@charter.net>, "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Subject: RE: x-site_3.3-110731.dwg was shared with you

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Just want to confirm you are also providing building height for each structure on site so AECOM can construct the massing model in 3D.

Thanks,

Wendy Yang

Urban Designer
Associate Principal
D +1 949.756.6964
wendy.yang@aecom.com

AECOM

2737 Campus Drive
Irvine, CA 92612 USA
T +1 949.660.8044 F +1 949.660.1046
www.aecom.com

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Sent: Monday, August 01, 2011 6:35 AM
To: Yang, Wendy
Cc: Dave Rose; Morgan, Jayna
Subject: Fwd: x-site_3.3-110731.dwg was shared with you

Autocad....

Sent from my iPhone

Matthew Reid
619.335.5896 Google voice
Skype: [matthew.reid.ca](https://www.skype.com/people/matthew.reid.ca)

Begin forwarded message:

From: Jeremy Grant <messages@autocadws.com>
Date: July 31, 2011 6:05:34 PM PDT
To: matt.reid@landanddesign.com
Subject: x-site_3.3-110731.dwg was shared with you
Reply-To: Jeremy Grant <jeremy.jgrant@gmail.com>

Autodesk
AutoCAD WS



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- ? View your drawing history

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- ? [Send Feedback](#)

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GG APPROVE MASTERPLAN_question.pdf	Content-Description: GG APPROVE MASTERPLAN_question.pdf
	Content-Type: application/octet-stream
	Content-Encoding: base64



E-TICKET HOSPITALITY, LLC

FULL SERVICE HOTEL
 19 STORIES
 350 KEYS
 22 ROOMS/FLOOR
 -20 CASITAS W/ PRIVATE PATIO & POOL DECK
 -FANTASY POOL DECK W/BAR
 -SPA DECK
 -3 MEAL RESTAURANT & BAR
 5,000 S.F.
 -ALL DAY RESTAURANT, 5,000 S.F.

CONFERENCE CENTER
 BALLROOM AND MEETING ROOMS
 38,000 S.F.

LIMITED SERVICE HOTEL #1
 11 STORIES
 150 KEYS
 4-15 ROOMS/FLOOR
 -MEETING ROOMS, 1,000 S.F.
 -POOL DECK / FITNESS CENTER

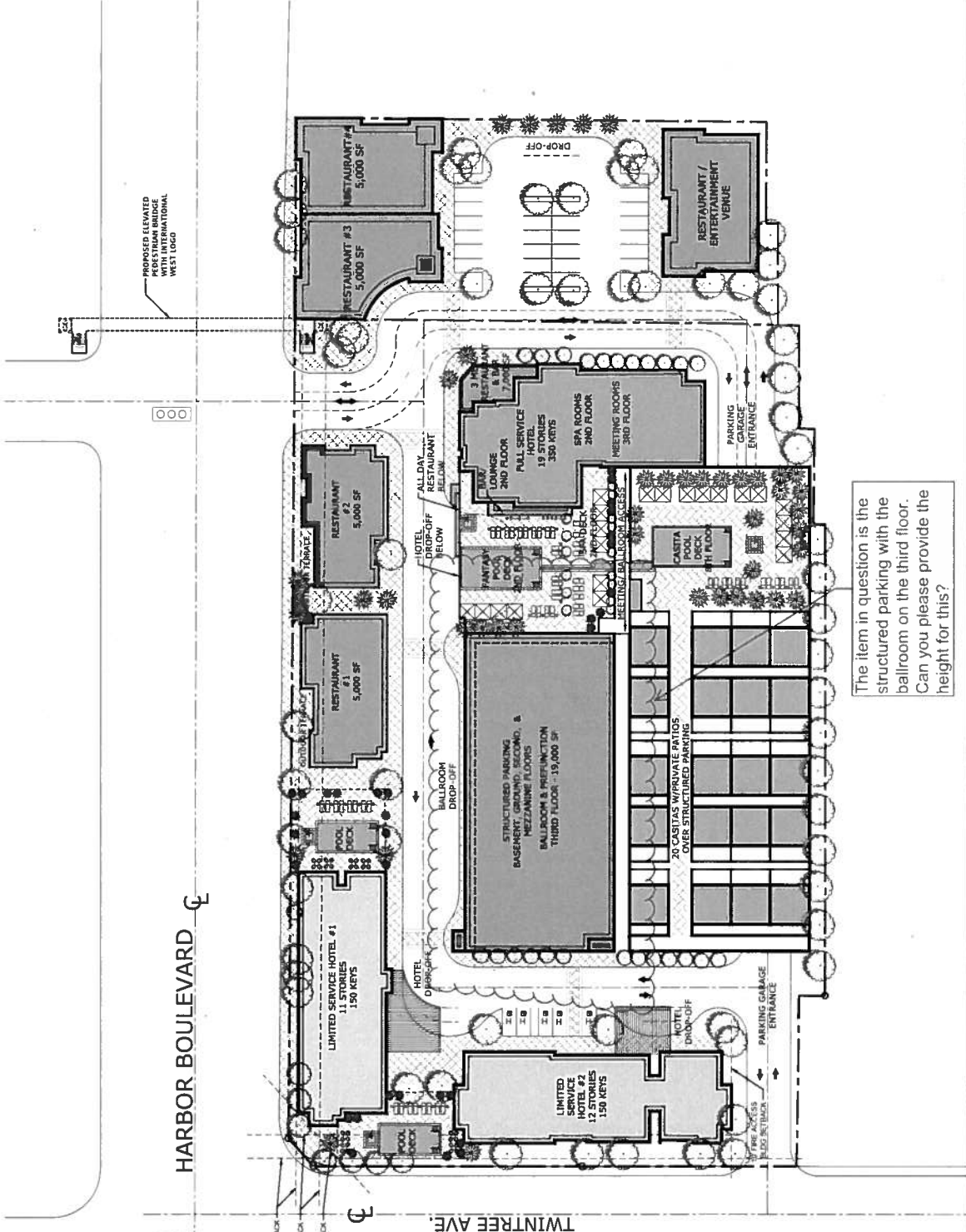
LIMITED SERVICE HOTEL #2
 12 STORIES
 150 KEYS
 4-14 ROOMS/FLOOR
 -MEETING ROOMS, 1,000 S.F.
 -POOL DECK / FITNESS CENTER

RESTAURANTS / RETAIL
 -RESTAURANT #1 5,000 SF
 -RESTAURANT #2 5,000 SF
 -RESTAURANT #3 5,000 SF
 -RESTAURANT #4 5,000 SF
 -RESTAURANT / ENTERTAINMENT VENUE

PARKING PROVIDED
 TOTAL = 1,270 SPACES



1130 WESTWOOD BLVD.
 LOS ANGELES, CA 90024



The item in question is the structured parking with the ballroom on the third floor. Can you please provide the height for this?

05.31.11
 JOB # 1043P
 Disclaimer: Hotel and restaurant brands shown are for demonstration purposes only and final proposal may contain a combination of brands shown or different brands altogether.

SITE PLAN - SCHEME 3.3
 SCALE: 1/64"=1'-0"

Subject: Re: x-site_3.3-110731.dwg was shared with you

From: drose3@charter.net

Date: Thu, 11 Aug 2011 00:12:35 +0000

To: "Dubon, Jennifer" <Jennifer.Dubon@aecom.com>, "Yang, Wendy" <Wendy.Yang@aecom.com>, "Matthew Reid" <matt.reid@landanddesign.com>

CC: "Morgan, Jayna" <Jayna.Morgan@aecom.com>, "Greg Blodgett" <Greg1@ci.garden-grove.ca.us>, "David Rose" <drose3@hotmail.com>, "Suthiwan,Popy" <Popy.Suthiwan@aecom.com>

The answer is no, its not the same height, and I'd use 65 ft tall.

Dave

Sent via BlackBerry by AT&T

From: "Dubon, Jennifer" <Jennifer.Dubon@aecom.com>

Date: Wed, 10 Aug 2011 17:04:25 -0700

To: <drose3@charter.net>; Yang, Wendy<Wendy.Yang@aecom.com>; Matthew Reid<matt.reid@landanddesign.com>

Cc: Morgan, Jayna<Jayna.Morgan@aecom.com>; Greg Blodgett<Greg1@ci.garden-grove.ca.us>; David Rose<drose3@hotmail.com>; Suthiwan,Popy<Popy.Suthiwan@aecom.com>

Subject: RE: x-site_3.3-110731.dwg was shared with you

Dave,

Could you please provide us with the height of the Structured Parking (with ballroom) noted in the attached PDF. We are currently creating the massing model and are unsure if the height of that parking structure is the same as the one with the Casitas.

Thanks,

Jennifer

From: drose3@charter.net [mailto:drose3@charter.net]

Sent: Thursday, August 04, 2011 11:35 AM

To: Yang, Wendy; Matthew Reid

Cc: Morgan, Jayna; Greg Blodgett; David Rose

Subject: Re: x-site_3.3-110731.dwg was shared with you

1. The pool deck on Twintree is at grade level, the same for the pool deck on Harbor;
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To: Yang, Wendy
Cc: Dave Rose; Morgan, Jayna
Subject: Fwd: x-site_3.3-110731.dwg was shared with you

Autocad....

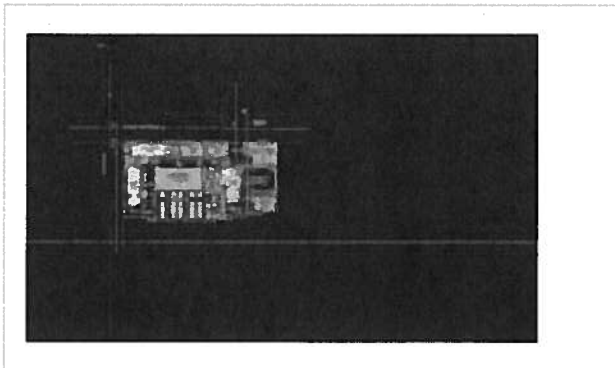
Sent from my iPhone

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Reply-To: Jeremy Grant <jeremy.jgrant@gmail.com>

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AutoCAD WS



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Date: Wed, 10 Aug 2011 17:15:29 -0700
To: <drose3@charter.net>, "Dubon, Jennifer" <Jennifer.Dubon@aecom.com>, "Yang, Wendy" <Wendy.Yang@aecom.com>, Matthew Reid <matt.reid@landanddesign.com>
CC: Greg Blodgett <Greg1@ci.garden-grove.ca.us>, David Rose <drose3@hotmail.com>, "Suthiwan, Popy" <Popy.Suthiwan@aecom.com>

Thanks Dave

Jayna Morgan
AECOM
T. 949.660.8044

From: drose3@charter.net [mailto:drose3@charter.net]
Sent: Wednesday, August 10, 2011 5:13 PM
To: Dubon, Jennifer; Yang, Wendy; Matthew Reid
Cc: Morgan, Jayna; Greg Blodgett; David Rose; Suthiwan, Popy
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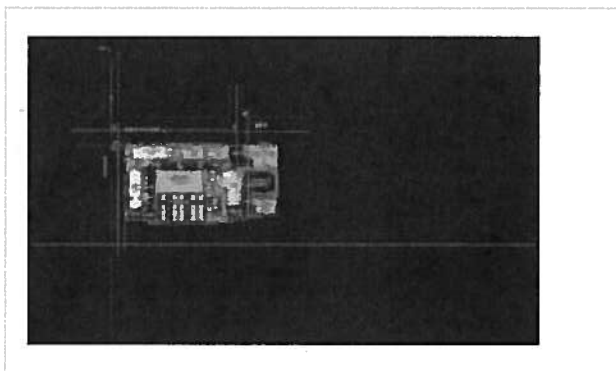
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Subject: Re: Garden Grove

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>

Date: Fri, 12 Aug 2011 16:57:30 -0700

To: "Dubon, Jennifer" <Jennifer.Dubon@aecom.com>

CC: <drose3@charter.net>, Matthew Reid <matt.reid@landanddesign.com>, "Yang, Wendy" <Wendy.Yang@aecom.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, "Daniels, Shannon" <Shannon.Daniels@aecom.com>

Thank you Jennifer!!

Sent from my iPhone

On Aug 12, 2011, at 3:12 PM, "Dubon, Jennifer" <Jennifer.Dubon@aecom.com> wrote:

Dave and Matt,

Attached you will find views of the Garden Grove site with the massing as per the heights given to us. Please verify that the massing looks correct before we proceed with the shade/ shadow analysis.

To reiterate, the heights used are:

1. Full Service Hotel- 263ft
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4. Restaurant/ Venue at NE corner- 75ft
5. Parking Structure w/ Ballroom- 65ft
6. Casitas on top of parking garage- 15ft
7. Restaurants along Harbor- 20ft

Thanks

Jennifer

<W view.jpg>

<NEview.jpg>

<NWview.jpg>

<SEview.jpg>

<SWview.jpg>

Re: 10 am Conference call to discuss Site C Addendum and Shade Sh...

Subject: Re: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue
From: Matthew Reid <matt.reid@landanddesign.com>
Date: Mon, 15 Aug 2011 13:48:14 -0700
To: Greg Blodgett <greg1@ci.garden-grove.ca.us>

I may be headed out of town Wed to meet with West Coast investors? I'll let you know.

Matthew Reid
Land & Design, Inc.
8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942
619.335.5896 Google voice | 619.462.4144 fax
Skype matthew.reid.ca
matt.reid@landanddesign.com

On 8/15/11 8:52 AM, "Greg Blodgett" <greg1@ci.garden-grove.ca.us> wrote:

I have schedule a 12:00 meeting with the city manager on this thursday

Greg Blodgett
SR Project Manager
City of Garden Grove
Economic Development

----- Original Message -----

From: "Matthew Reid" <matt.reid@landanddesign.com>
To: "Jayna Morgan" <Jayna.Morgan@aecom.com>
Cc: "<drose3@charter.net>" <drose3@charter.net>, "Karl Hill" <karlh@ci.garden-grove.ca.us>, "Maria Parra" <mariap@ci.garden-grove.ca.us>, "Greg Blodgett" <greg1@ci.garden-grove.ca.us>, "Jane Chang" <Jane.Chang@aecom.com>
Sent: Thursday, July 28, 2011 12:40:59 PM
Subject: Re: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue

Wasn't aware of a call today....sorry. Can do tomorrow at 11am.

Sent from my iPhone

Matthew Reid
619.335.5896 Google voice
Skype: matthew.reid.ca

On Jul 28, 2011, at 11:32 AM, "Morgan, Jayna" <Jayna.Morgan@aecom.com> wrote:

The call was today, but no one has called in so I think we should re-schedule for this afternoon (1PM or 4PM) or tomorrow am.

I will not be available tomorrow afternoon and I am on vacation next week.

Let me know your availability.

Thanks,

Jayna Morgan

AECOM

T. 949.660.8044

From: drose3@charter.net [mailto:drose3@charter.net]
Sent: Thursday, July 28, 2011 11:20 AM
To: Morgan, Jayna
Subject: Re: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue

What day is the call?

Sent via BlackBerry by AT&T

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>

Date: Thu, 28 Jul 2011 09:39:26 -0700

To: <drose3@charter.net>

Subject: FW: 10 am Conference call to discuss Site C Addendum and Shade Shadow Issue

Sorry, I forgot to include you.

Jayna Morgan

AECOM

T. 949.660.8044

From: Morgan, Jayna
Sent: Thursday, July 28, 2011 9:37 AM
To: Greg Blodgett; 'Karl Hill'; 'Matthew Reid'; Maria Parra
Cc: Chang, Jane
Subject: 10 am Conference call to discuss Site C Addendum and Shade
Shadow Issue

Conference Call 866- 203- 6896

Code 9607121256

Leader pin 3092

Jayna Morgan
Environmental Planner
Design + Planning
jayna.morgan@aecom.com

AECOM
2737 Campus Drive, Irvine, CA 92612 USA
T 949.660.8044 F 949.660.1046
www.aecom.com

Subject: RE: Garden Grove- Response Required

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>

Date: Tue, 16 Aug 2011 10:17:30 -0700

To: "Dubon, Jennifer" <Jennifer.Dubon@aecom.com>, <drose3@charter.net>, Matthew Reid <matt.reid@landanddesign.com>

CC: "Yang, Wendy" <Wendy.Yang@aecom.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, "Daniels, Shannon" <Shannon.Daniels@aecom.com>

Hi All,

We are still waiting to hear back before we complete the shade/shadow diagrams. Please let us know as it will take a day or 2 upon receiving confirmation to get this done.

Thanks!!

Jayna Morgan

AECOM

T. 949.660.8044

From: Dubon, Jennifer

Sent: Friday, August 12, 2011 3:12 PM

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Cc: Yang, Wendy; Morgan, Jayna; Greg Blodgett; Daniels, Shannon

Subject: Garden Grove

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Thanks

Jennifer

Subject: Re: Garden Grove- Response Required

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CC: "Yang, Wendy" <Wendy.Yang@aecom.com>, "Greg Blodgett" <Greg1@ci.garden-grove.ca.us>, "Daniels, Shannon" <Shannon.Daniels@aecom.com>

This information is fine.

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To: Dubon, Jennifer<Jennifer.Dubon@aecom.com>; <drose3@charter.net>; Matthew Reid<matt.reid@landanddesign.com>

Cc: Yang, Wendy<Wendy.Yang@aecom.com>; Greg Blodgett<Greg1@ci.garden-grove.ca.us>; Daniels, Shannon<Shannon.Daniels@aecom.com>

Subject: RE: Garden Grove- Response Required

Hi All,

We are still waiting to hear back before we complete the shade/shadow diagrams. Please let us know as it will take a day or 2 upon receiving confirmation to get this done.

Thanks!!

Jayna Morgan

AECOM

T. 949.660.8044

From: Dubon, Jennifer

Sent: Friday, August 12, 2011 3:12 PM

To: drose3@charter.net; Matthew Reid

Cc: Yang, Wendy; Morgan, Jayna; Greg Blodgett; Daniels, Shannon

Subject: Garden Grove

Dave and Matt,

Attached you will find views of the Garden Grove site with the massing as per the heights given to us. Please verify that the massing looks correct before we proceed with the shade/ shadow analysis.

To reiterate, the heights used are:

1. Full Service Hotel- 263ft
2. Limited Service Hotels- 150ft
3. Parking Structure- 75ft
4. Restaurant/ Venue at NE corner- 75ft
5. Parking Structure w/ Ballroom- 65ft
6. Casitas on top of parking garage- 15ft
7. Restaurants along Harbor- 20ft

Thanks

Jennifer

Subject: RE: Garden Grove- Response Required
From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Tue, 16 Aug 2011 10:31:39 -0700
To: <drose3@charter.net>, "Dubon, Jennifer" <Jennifer.Dubon@aecom.com>, Matthew Reid <matt.reid@landanddesign.com>
CC: "Yang, Wendy" <Wendy.Yang@aecom.com>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, "Daniels, Shannon" <Shannon.Daniels@aecom.com>

Great! Thanks!

Jayna Morgan
AECOM
T. 949.660.8044

From: drose3@charter.net [mailto:drose3@charter.net]
Sent: Tuesday, August 16, 2011 10:29 AM
To: Morgan, Jayna; Dubon, Jennifer; Matthew Reid
Cc: Yang, Wendy; Greg Blodgett; Daniels, Shannon
Subject: Re: Garden Grove- Response Required

This information is fine.

Sent via BlackBerry by AT&T

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>
Date: Tue, 16 Aug 2011 10:17:30 -0700
To: Dubon, Jennifer<Jennifer.Dubon@aecom.com>; <drose3@charter.net>; Matthew Reid<matt.reid@landanddesign.com>
Cc: Yang, Wendy<Wendy.Yang@aecom.com>; Greg Blodgett<Greg1@ci.garden-grove.ca.us>; Daniels, Shannon<Shannon.Daniels@aecom.com>
Subject: RE: Garden Grove- Response Required

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AECOM
T. 949.660.8044

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Sent: Friday, August 12, 2011 3:12 PM
To: drose3@charter.net; Matthew Reid
Cc: Yang, Wendy; Morgan, Jayna; Greg Blodgett; Daniels, Shannon
Subject: Garden Grove

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Thanks

Jennifer

Subject: FW: Garden Grove Preliminary Shadow Diagrams

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>

Date: Wed, 17 Aug 2011 15:11:01 -0700

To: Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, Maria Parra <mariap@ci.garden-grove.ca.us>

CC: Paul Guerrero <paulg@ci.garden-grove.ca.us>, Matthew Reid <matt.reid@landanddesign.com>, <drose3@charter.net>

Hi All,

Please see attached and below for the preliminary shadow results.
Please let me know if you have any questions and how you want to proceed.

Thank You,

Jayna Morgan

AECOM

T. 949.660.8044

From: Daniels, Shannon

Sent: Wednesday, August 17, 2011 11:14 AM

To: Morgan, Jayna; Yang, Wendy; Dubon, Jennifer

Cc: Godkin, Shawn

Subject: Garden Grove Preliminary Shadow Diagrams

Hi All,

Shawn prepared the attached draft shadow diagrams. In my preliminary review of these diagrams, it appears that the project would shade portions of residential properties (residential backyards, homes, and other outdoor useable spaces) to the east for 3 to 4 hours on Summer afternoons; up to 3 hours on Spring and Fall afternoons; and up to 3 hours in the Winter.

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The City of LA has very specific thresholds where at a certain time of year more than 3 hours is significant, and at another time of year more than 4 hours is significant. See <http://www.ci.la.ca.us/EAD/programs/Thresholds/A-Aesthetics%20and%20Visual%20Resources.pdf> page A.3-2.

Please let me know if you have any questions and if you have any changes for the diagrams.

Shannon

Shannon Daniels

Project Manager

Design + Planning

D 213.593.8407

shannon.daniels@aecom.com

AECOM

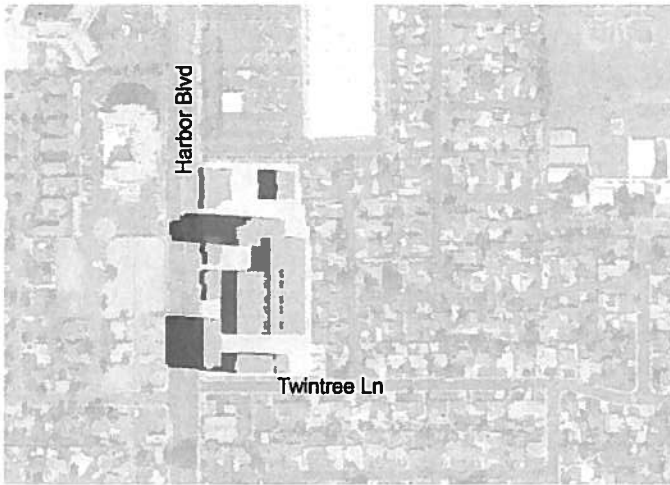
515 S Flower Street, 9th Floor, Los Angeles, CA 90071 USA

T 213.593.7700 F 213.593.7715

www.aecom.com

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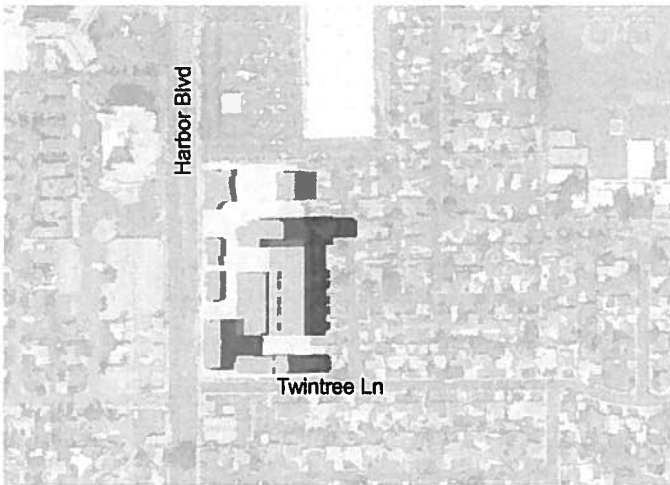
Summer Solstice-June 21st



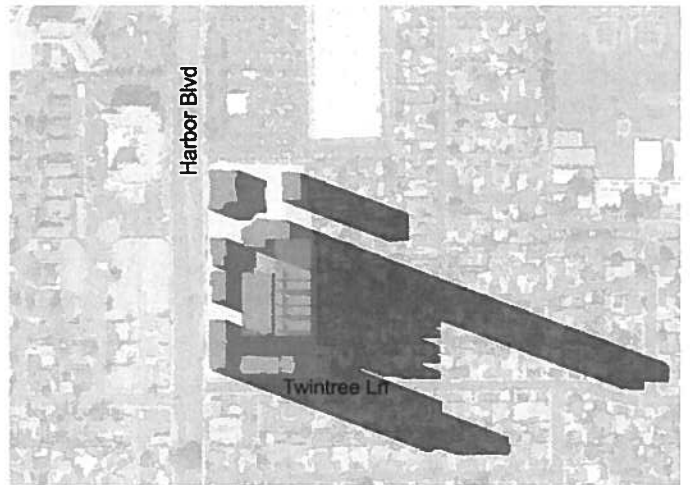
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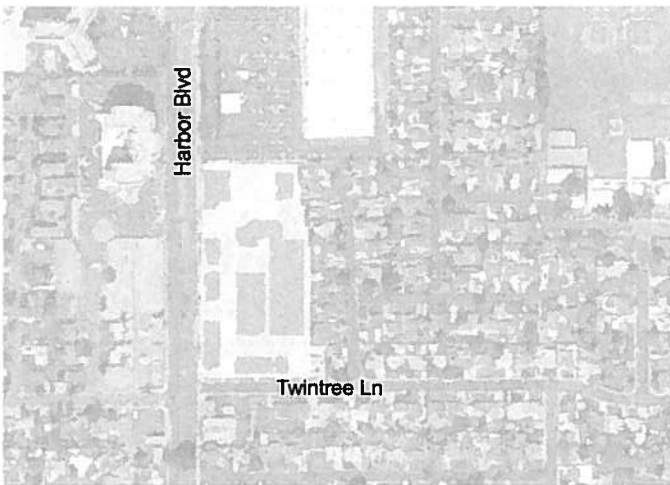
12:00 p.m.



3:00 p.m.



6:00 p.m.



Site Plan

Shade/Shadow Analysis Garden Grove

■ Proposed Building

Source: Google SketchUp Pro 8 2010 and EDAW 2011

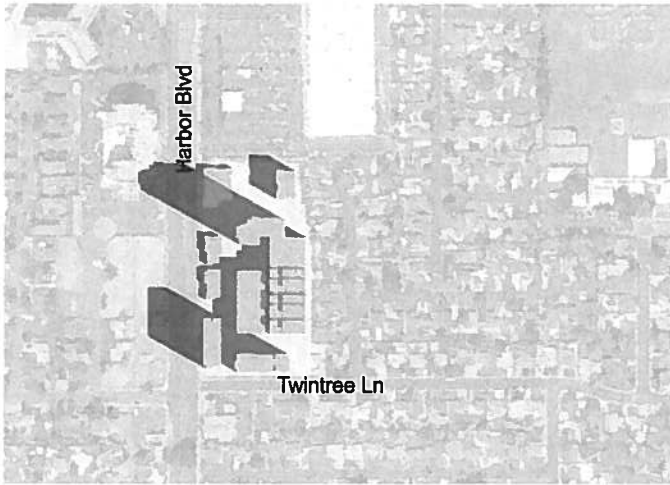


Not to Scale

NORTH

Summer Solstice-June 21st Shadow Simulation

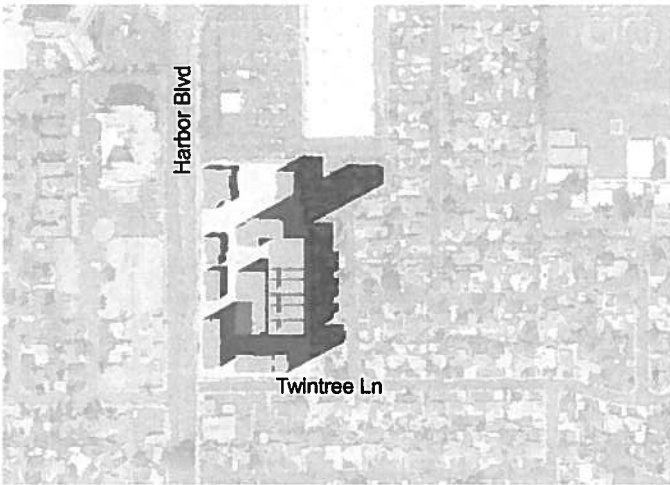
Spring Equinox-March 20th



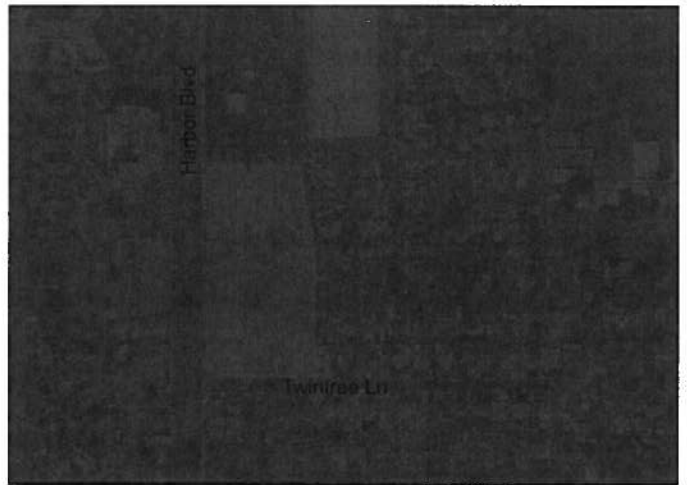
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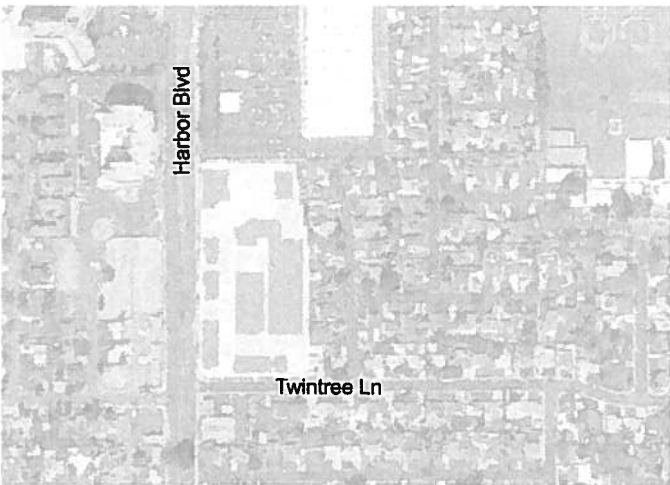
12:00 p.m.



3:00 p.m.



6:00 p.m.



Site Plan

Shade/Shadow Analysis Garden Grove

■ Proposed Building

Source: Google SketchUp Pro 8 2010 and EDAW 2011

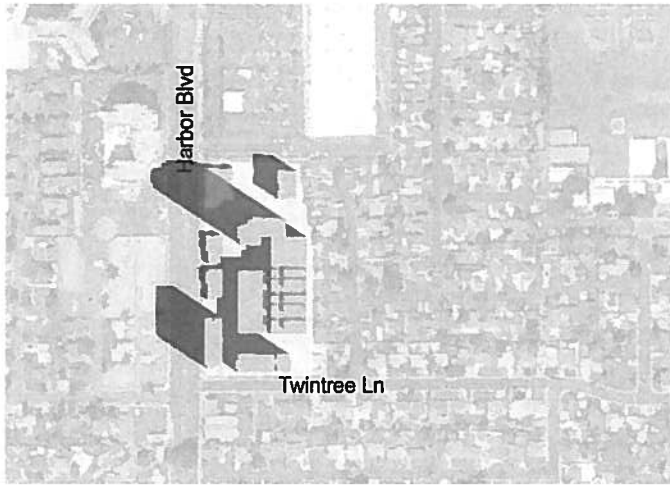


Not to Scale

NORTH

Spring Equinox-March 20th Shadow Simulation

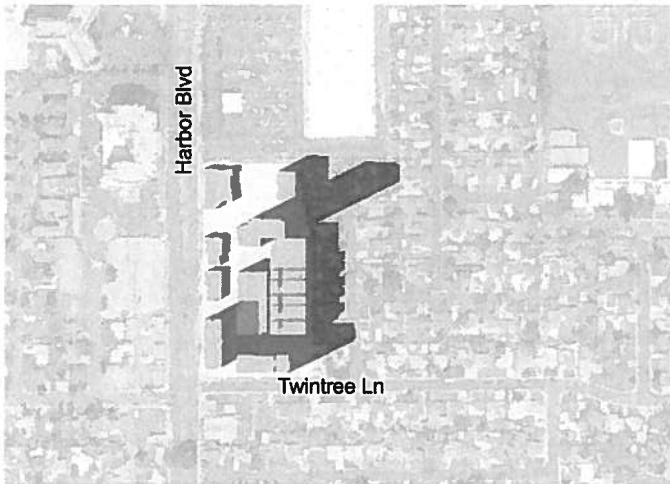
Autumn Equinox-September 23rd



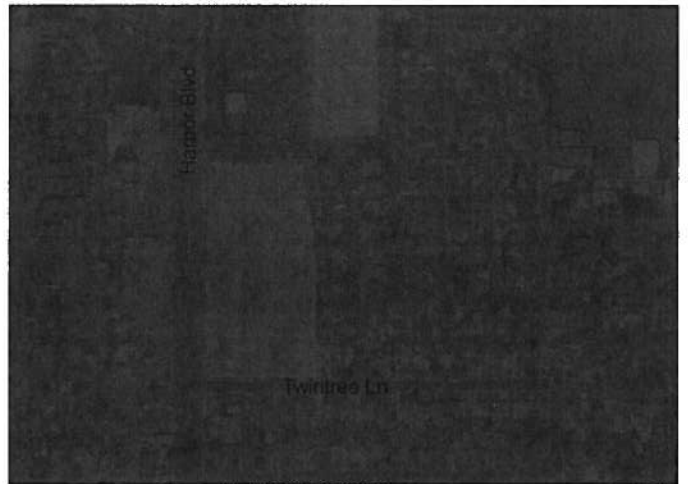
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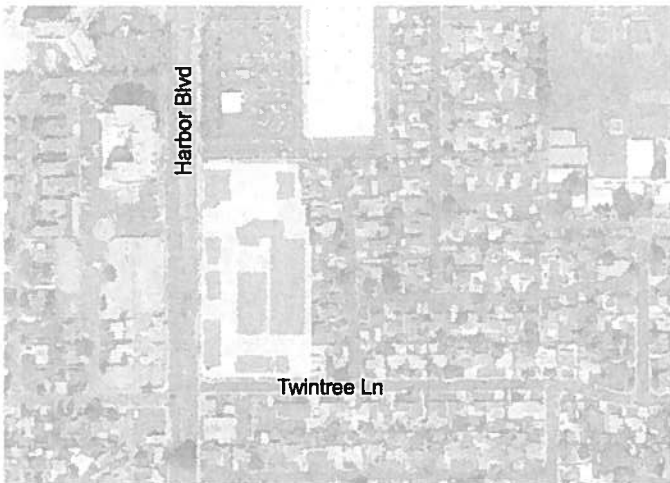
12:00 p.m.



3:00 p.m.



6:00 p.m.



Site Plan

Shade/Shadow Analysis Garden Grove

■ Proposed Building

Source: Google SketchUp Pro 8 2010 and EDAW 2011

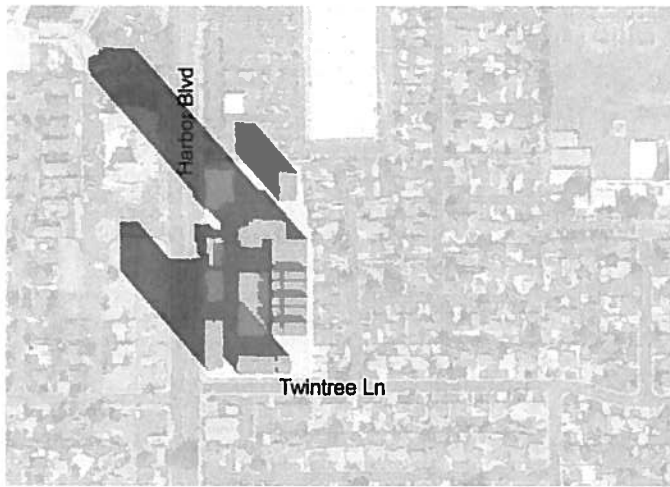


Not to Scale

NORTH

Autumn Equinox-September 23rd Shadow Simulation

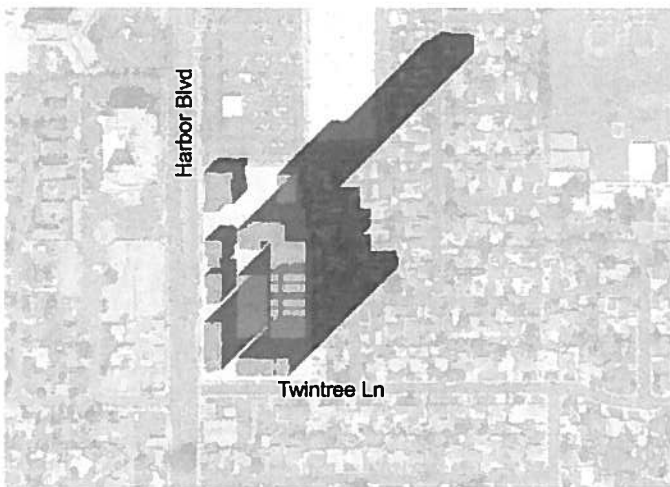
Winter Solstice-December 22nd



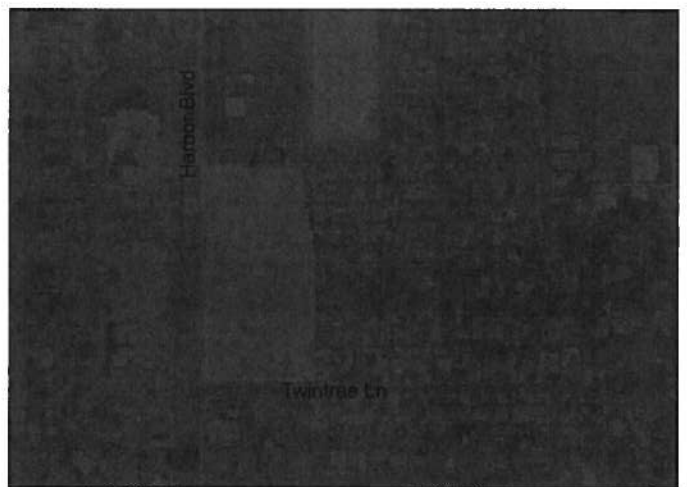
9:00 a.m.



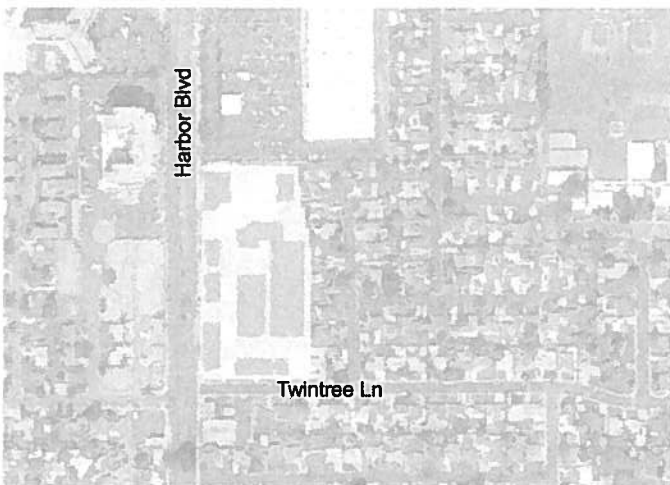
12:00 p.m.



3:00 p.m.



6:00 p.m.



Site Plan

Shade/Shadow Analysis Garden Grove

■ Proposed Building

Source: Google SketchUp Pro 8 2010 and EDAW 2011



Not to Scale

NORTH

Winter Solstice-December 22nd Shadow Simulation

Subject: RE: Garden Grove Preliminary Shadow Diagrams

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>

Date: Wed, 17 Aug 2011 15:35:58 -0700

To: <drose3@charter.net>, Greg Blodgett <Greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, Maria Parra <mariap@ci.garden-grove.ca.us>

CC: Paul Guerrero <paulg@ci.garden-grove.ca.us>, Matthew Reid <matt.reid@landanddesign.com>

I think we need to defer to the City and their attorney on that one.

Jayna Morgan

AECOM

T. 949.660.8044

From: drose3@charter.net [mailto:drose3@charter.net]

Sent: Wednesday, August 17, 2011 3:34 PM

To: Morgan, Jayna; Greg Blodgett; Karl Hill; Maria Parra

Cc: Paul Guerrero; Matthew Reid

Subject: Re: Garden Grove Preliminary Shadow Diagrams

So, what you're saying is there's no impacts. :)

Sent via BlackBerry by AT&T

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>

Date: Wed, 17 Aug 2011 15:11:01 -0700

To: Greg Blodgett<Greg1@ci.garden-grove.ca.us>; Karl Hill<karlh@ci.garden-grove.ca.us>; Maria Parra<mariap@ci.garden-grove.ca.us>

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Hi All,

Please see attached and below for the preliminary shadow results.

Please let me know if you have any questions and how you want to proceed.

Thank You,

Jayna Morgan

AECOM

T. 949.660.8044

From: Daniels, Shannon

Sent: Wednesday, August 17, 2011 11:14 AM

To: Morgan, Jayna; Yang, Wendy; Dubon, Jennifer

Cc: Godkin, Shawn

Subject: Garden Grove Preliminary Shadow Diagrams

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Shannon Daniels
Project Manager
Design + Planning
D 213.593.8407
shannon.daniels@aecom.com

AECOM
515 S Flower Street, 9th Floor, Los Angeles, CA 90071 USA
T 213.593.7700 F 213.593.7715
www.aecom.com

Subject: Re: Garden Grove Preliminary Shadow Diagrams

From: drose3@charter.net

Date: Wed, 17 Aug 2011 22:34:02 +0000

To: "Morgan, Jayna" <Jayna.Morgan@aecom.com>, "Greg Blodgett" <Greg1@ci.garden-grove.ca.us>, "Karl Hill" <karlh@ci.garden-grove.ca.us>, "Maria Parra" <mariap@ci.garden-grove.ca.us>

CC: "Paul Guerrero" <paulg@ci.garden-grove.ca.us>, "Matthew Reid" <matt.reid@landanddesign.com>

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Cc: Godkin, Shawn

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T 213.593.7700 F 213.593.7715
www.aecom.com

Re:

Subject: Re:

From: Matthew Reid <matt.reid@landanddesign.com>

Date: Tue, 06 Sep 2011 09:39:48 -0700

To: Greg Blodgett <greg1@ci.garden-grove.ca.us>

I'm going to be in San Jose most of this week (investor capital partner meetings). I'll check with our atty to see where his comments are.

Matthew Reid
Land & Design, Inc.
8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942
619.335.5896 Google voice | 619.462.4144 fax
Skype matthew.reid.ca
matt.reid@landanddesign.com

On 9/3/11 9:52 AM, "Greg Blodgett" <greg1@ci.garden-grove.ca.us> wrote:

We will Be meeting Sunbelt at ICSc San Diego this Thursday and Friday did you have chance to review the proposed lease . Do you want to meet us or Sunbelt?

Greg Blodgett
SR Project Manager
City of Garden Grove
Economic Development

Subject: FW: Revised Diagrams

From: "Morgan, Jayna" <Jayna.Morgan@aecom.com>

Date: Wed, 7 Sep 2011 11:32:11 -0700

To: Maria Parra <mariap@ci.garden-grove.ca.us>, Greg Blodgett <greg1@ci.garden-grove.ca.us>, Karl Hill <karlh@ci.garden-grove.ca.us>, Paul Guerrero <paulg@ci.garden-grove.ca.us>

CC: "Chang, Jane" <Jane.Chang@aecom.com>, "Dubon, Jennifer" <Jennifer.Dubon@aecom.com>, "Yang, Wendy" <Wendy.Yang@aecom.com>, <drose3@charter.net>, Matthew Reid <matt.reid@landanddesign.com>

Hi All,

Please find attached the revised shade/shadow study for the project. Per your direction, the explanation of why the diagram is so dark has been added where appropriate.

We have also added context building massing, drew all parcel lines, provided further study times of day per comments, and conducted additional shade/shadow studies for the existing condition.

With respect to the FAR, I looked back at my notes from the conference call we had on July 29th. The following is from my notes:

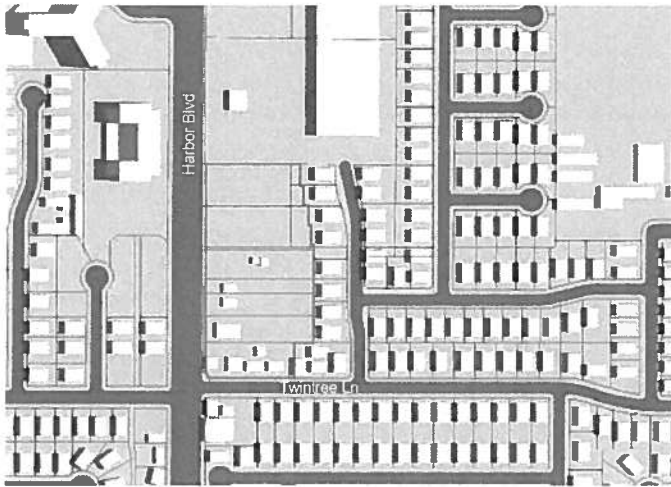
1. Don Smith of our office did a rough calculation of the FAR and concluded it was closer to 3.0 or 3.5 depending on how the parking structures were calculated.
2. We discussed that because the City's updated General Plan included the site within the International West Mixed Use (IW)- Focus Area A which allows up to 4,615,00 square feet of Commercial over the 401.46 acre area, that the site specific FARs may exceed 2.0 as long as the total 401 acre development FAR does not exceed the 2.0.
3. We discussed that this GP concept of FAR calculation is also supported by the PUD zoning. I believe this is how the Water park project was handled, but cannot recall if we discussed that during our call.

Please let me know if you have additional questions or comments.

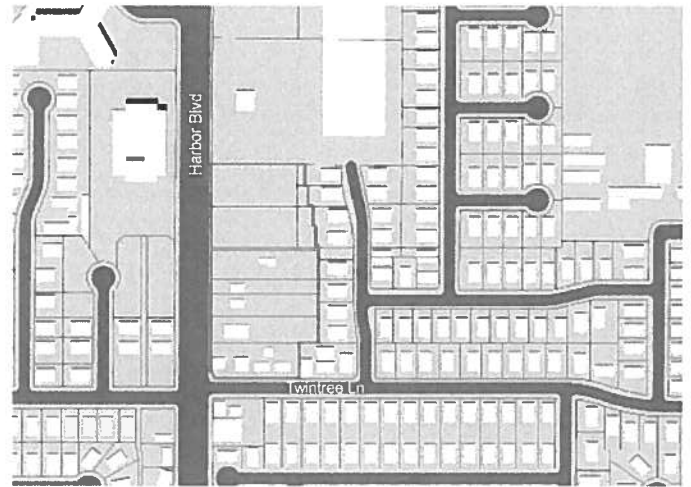
Thank you,
Jayna Morgan
AECOM
T. 949.660.8044

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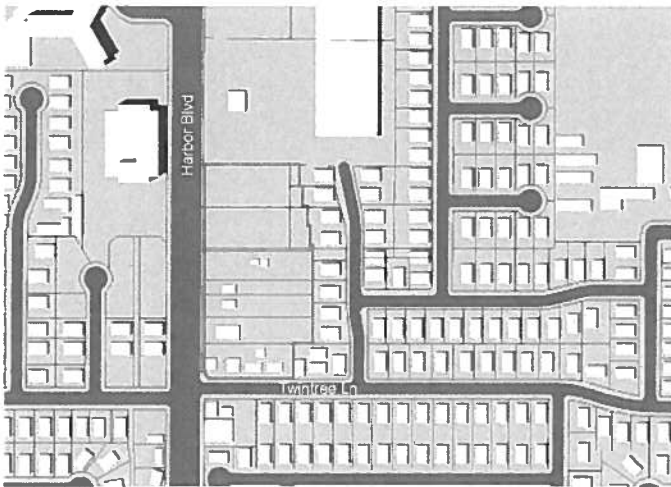
Summer Solstice-June 21st



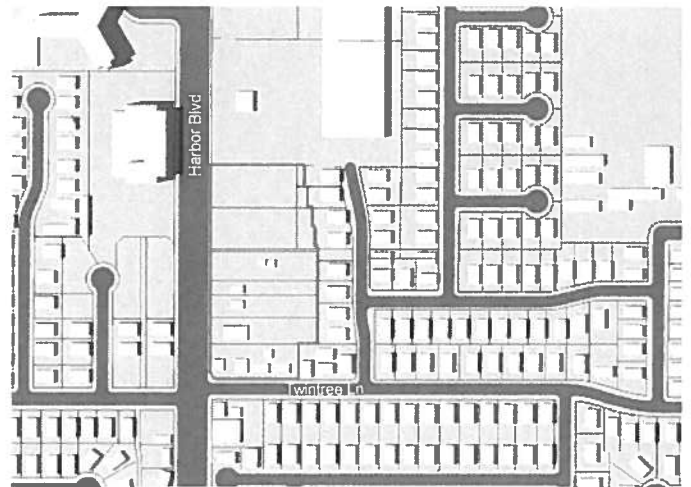
9:00 a.m.



12:00 p.m.



1:00 p.m.



2:00 p.m.



Site Plan

Shade/Shadow Analysis Garden Grove

□ Proposed Project Area

Source: Google SketchUp Pro 8 2010 and AECOM 2011

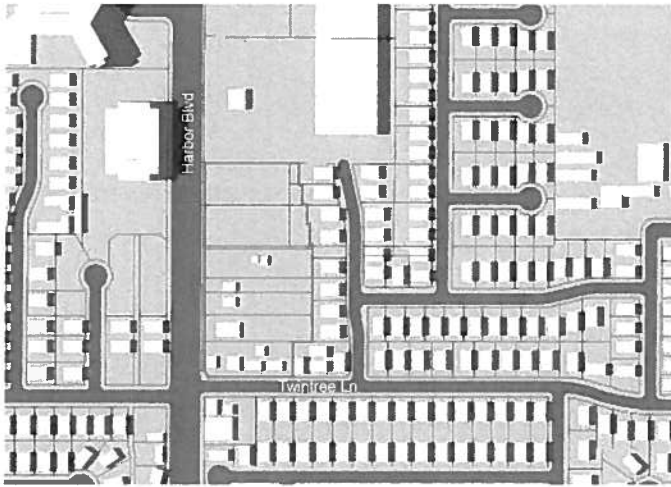


NORTH

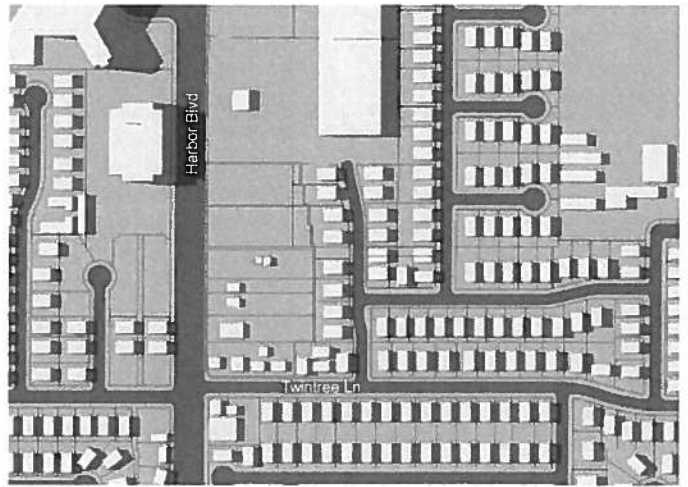
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Existing Condition-Summer Solstice-June 21st Shadow Simulation

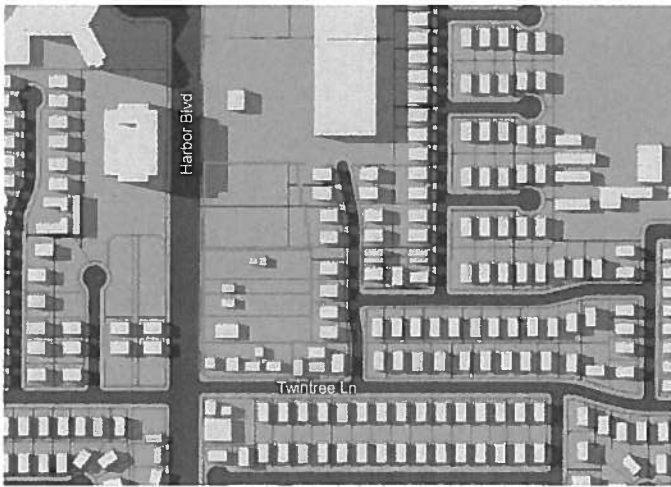
Summer Solstice-June 21st



3:00 p.m.



4:00 p.m.



5:00 p.m.



6:00 p.m.



Site Plan

Shade/Shadow Analysis

Garden Grove

□ Proposed Project Area

Source: Google SketchUp Pro 8 2010 and AECOM 2011

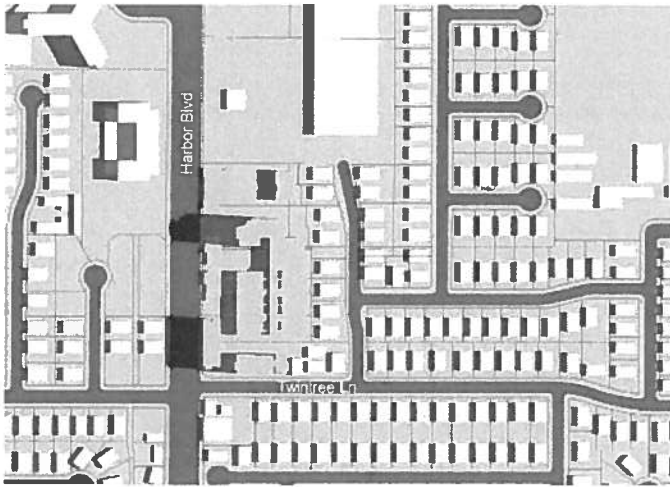


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NORTH

Existing Condition-Summer Solstice-June 21st Shadow Simulation

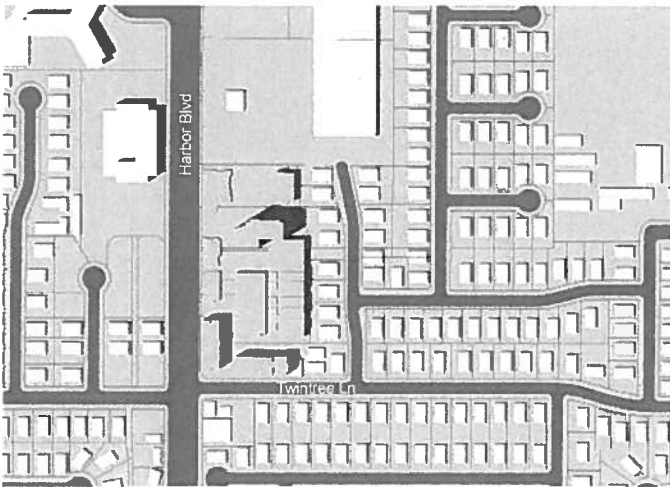
Summer Solstice-June 21st



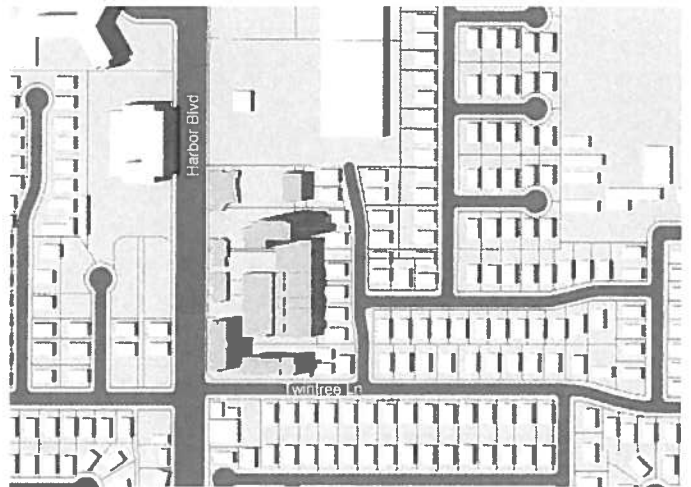
9:00 a.m.



12:00 p.m.



1:00 p.m.



2:00 p.m.



Site Plan

Shade/Shadow Analysis

Garden Grove

■ Proposed Building

Source: Google SketchUp Pro 8 2010 and AECOM 2011

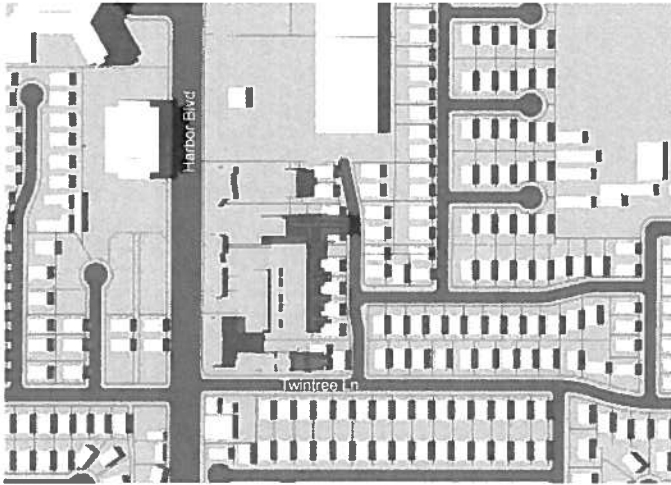


Not to Scale

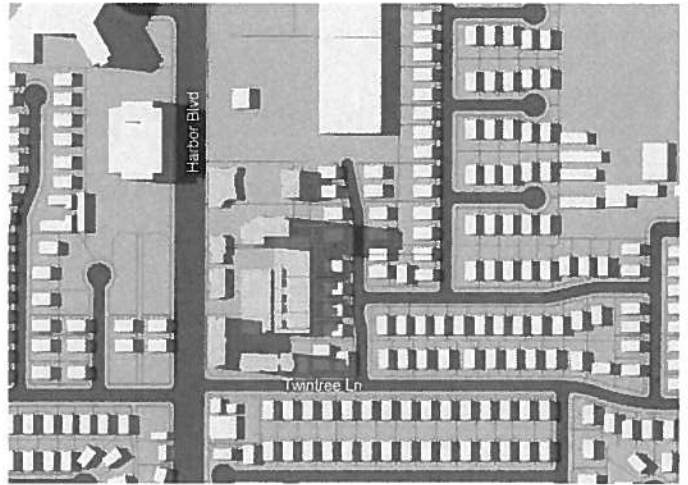
NORTH

Summer Solstice-June 21st Shadow Simulation

Summer Solstice-June 21st



3:00 p.m.



4:00 p.m.



5:00 p.m.



6:00 p.m.



Site Plan

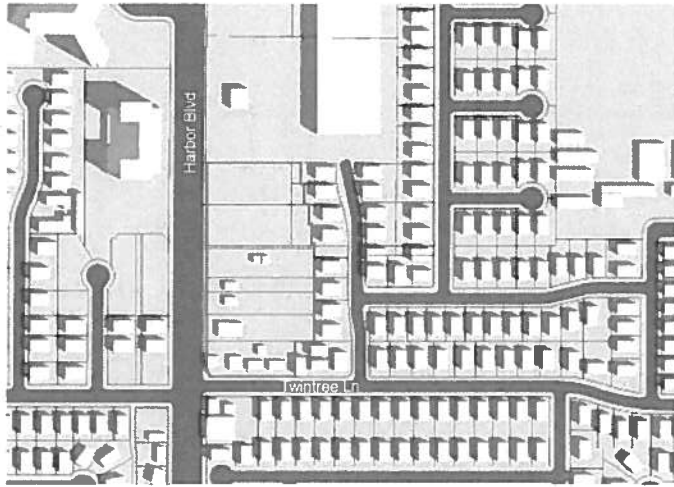
Shade/Shadow Analysis
Garden Grove
■ Proposed Building

Source: Google SketchUp Pro 8 2010 and AECOM 2011

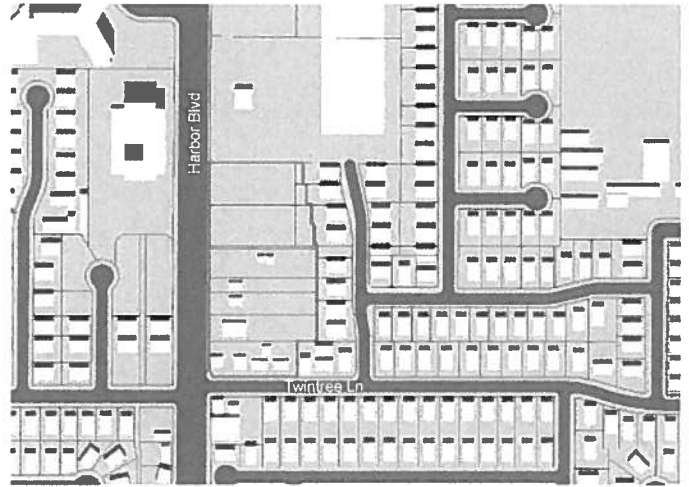


Summer Solstice-June 21st Shadow Simulation

Spring Equinox-March 20th



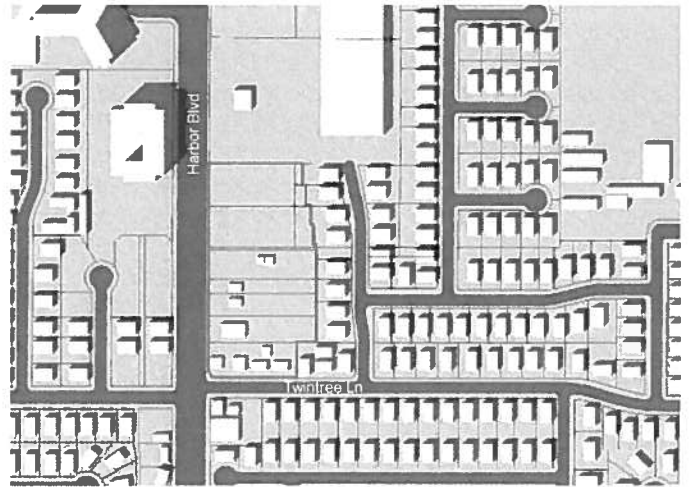
9:00 a.m.



12:00 p.m.



1:00 p.m.



2:00 p.m.



Site Plan

Shade/Shadow Analysis Garden Grove

□ Proposed Project Area

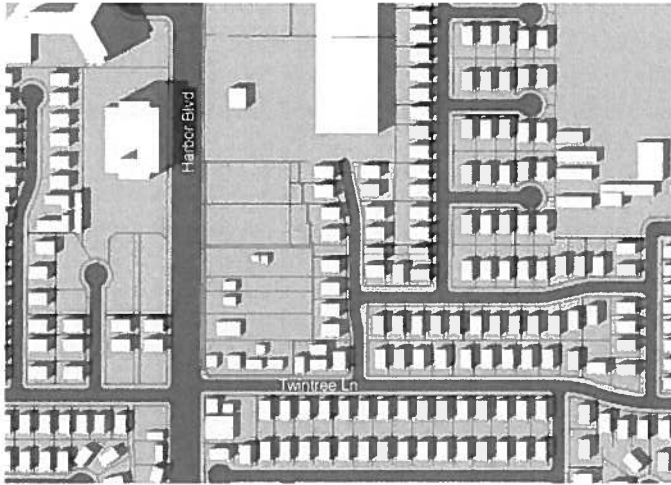
Source: Google SketchUp Pro 8 2010 and AECOM 2011



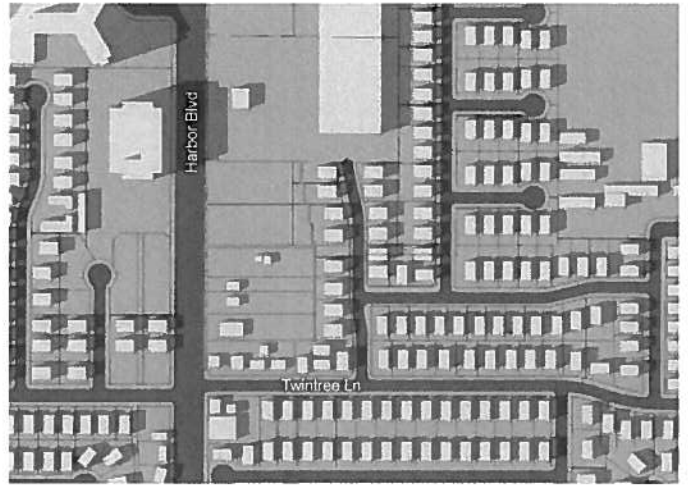
Not to Scale

Existing Condition-Spring Equinox-March 20th Shadow Simulation

Spring Equinox-March 20th



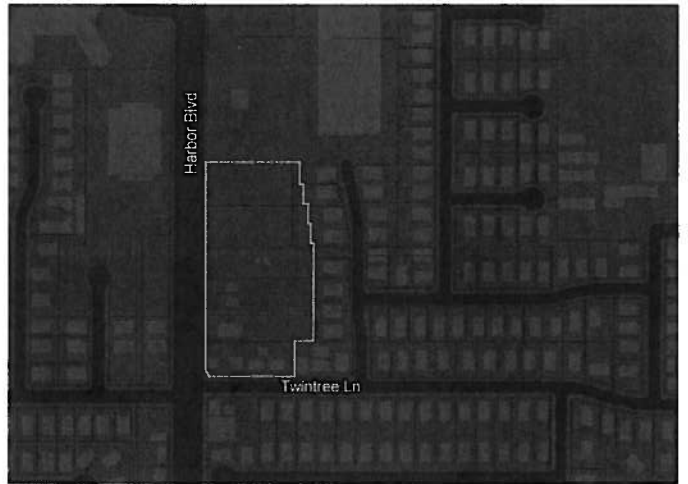
3:00 p.m.



4:00 p.m.



5:00 p.m.



6:00 p.m. *



Site Plan

Shade/Shadow Analysis Garden Grove

□ Proposed Project Area

Source: Google SketchUp Pro 8 2010 and AECOM 2011

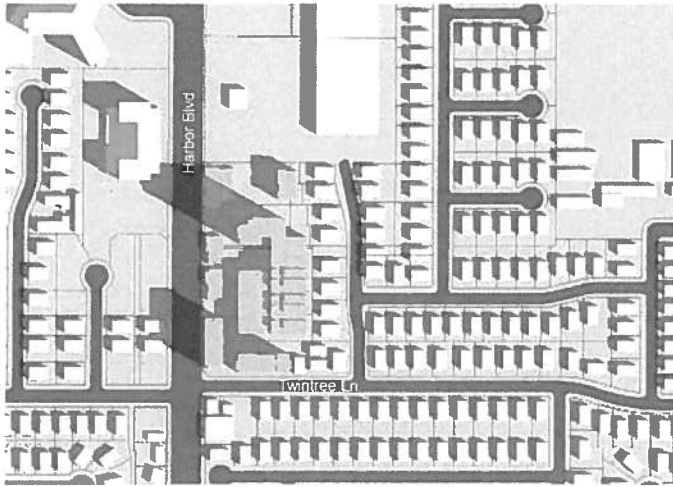
* Sunset is defined as the time when the last part of the Sun is about to disappear below the horizon. As such, the sun is getting relatively close to the horizon even at 6:00pm. This results in very diluted, indistinguishable widespread shadows, and the appearance that everything is being shaded, although it is not yet technically dark or nighttime. The SketchUp model we use for these diagrams takes this into account. This is why the diagrams do not show distinct shadows at 6:00pm.



Not to Scale

Existing Condition-Spring Equinox-March 20th Shadow Simulation

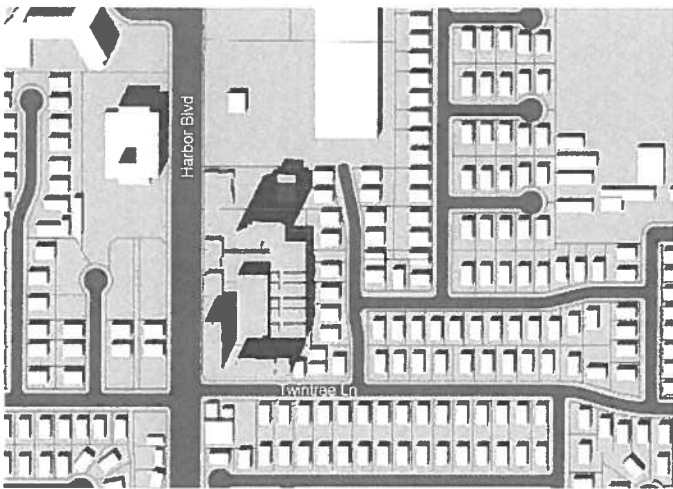
Spring Equinox-March 20th



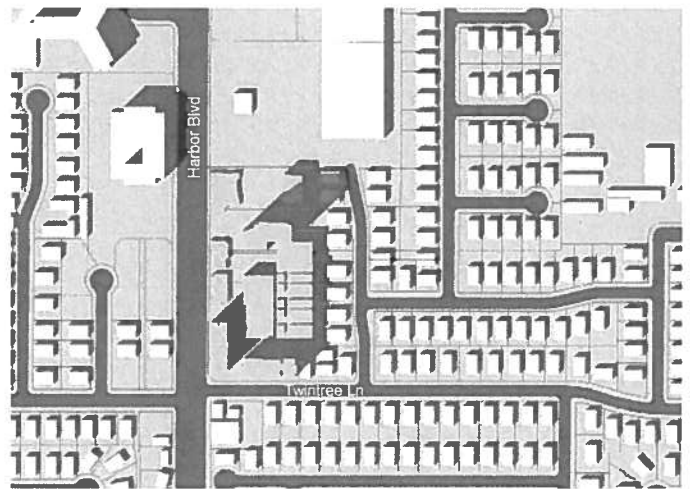
9:00 a.m.



12:00 p.m.



1:00 p.m.



2:00 p.m.



Site Plan

Shade/Shadow Analysis

Garden Grove

■ Proposed Building

Source: Google SketchUp Pro 8 2010 and AECOM 2011



Not to Scale

NORTH

Spring Equinox-March 20th Shadow Simulation

Spring Equinox-March 20th



3:00 p.m.



4:00 p.m.



5:00 p.m.



6:00 p.m. *



Site Plan

Shade/Shadow Analysis

Garden Grove

■ Proposed Building

Source: Google SketchUp Pro 8 2010 and AECOM 2011

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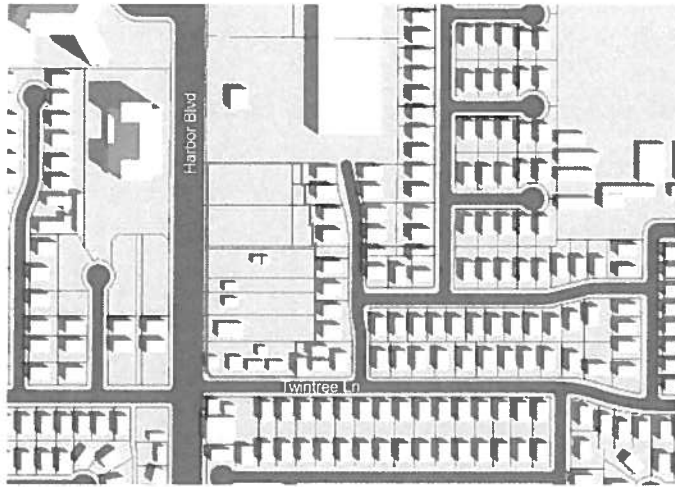


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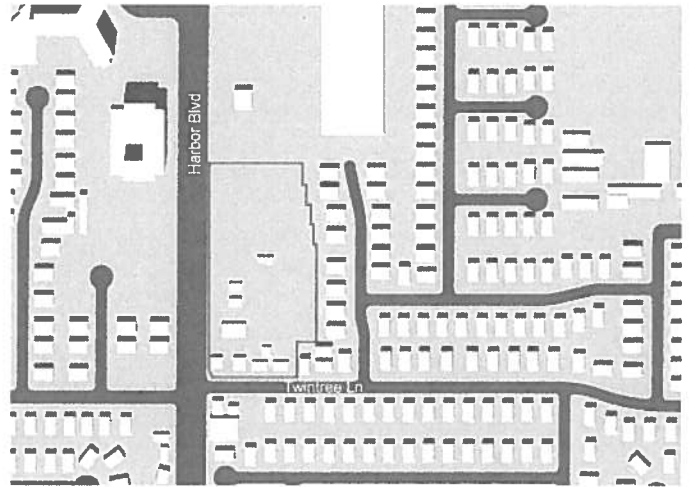
NORTH

Spring Equinox-March 20th Shadow Simulation

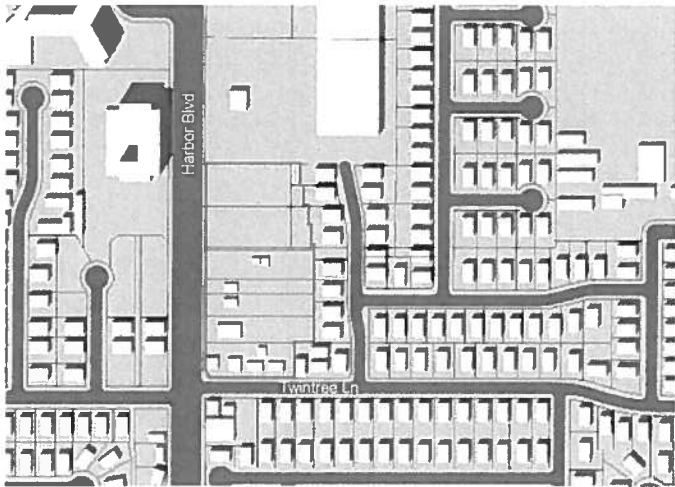
Autumn Equinox-September 23rd



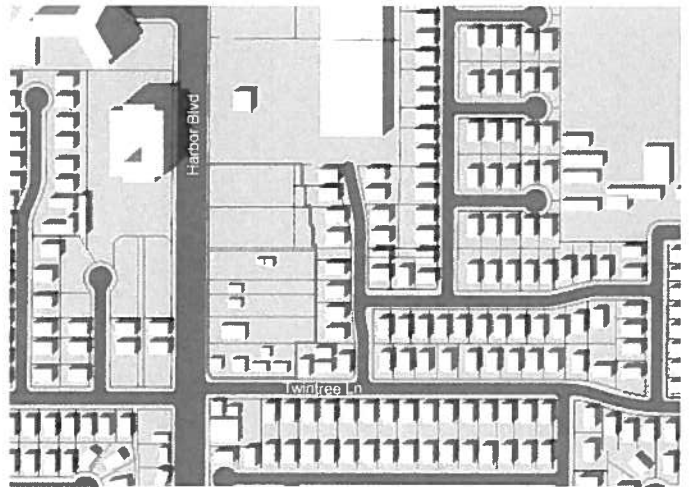
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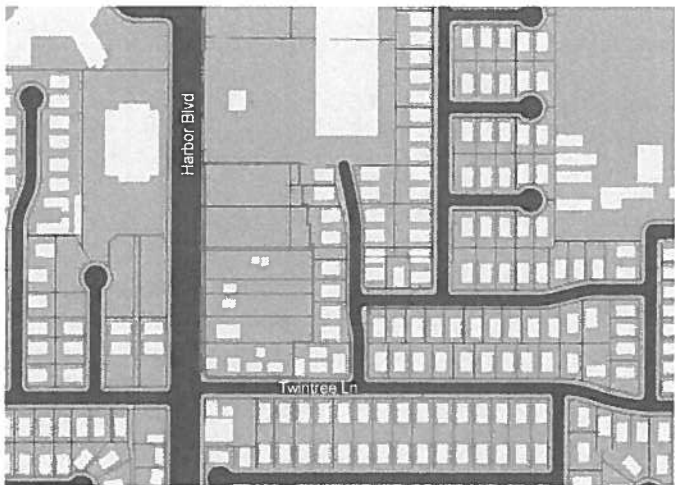
12:00 p.m.



1:00 p.m.



2:00 p.m.



Site Plan

Shade/Shadow Analysis Garden Grove

□ Proposed Project Area

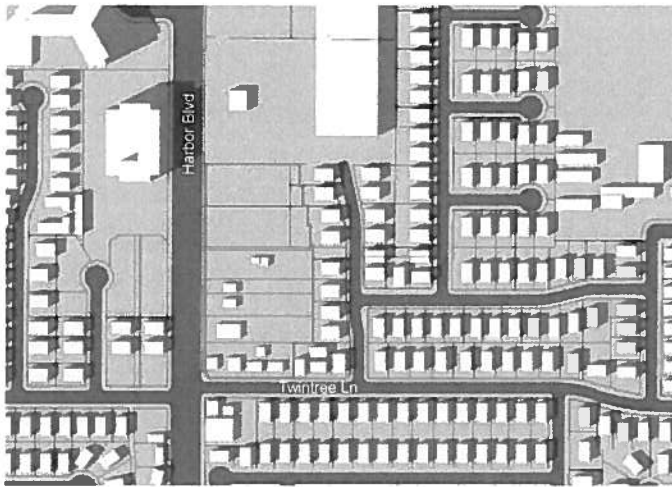
Source: Google SketchUp Pro 8 2010 and AECOM 2011



Not to Scale

Existing Condition-Autumn Equinox-September 23rd Shadow Simulation

Autumn Equinox-September 23rd



3:00 p.m.



4:00 p.m.



5:00 p.m.



6:00 p.m. *



Site Plan

Shade/Shadow Analysis Garden Grove

□ Proposed Project Area

Source: Google SketchUp Pro 8 2010 and AECOM 2011

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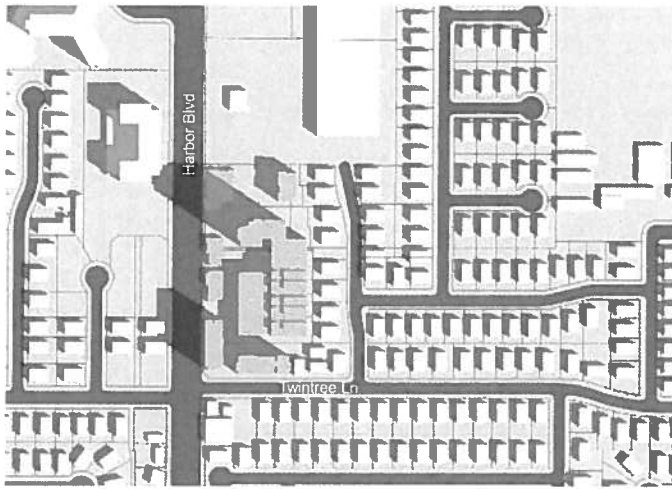


Not to Scale

NORTH

Existing Condition-Autumn Equinox-September 23rd Shadow Simulation

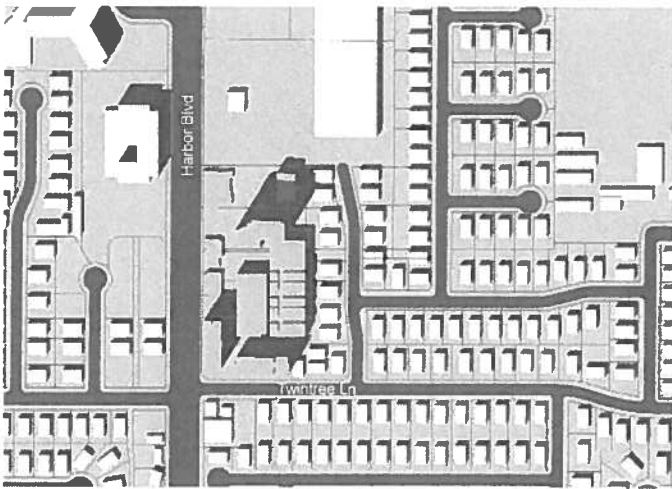
Autumn Equinox-September 23rd



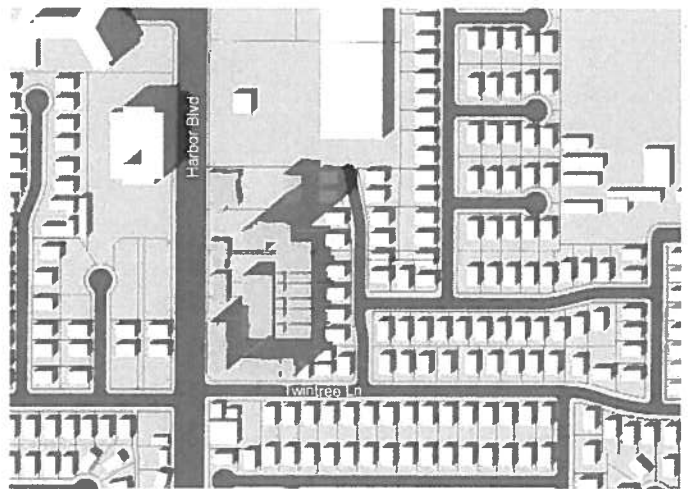
9:00 a.m.



12:00 p.m.



1:00 p.m.



2:00 p.m.



Site Plan

Shade/Shadow Analysis

Garden Grove

■ Proposed Building

Source: Google SketchUp Pro 8 2010 and AECOM 2011

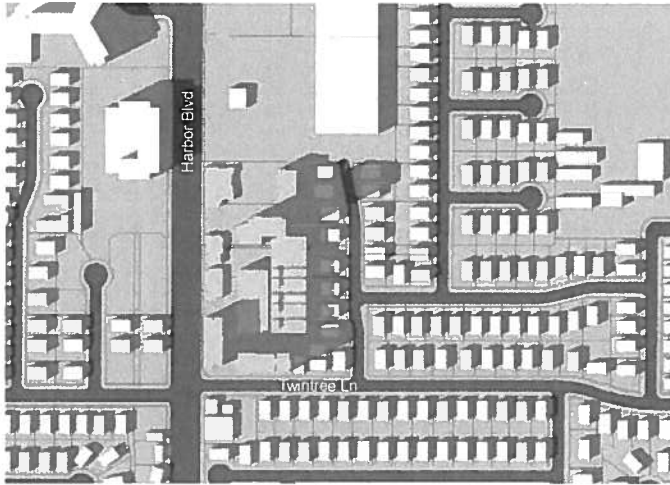


Not to Scale

NORTH

Autumn Equinox-September 23rd Shadow Simulation

Autumn Equinox-September 23rd



3:00 p.m.



4:00 p.m.



5:00 p.m.



6:00 p.m. *



Site Plan

Shade/Shadow Analysis Garden Grove

■ Proposed Building

Source: Google SketchUp Pro 8 2010 and AECOM 2011

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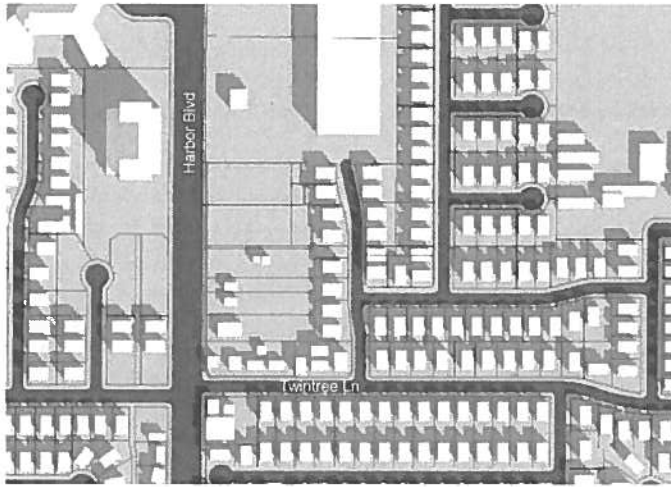


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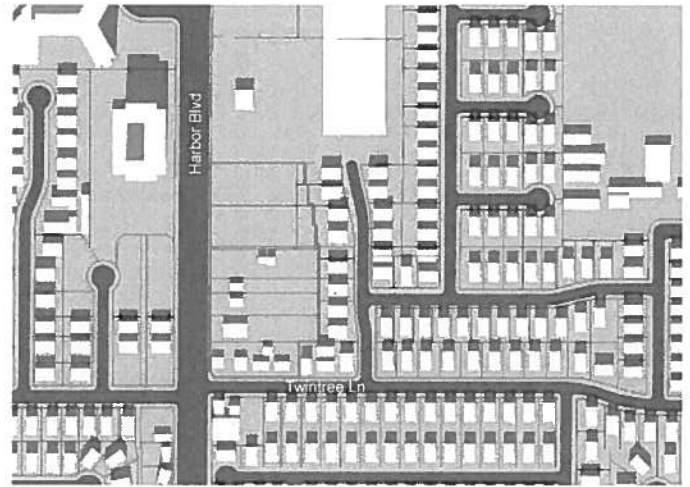
NORTH

Autumn Equinox-September 23rd Shadow Simulation

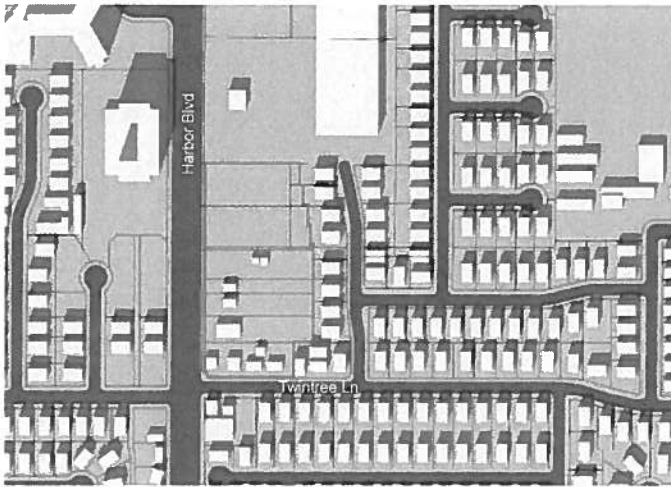
Winter Solstice-December 22nd



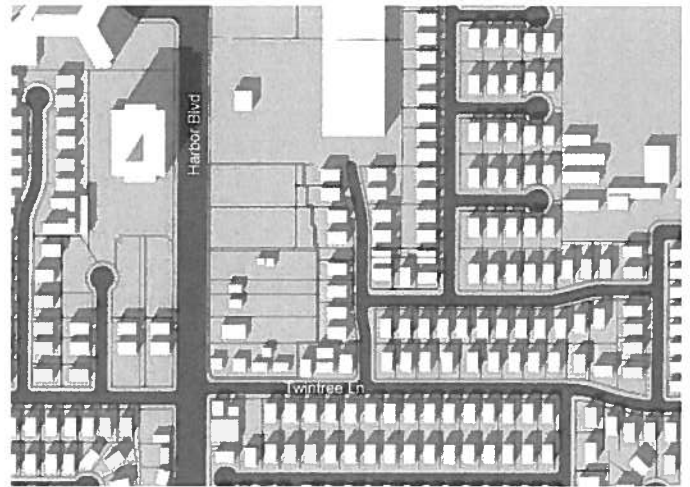
9:00 a.m.



12:00 p.m.



1:00 p.m.



2:00 p.m.



Site Plan

Shade/Shadow Analysis

Garden Grove

□ Proposed Project Area

Source: Google SketchUp Pro 8 2010 and AECOM 2011



Not to Scale

Existing Condition-Winter Solstice-December 22nd Shadow Simulation

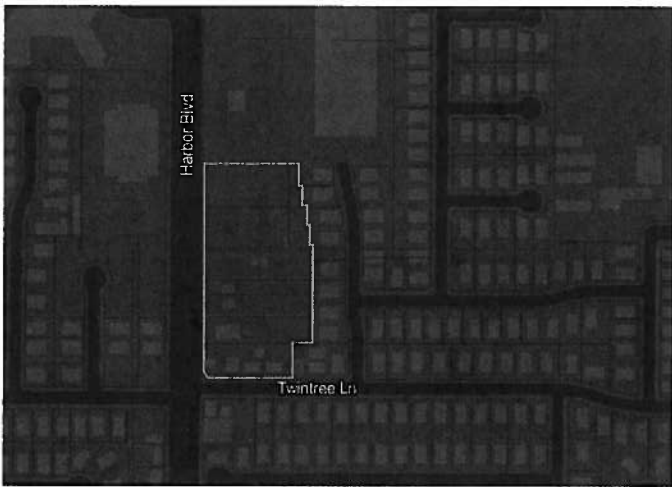
Winter Solstice-December 22nd



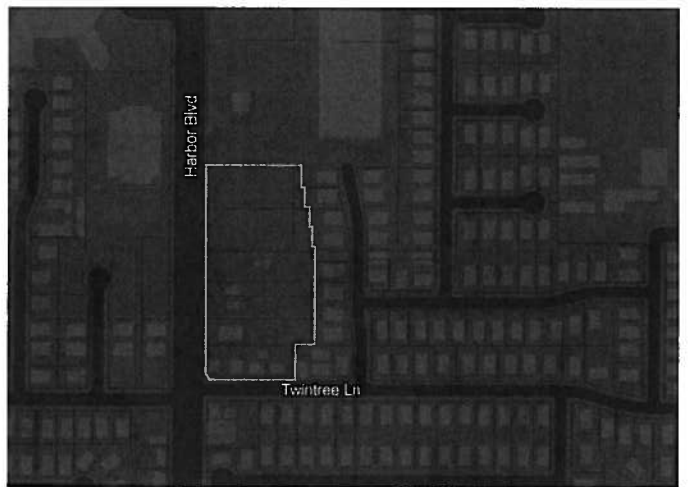
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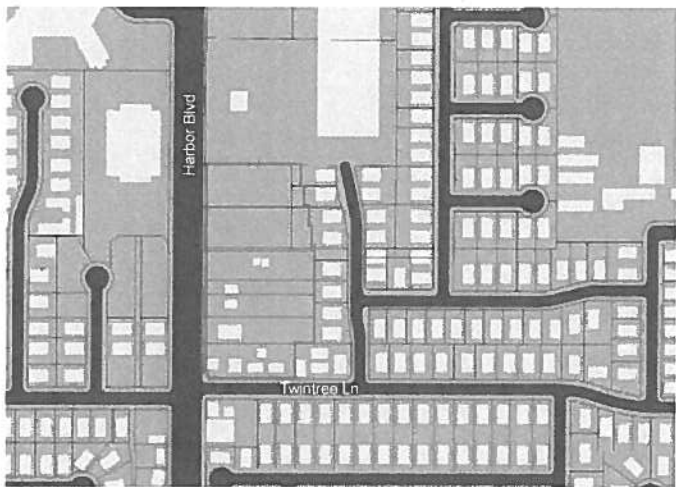
4:00 p.m.



5:00 p.m. *



6:00 p.m. *



Site Plan

Shade/Shadow Analysis Garden Grove

□ Proposed Project Area

Source: Google SketchUp Pro 8 2010 and AECOM 2011

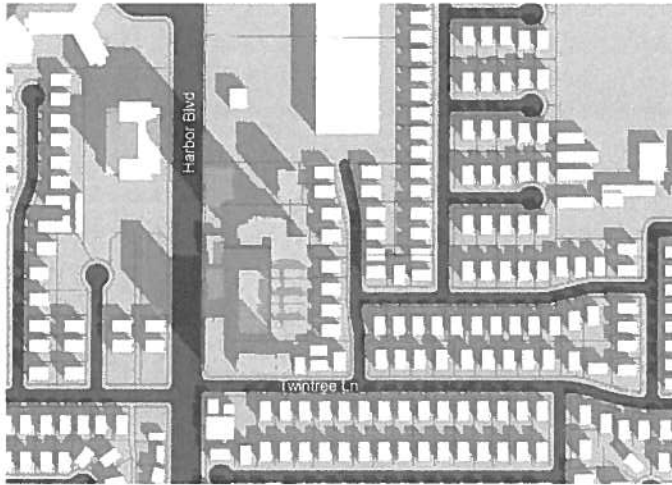
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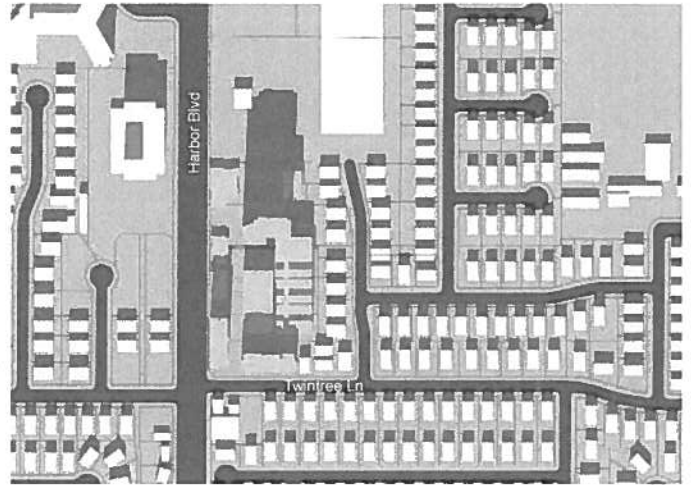
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Existing Condition-Winter Solstice-December 22nd Shadow Simulation

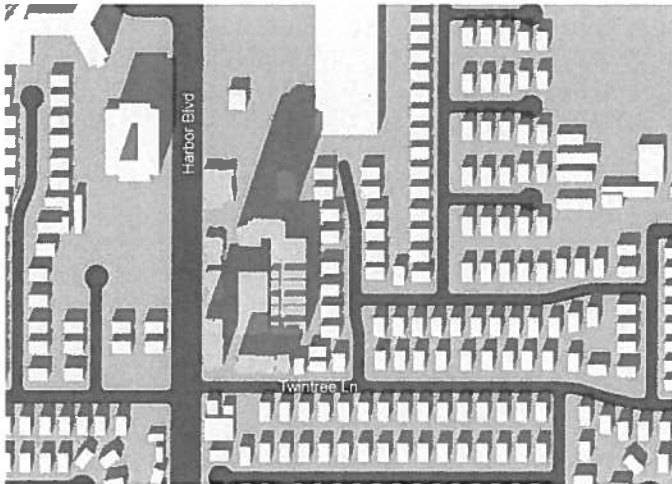
Winter Solstice-December 22nd



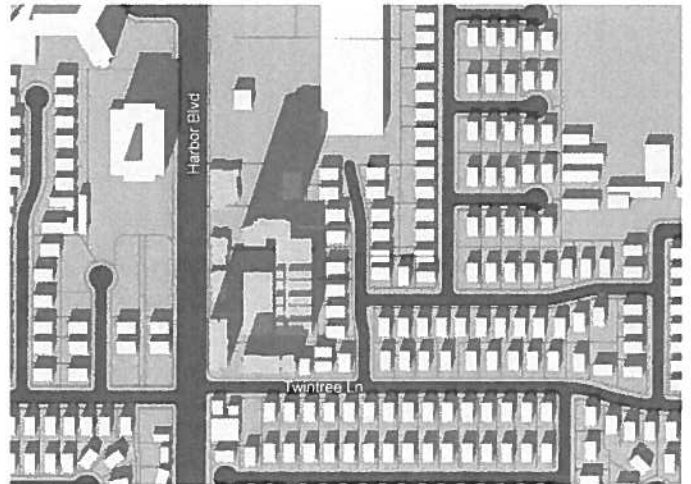
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12:00 p.m.



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2:00 p.m.



Site Plan

Shade/Shadow Analysis

Garden Grove

■ Proposed Building

Source: Google SketchUp Pro 8 2010 and AECOM 2011

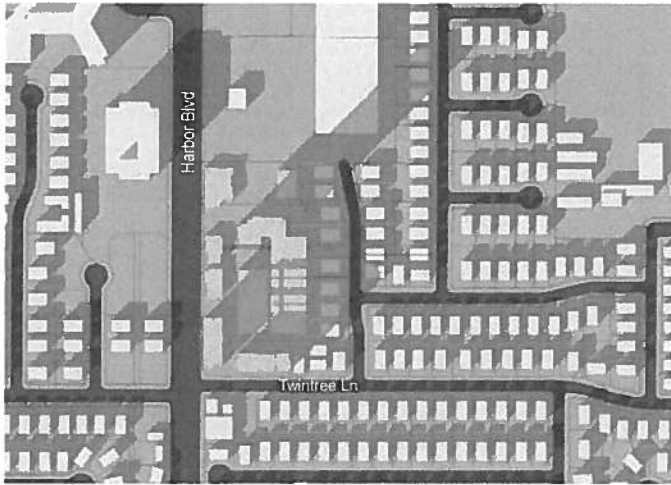


Not to Scale

NORTH

Winter Solstice-December 22nd Shadow Simulation

Winter Solstice-December 22nd



3:00 p.m.



4:00 p.m.



5:00 p.m. *



6:00 p.m. *

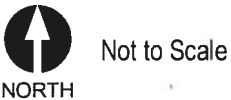


Site Plan

Shade/Shadow Analysis
Garden Grove
Proposed Building

Source: Google SketchUp Pro 8 2010 and AECOM 2011

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on phone call

Subject: on phone call

From: Matthew Reid <matt.reid@landanddesign.com>

Date: Thu, 06 Oct 2011 14:32:10 -0700

To: Greg Blodgett <greg1@zimbra.ci.garden-grove.ca.us>

Will call you after my phone call.

Monday

Subject: Monday

From: Matthew Reid <matt.reid@landanddesign.com>

Date: Sat, 29 Oct 2011 09:25:55 -0700

To: Greg Blodgett <Greg1@ci.garden-grove.ca.us>

You have time for update Monday?

Matthew Reid

Land & Design, Inc.

8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942

619.335.5896 Google voice | 619.462.4144 fax

Skype – matthew.reid.ca

matt.reid@landanddesign.com

Re: Monday

Subject: Re: Monday

From: "Matthew Reid (Land & Design)" <matt.reid@landanddesign.com>

Date: Thu, 3 Nov 2011 00:43:04 -0700

To: Greg Blodgett <greg1@ci.garden-grove.ca.us>

How about Thursday around 3pm? I'll call you.

Sent from my iPad

Matthew W Reid

619.335.5896 Google voice | 619.462.4144 f

Skype - matthew.reid.ca

On Oct 29, 2011, at 10:01 AM, Greg Blodgett <greg1@ci.garden-grove.ca.us> wrote:

sure what time.

Greg Blodgett

SR Project Manager

City of Garden Grove

Economic Development

----- Original Message -----

From: "Matthew Reid" <matt.reid@landanddesign.com>

To: "Greg Blodgett" <Greg1@ci.garden-grove.ca.us>

Sent: Saturday, October 29, 2011 9:25:55 AM

Subject: Monday

You have time for update Monday?

Matthew Reid

Land & Design, Inc.

8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942

619.335.5896 G o o g l e voice | 619.462.4144 fax

Skype - matthew.reid.ca

matt.reid@landanddesign.com

Re: Monday

Subject: Re: Monday
From: Matthew Reid <matt.reid@landanddesign.com>
Date: Thu, 03 Nov 2011 08:53:05 -0700
To: Greg Blodgett <greg1@ci.garden-grove.ca.us>

I'm at Edwards Air Force Base tomorrow and won't be able to use my phone until about 2. Can we do it then?

Matthew Reid
Land & Design, Inc.
8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942
619.335.5896 Google voice | 619.462.4144 fax
Skype matthew.reid.ca
matt.reid@landanddesign.com

On 11/3/11 8:38 AM, "Greg Blodgett" <greg1@ci.garden-grove.ca.us> wrote:

tomorrow at 9 is good

Greg Blodgett
SR Project Manager
City of Garden Grove
Economic Development

----- Original Message -----

From: "Matthew Reid (Land & Design)" <matt.reid@landanddesign.com>
To: "Greg Blodgett" <greg1@ci.garden-grove.ca.us>
Sent: Thursday, November 3, 2011 12:43:04 AM
Subject: Re: Monday

How about Thursday around 3pm? I'll call you.

Sent from my iPad

Matthew W Reid
619.335.5896 Google voice | 619.462.4144 f
Skype - matthew.reid.ca

On Oct 29, 2011, at 10:01 AM, Greg Blodgett <greg1@ci.garden-grove.ca.us> wrote:

sure what time.
Greg Blodgett
SR Project Manager
City of Garden Grove
Economic Development

----- Original Message -----

From: "Matthew Reid" <matt.reid@landanddesign.com>
To: "Greg Blodgett" <Greg1@ci.garden-grove.ca.us>
Sent: Saturday, October 29, 2011 9:25:55 AM
Subject: Monday

You have time for update Monday?

Matthew Reid
Land & Design, Inc.
8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942
619.335.5896 G o o g l e voice | 619.462.4144 fax
Skype matthew.reid.ca
matt.reid@landanddesign.com

Subject: 33433 studies
From: Matthew Reid <matt.reid@landanddesign.com>
Date: Thu, 17 Nov 2011 18:29:19 -0800
To: Greg Blodgett <greg1@ci.garden-grove.ca.us>

Would you send me these for our project?

Sent from my iPhone

Matthew Reid
619.335.5896 Google voice
Skype: matthew.reid.ca

Subject: 33433 Report
From: Paul Guerrero <paulg@ci.garden-grove.ca.us>
Date: Fri, 18 Nov 2011 08:14:41 -0800 (PST)
To: matt.reid@landanddesign.com

Matt,
Attached is the 33433 report.
Paul

33433 Land & Design, Inc.; June 14, 2011.pdf	Content-Type: application/pdf Content-Encoding: base64
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**GARDEN GROVE REDEVELOPMENT PROJECT
GARDEN GROVE, CALIFORNIA**

**SUMMARY REPORT PERTAINING TO THE DISPOSITION
OF CERTAIN PROPERTY WITHIN THE
GARDEN GROVE COMMUNITY
PROJECT AREA**

**California Community Redevelopment Law
Section 33433**

**PURSUANT TO PROPOSED DISPOSITION AND DEVELOPMENT
AGREEMENT BETWEEN
GARDEN GROVE AGENCY FOR COMMUNITY DEVELOPMENT
AND
LAND & DESIGN, INC.**

**Garden Grove Agency for Community Development
Garden Grove, California**

June 14, 2011

TABLE OF CONTENTS

Section	Page
A. Introduction	3
I. Salient Points of the Agreement	4
II. Cost of the Agreement to the Agency	5
III. Estimated Value of the Interest to be Conveyed Determined at the Highest and Best Use Permitted under the Redevelopment Plan	6
IV. Estimated Reuse Value of the Interests to be Conveyed	6
V. Consideration Received and Comparison with the Established Value	6
VI. Blight Elimination	7
VII. Conformation with the AB1290 Implementation Plan	7

A. INTRODUCTION

The following Summary Report ("Summary Report") has been prepared pursuant to Section 33433 of the California Health and Safety Code. This report sets forth certain details of the proposed Disposition and Development Agreement ("Agreement") between Garden Grove Agency for Community Development ("Agency") and Land & Design, Inc. ("Developer").

In accordance with Section 33433 of the California Health and Safety Code, before any property acquired by a Redevelopment Agency in whole or part, directly or indirectly with tax increment moneys is conveyed to the Developer, the City Council and Redevelopment Agency Board must approve such transaction by resolution after a joint public hearing. The notice of the time and place of the public hearing shall be published in a newspaper of general circulation in the community at least once per week for at least two successive weeks prior to the hearing.

A Summary Report has been prepared in accordance with the requirements of Section 33433. The Agency shall make available for public inspection and copying at a cost not to exceed the cost of duplication the Summary Report no later than the time of publication of the first notice of hearing. In addition to providing a general description of the project, this Summary Report describes the following:

- I. Salient Points of the Agreement:** This section summarizes the major responsibilities imposed on the Developer and the Agency by the Agreement.
- II. Cost of the Agreement to the Agency:** This section details the total cost to the Agency associated with implementing the Agreement.
- III. Estimated Value of the Interests to be Conveyed Determined at the Highest Use Permitted under the Redevelopment Plan:** This section estimates the value of the interests to be conveyed determined at the highest use permitted for the Site and the requirements imposed by the Redevelopment Plan.
- IV. Estimated Reuse Value of the Interests to be Conveyed:** This section summarizes the valuation estimate for the Site based on the required scope of development and other conditions and covenants required by the Agreement.
- V. Consideration Received and Comparison with the Established Value:** This section describes the compensation to be received by the Agency and explains any difference between the compensation to be received and the estimated value based on the highest and best use of the Site.
- VI. Blight Elimination:** This section describes the existing blighting conditions on the Site, and explains how the Agreement will assist in alleviating the blighting influence.

VII. Conformation with the AB1290; Five-Year Implementation Plan:
This section describes how the Agreement achieves the goals identified in the Agency's adopted AB 1290, Five-Year Implementation Plan.

I. SALIENT POINTS OF THE AGREEMENT

A. Project Description

The property which is the subject of this Agreement is approximately five acres (5) acres located within the boundaries of the Project Area located at the northeast quadrant of Twintree Lane and Harbor Boulevard and is comprised of certain property owned by the Agency ("Agency Property") and property currently owned by third parties ("Third Party Property").

The Agreement provides for the Agency to transfer the Site to the Developer for the proposed development that includes a hotel with approximately nineteen (19) stories and between three hundred (300) and four hundred rooms (400), including not less than ten thousand (10,000) square feet of meeting space (collectively, the "Upper Upscale Hotel"), as well as a minimum of ten thousand (10,000) and a maximum of sixty-five thousand (65,000) square feet of retail/restaurant/entertainment, including one (1) or more restaurants (the "Retail/Restaurant/Entertainment Component"), a Parking Structure, and as more specifically described in the Scope of Development (Exhibit C), and such other improvements as may be required by the Land Use Approvals (collectively, the "Upper Upscale Hotel Component"). In addition, Developer has also proposed up to two (2) Limited/Select/Focus Service/Suites/Extended Stay type hotels (collectively, the "Limited Service Hotels" and each a "Limited Service Hotel"), consisting of approximately 125 - 200 rooms each. The Limited Service Hotels are more specifically described in the Scope of Development. The Upper Upscale Hotel, the Limited Service Hotels, Retail/Restaurant/Entertainment Component, Parking Structure, and the other improvements required to be constructed on the Site pursuant to this Agreement and the Land Use Approvals are collectively referred to herein as the "Developer Improvements" or "Project," and individually "Separate Component(s)."

The Agreement requires the Agency to acquire and convey the Site, relocate the existing tenants/businesses along with carrying the cost of an existing lease for approximately two years, demolish the existing improvements, and rough grade the Site at no cost to the Developer. In return, the Developer must construct the Project.

The Agreement imposes development restrictions on the Project including quality levels, size and amenities, which impact the proposed Hotel's feasibility. As such, the Agreement requires the Agency to provide financial assistance to the Developer to mitigate the economic impact caused by the controls.

Agency Responsibilities Under the Agreement

Subject to the specific terms and conditions stated in the Agreement and outlined in the summary of the Salient Points, the Agency's key responsibilities are:

1. **Additional Property.** To acquire additional property currently owned by third parties located at 12302 Harbor, 12511, 12531, 12551, and 12571 Twintree Lane and to be conveyed to the Developer for the proposed Project.
2. **Agency Property.** To convey certain property owned by the Agency to the Developer for the proposed Project.
3. **Upper Upscale Hotel Covenant Consideration.** In consideration for the granting of the Covenants by the Developer to the Agency, Agency shall pay to the Developer annually, within thirty (30) days after receipt by the City of Transient Occupancy Tax attributable to the Upper Upscale Hotel, from the date on which Completion of Construction of the Upper Upscale Hotel occurs:
 - (a) through June 30, 2034, an amount equal to fifty-eight percent (58%) of the Transient Occupancy Tax Revenues which have been paid to and received by the City in each calendar year during such period with respect to the Upper Upscale Hotel(s); and
 - (b) for a period of twelve years, an amount equal to fifty percent (50%) of the Remaining Revenues in each calendar year during such period. Remaining Revenues means (i) an amount equal to the balance of the Transient Occupancy Tax attributable to the Upper Upscale Hotel after deducting the amounts described in (a) above (i.e., the remaining 42% of the Transient Occupancy Tax Revenues attributable to the Upper Upscale Hotel), (ii) Net Tax Increment Revenues attributable to the Upper Upscale Hotel Component in each calendar year during such period, and (iii) Sales Tax Revenues attributable to the Upper Upscale Hotel Components in each calendar year during such period, after deducting an amount equal to fourteen and 29/100 percent (14.29%) of the Agency Improvement Costs each such calendar year until the total amount of the Agency Improvement Costs has been reached.
4. **Limited Service Hotel Covenant Consideration.** In consideration for the granting of the Covenants by the Developer to the Agency, and with respect to each Limited Service Hotel on the Site, Agency shall pay to the Developer annually, for the period commencing on the date on which Completion of Construction of such Limited Service Hotel(s) has occurred and expiring ten (10) years thereafter, an amount equal to fifty percent (50%) of (i) the Transient Occupancy Tax Revenues which have been paid to and received by the City in each calendar year during such period with respect to each such Limited Service Hotel, (ii) the Net Tax Increment attributable to the Limited Service Hotel(s) in each calendar year during such period, and (iii) Sales Tax Revenues attributable to the Limited Service Hotel(s) in each calendar year

during such period. Such payments will be made to Developer within thirty (30) days after receipt of such revenues by the City or Agency, as applicable.

5. **Sunbelt Property Covenant Consideration.** In consideration for the granting of the Covenants by the Developer to the Agency, the Agency shall pay to the Developer annually with respect to the Sunbelt Property, from and after Completion of Construction of any portion of the Retail/Restaurant/Entertainment Component on the Sunbelt Property, an amount equal to fifty percent (50%) of the Net Tax Increment Revenues and Sales Tax Revenues attributable to Retail/Restaurant/Entertainment Component of the Sunbelt Property for a period of ten (10) years from the date on which Completion of Construction of each such portion of the Retail/Restaurant/Entertainment Components on the Sunbelt Property (i.e., there shall be separate 10-year payment periods for each such portion of the Retail/Restaurant/Entertainment Components on the Sunbelt Property), in each case as received by the City in each calendar year during such period. The payments required shall be prorated for any partial years at the beginning or end of the applicable periods and paid to Developer within thirty (30) days after receipt of such revenues by the City or Agency, as applicable.

Developer Responsibilities Under the Agreement

Subject terms and conditions to the specific stated in the Agreement and outlined in the summary of the Salient Points, the Developer's key responsibilities are:

1. Design and construct the specific Improvements as specified in the Scope of Development, the Land Use Approvals, and the approved Final Construction Plans.
2. Meet development milestones, including commencement and completion of construction, by the dates specified in the Schedule of Performance.

II. COST OF THE AGREEMENT TO THE AGENCY

The estimated costs incurred by the Agency to implement the Agreement are Fifteen Million Eighth Hundred Thousand Dollars (\$15,800,000), and include the following:

Agency costs to acquire the Site (relocation costs, demolition costs, and costs for hazardous materials abatement), CEQA documentation, site preparation, administrative costs, and the Agency costs for other public improvement's \$15,800,000. Agency to provide direct financial assistance to the Developer for the Project of \$15,800,000.

The Agency will receive the Property Tax Increment generated by the Project, which will partially defray the Agency cost to implement the Agreement. In addition, the City will receive the Transient Occupancy Tax (TOT) and Sales Tax Revenues

generated by the Project, which are projected to produce substantial General Fund revenues over time.

III. ESTIMATED VALUE OF THE INTERESTS TO BE CONVEYED DETERMINED AT THE HIGHEST AND BEST USE PERMITTED UNDER THE REDEVELOPMENT PLAN

This section presents an analysis of the fair market value of the Site at its highest and best use.

In appraisal terminology, the highest and best use is that use of the Site that generates the highest property value and is physically possible, financially feasible, and legally permitted. Therefore, value at highest and best use is based solely on the value created and not whether or not that use carries out the redevelopment goals and policies for the City of Garden Grove. The subject property is located in a Land Use District, the Harbor Corridor Specific Plan HCSP. The district allows for tourist related land uses including hotels, retail and entertainment land uses.

Horwath Hospitality and Leisure, LLC ("Horwath"), the Agency's economic consultant, undertook a review of available appraisals and comparable land sales in order to determine the fair market value of Site. An appraisal was conducted by Lidgard and Associates, Inc. (Lidgard) on a portion of the Subject Site, which did not include the corner portion, with a date of value of March 31, 2009. Lidgard appraisal methodology relied on the comparable sales approach to value, with a conclusion range of value from \$43.00 to \$56.00 per SF of land (rounded). Subsequent to this appraisal, Lidgard provided sales as of April 2011. Horwath concluded the value of the Site (5.0 acres) as of May 9, 2011, to be \$10,900,000, or \$50.00 per SF of land, without consideration of costs such as the removal of current improvements on the Site.

In addition, a separate analysis of five Restaurant and Retail pad sites on a total of 2.422 acres by Keyser Marston Associates, Inc. concluded to an estimated \$50 per square foot for each parcel, or a total approximate land value of \$5,275,000. Added to this value were the Cost Savings from Sitework and Landscaping, for an Effective Land Payment of \$5,908,000. Subtracting Estimated Parking Costs by the Master Developer, resulted in Remaining Land Proceeds of \$2,624,000. This was considered to partially offset the negative Residual Reuse Value of the Hotel Site.

IV. ESTIMATED REUSE VALUE OF INTERESTS TO BE CONVEYED

In an "Option 1 - Estimated Reuse Value Report - Site C Proposed for Development by Land & Design, Inc. - Upper Upscale with Casitas, Select Service and All-Suite Hotels" dated June 9, 2011, Horwath prepared a reuse valuation analysis of the proposed Project. Based upon the financial terms and conditions imposed by the Agreement, Horwath analysis concluded that the Project generates a negative reuse value inclusive of the Agency Assistance, of Thirty-Six Million Dollars

(\$36,000,000). Adjusting for the partial offset from the Restaurant and Retail pad site(s), the Project generates a negative reuse value inclusive of the Agency Assistance, of Thirty-Three Million Four Hundred Thousand Dollars (\$33,400,000), rounded.

If the Developer chooses Option 2, which is a second full-service hotel with up to 225 rooms or two (2) Upper Upscale Hotels consisting of 450 in aggregate, in an "Option 2 - Estimated Reuse Value Report - Site C Proposed for Development by Land & Design, Inc. - Upper Upscale with Casitas and Upscale Full Service Hotel" dated June 9, 2011, Horwath prepared a reuse valuation analysis of the proposed Project. Based upon the financial terms and conditions imposed by the Agreement, Horwath analysis concluded that the Project generates a negative reuse value inclusive of the Agency Assistance, of Twenty Million Dollars (\$20,000,000). Adjusting for the partial offset from the Restaurant and Retail pad site(s), the Project generates a negative reuse value inclusive of the Agency Assistance, of Seventeen Million Four Hundred Thousand Dollars (\$17,400,000), rounded.

V. CONSIDERATION RECEIVED AND COMPARISON WITH THE ESTABLISHED VALUE

The Agreement requires the Agency to convey the Agency Properties to the Developer at no cost and to provide the Developer with direct financial assistance.

The Developer is required to provide public parking in a structure on the Site, develop an Upper Upscale hotel with approximately nineteen (19) stories and between three hundred (300) and four hundred rooms (400), including not less than ten thousand (10,000) square feet of meeting space as well as a minimum of ten thousand (10,000) and a maximum of sixty-five thousand (65,000) square feet of retail/restaurant/entertainment, including one (1) or more restaurants, all as more specifically described in the Scope of Development (DDA - Exhibit C). In addition, Developer has also proposed up to two (2) Limited Service Hotels and each a "Limited Service Hotel"), consisting of approximately 125 - 200 rooms each. The Limited Service Hotels are more specifically described in the Scope of Development. The Upper Upscale Hotel, the Limited Service Hotels, Retail/Restaurant/Entertainment Component, Parking Structure, and the other improvements required to be constructed on the Site pursuant to this Agreement and the Land Use Approvals are collectively referred to herein as the "Developer Improvements" or "Project," and individually "Separate Component(s)."

The Agency is also imposing extraordinary land use controls on the Site, i.e., the quality of the Project must be comparable to noted upper up-scale Westin Pasadena California. As indicated previously, the Horwath analysis concluded that the Agency Property has a negative reuse land value. Thus, Horwath concluded that the consideration to be received is essentially equal to the established fair use value.

VI. BLIGHT ELIMINATION

The Redevelopment Plan (Plan) for the Garden Grove Community Project Area governs the Site. In accordance with Section 33490 of the California Community Redevelopment Law, the Plan contains the goals and objectives and the projects and expenditures proposed to eliminate blight within the Project Area.

The Site, approximately 5 acres in size and encompasses fourteen (14) parcels, which will be used to develop the Project, is currently occupied with two (2) vacant and unimproved lots; four (4) lots that were formerly used as a trailer park (non-fixed recreational vehicle park) and are improved with vacant buildings (office, restroom, and laundry) that will be demolished; two (2) lots improved with a commercial building with the rear used as a trailer park (non-fixed recreational vehicle park) that will be demolished; four (4) lots improved with single-family homes that will be demolished; and two (2) lots comprising a portion of an unimproved backyard of two single-family home residences, which the residential structures are not part of this project. The development of the proposed Project on the Site will eliminate blight at this location by replacing substandard uses, underutilized land, uneconomic land uses, and obsolete structures defective in design character and physical condition, with a new high quality, mixed-use development. The Project will facilitate land assembly to prevent piecemeal development that would leave economic potential underachieved, re-plan, redesign and develop underdeveloped areas that are stagnant or improperly utilized, encourage private sector investment in development of the project areas, and strengthen hospitality, entertainment, retail and other commercial functions in the project areas.

VII. CONFORMANCE WITH AB 1290, FIVE-YEAR IMPLEMENTATION PLAN

The primary AB 1290 Implementation Plan program objective for the Garden Grove Community Project is to eliminate conditions which negatively impact economic development of the community by acquiring, removing, consolidating and rehabilitating substandard properties. To that end, the Agency plans to convey the Site to the Developer for the development of the Project.

Furthermore, the Agency's Implementation Plan 2010 through 2014 (Implementation Plan) also establishes a priority objective of increasing the community's economic base by encouraging new investment in the redevelopment project area. The Implementation Plan explicitly lists ensuring that optimum generation of sales tax revenues by facilitating the reuse, rehabilitation and development of commercial properties as an Agency goal. The Project, which will provide new commercial development and the subsequent transient occupancy and sales tax revenues, and property tax increment within the redevelopment project area, conforms to the Implementation Plan, and will achieve goals specifically defined in the Implementation Plan.

Subject: Re: 33433 Report

From: "Matthew Reid (Land & Design)" <matt.reid@landanddesign.com>

Date: Fri, 18 Nov 2011 08:21:47 -0800

To: Paul Guerrero <paulg@ci.garden-grove.ca.us>

CC: Greg Blodgett <greg1@ci.garden-grove.ca.us>

Thank you!

Sent from my iPad

Matthew W Reid

619.335.5896 Google voice | 619.462.4144 f

Skype - matthew.reid.ca

On Nov 18, 2011, at 8:14 AM, Paul Guerrero <paulg@ci.garden-grove.ca.us> wrote:

Matt,

Attached is the 33433 report.

Paul

<33433 Land & Design, Inc.; June 14, 2011.pdf>

Subject: EB-5

From: Matthew Reid <matt.reid@landanddesign.com>

Date: Mon, 28 Nov 2011 18:44:17 -0800

To: Greg Blodgett <greg1@zimbra.ci.garden-grove.ca.us>

CC: Dave Rose <drose3@charter.net>

Greg,

Here is an email we received today regarding pursuing EB-5 financing on the project. EB-5 financing is a VERY viable option and the only option (frankly) that Dave and I have found that can be done given the state of this economy.

It is crucial that you gain control of the land (both remaining residential and commercial parcels) so that we can go and represent that the property is assembled and there is a PROJECT.

As you know, we've said this from the very beginning that the land assembly is extremely important to getting this done.

Here is the email from THE ROBERT GREEN COMPANY:

Understood. Yes, I agree that we should be able to get a deal put together in that time frame.

There is one question that came to mind as I was talking through this internally today. We can't make a representation to the EB-5 investors that the deal is a go will until we know that all the land assembly issues and entitlements have been completed by the City. Similarly, we will be reticent to fund any reimbursement for costs incurred to date until those things have happened. So the timing of that all coming to conclusion is going to be critical. I would like to understand more thoroughly what the timing of the City process is and how it effects the timing of the steps we need to take.

Can we get on the phone tomorrow to walk through this? I have to go to LA for meetings on Palladium so I will be in the car a lot tomorrow with time to talk between 8 and 10:30 and then again between 2:00 and 6:00.

Please let me know what tie might be good.

Robert

Robert S. Green, Jr.
President

The Robert Green Company
169 Saxony Road
Suite 113
Encinitas, CA 92024

Clearly the land assembly is critical to us getting a deal done.

Matthew Reid

Land & Design, Inc.

8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942

619.335.5896 Google voice | 619.462.4144 fax

Skype – [matthew.reid.ca](https://www.skype.com/people/matthew.reid.ca)

matt.reid@landanddesign.com

Subject: Documents to be signed
From: Sherri Oslund <sherrio@ci.garden-grove.ca.us>
Date: Tue, 6 Dec 2011 17:09:56 -0800 (PST)
To: matt reid <matt.reid@landanddesign.com>
CC: Kathleen Angel <kathleenm@ci.garden-grove.ca.us>, Greg Blodgett <greg1@ci.garden-grove.ca.us>

Attached please find a document to be printed out and signed by you. Please return the signed document, by fax to 714/741-5136, by the end of business on Wednesday Dec 7th so that we may complete grant paperwork in reference to your project.

Sherri Oslund
City of Garden Grove
Economic Development Department
sherrio@ci.garden-grove.ca.us
714/741-5120 Direct
714/741-5136 Fax

Land and Design.pdf	Content-Type: application/pdf Content-Encoding: base64
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Exhibit A.

ASSURANCES OF COMPLIANCE With Civil Rights and Other Legal Requirements (To Be Executed by "Other Parties")	
<p>"Other Party" is herein defined as an entity that creates and/or saves (or intends to create/and or save) 15 or more permanent jobs as a result of the Economic Development Assistance (EDA) investment assistance, provided that such entity is also either specifically named in the application as benefiting from the project or is or will be located in a building, port, facility, or industrial, commercial, or business park constructed or improved in whole or in part with EDA investment assistance prior to EDA's final disbursement of funds. See 13 C.F.R. § 302.20.</p>	
<p>Applicant's Name:</p> <div style="border: 1px solid black; padding: 2px;">City of Garden Grove</div>	<p>"Other Party" Name:</p> <div style="border: 1px solid black; padding: 2px;">Land & Design; Inc.</div>
<p>Address:</p> <p>Street 1: <div style="border: 1px solid black; padding: 2px;">11222 Acacia Parkway</div></p> <p>Street 2: <div style="border: 1px solid black; padding: 2px;"> </div></p> <p>City: <div style="border: 1px solid black; padding: 2px;">Garden Grove</div> County: <div style="border: 1px solid black; padding: 2px;"> </div></p> <p>State: <div style="border: 1px solid black; padding: 2px;">CA: California</div></p> <p>Province: <div style="border: 1px solid black; padding: 2px;"> </div></p> <p>Country: <div style="border: 1px solid black; padding: 2px;">USA: UNITED STATES</div></p> <p>Zip/Postal Code: <div style="border: 1px solid black; padding: 2px;">92840</div> Phone Number: <div style="border: 1px solid black; padding: 2px;">714-741-5124</div></p>	
<p>The obligations incurred under this form apply only to the building, port, facility, or industrial, commercial or business park constructed or improved in whole or in part with investment assistance from the EDA. This form must be executed by an "Other Party" who satisfies the following conditions:</p> <p><input checked="" type="checkbox"/> The "Other Party" will (or intends to) create and/or save fifteen (15) or more permanent jobs (estimated number of jobs <div style="border: 1px solid black; padding: 2px;">400</div>) as a result of the EDA investment assistance; <u>and</u> (check applicable section below)</p> <p><input checked="" type="checkbox"/> (a) is specifically named in the application for EDA investment assistance as benefiting from the project; or</p> <p><input type="checkbox"/> (b) is or will be located in a building, port, facility, or industrial, commercial or business park constructed or improved in whole or in part with EDA investment assistance before EDA has made its final disbursement of EDA funds.</p>	
<p>ASSURANCES OF COMPLIANCE WITH THE U.S. DEPARTMENT OF COMMERCE AND EDA REGULATIONS (13 C.F.R. § 302.20) UNDER SECTION 601 OF TITLE VI OF THE CIVIL RIGHTS ACT OF 1964, SECTION 112 OF PUBLIC LAW 92-65, TITLE IX OF THE EDUCATION AMENDMENTS OF 1972, SECTION 504 OF THE REHABILITATION ACT OF 1973, AND THE AGE DISCRIMINATION ACT OF 1975, ALL AS AMENDED.</p>	
<p>The "Other Party" assures that it will comply with Section 601 of Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and the U.S. Department of Commerce's implementing regulations found at 15 C.F.R. part 8, and any amendments thereto.</p> <p>The "Other Party" agrees to comply with the provisions of Section 112 of Public Law 92-65 (42 U.S.C. 3123) and 42 U.S.C. 6709, and the U.S. Department of Commerce's implementing regulations found at 15 C.F.R. §§ 8.7-8.15, and any amendments thereto.</p> <p>The "Other Party" agrees to comply with Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and the U.S. Department of Commerce's implementing regulations found at 15 C.F.R. part 8b; Title IX of the Education Amendments of 1972 (20 U.S.C. 1681 et seq.); the Age Discrimination Act of 1975 (42 U.S.C. 6101 et seq.) and the U.S. Department of Commerce's implementing regulations found at 15 C.F.R. part 20, and the non-discrimination on the basis of age regulations found at 45 C.F.R. part 90.</p>	

Such requirements hold that no person in the United States shall on the ground of race, color, national origin, sex, handicap, or age be excluded from participation in, denied the benefits of, or otherwise subjected to discrimination under any program or activity for which federal financial assistance has been extended.

In accordance with these assurances and without limiting the above, the "Other Party" agrees that these assurances shall be binding upon it and any grantees, assignees, transferees, lessees, and successors in interest. These assurances shall also be binding through any modification or amendment to the financial assistance award or to the project.

The "Other Party" acknowledges that it is aware that if there appears to be a failure or threatened failure to comply with these assurances and the noncompliance or threatened noncompliance cannot be corrected by informal means, compliance may be effected by the suspension or termination of, or refusal to grant or to continue, federal financial assistance or by any other means authorized by law.

NOTICE

This form must be executed by an official authorized to make the aforementioned assurances, with full authority to bind the "Other Party" identified herein. If the "Other Party" is a corporation, this form must be executed by a corporate officer or person so authorized to make such assurances, and the title block must clearly indicate such authority. Assurance forms executed by employees other than corporate officers will not be accepted unless they are accompanied by a separate certification signed by a corporate officer or corporate counsel stating that the assessor has full authority to legally bind the "Other Party" identified below. In the case of an individual executing this assurance form as a sole owner, the sole owner's title must be indicated. For circumstances other than those discussed herein, contact the EDA Regional Office for instructions.

ACCEPTANCE OF ASSURANCES OF COMPLIANCE

These assurances are made binding for:

Name of "Other Party":

Address:

Street 1:
Street 2:
City: County:
State:
Province:
Country:
Zip/Postal Code: Telephone Number:

By: Prefix: First Name: Middle Name:
Last Name: Suffix:

*(Title of Corporate Officer)

(Signature of Official) (Date)

* If the person signing this form is not a corporate officer, the company's corporate officer or corporate counsel must certify in writing that the signatory is authorized to legally bind the company. Such written certification should be included as an electronic signature through www.Grants.gov or in hardcopy.

--WARNING--

False statements or representations made in connection with the "ASSURANCES OF COMPLIANCE" are a violation of federal law punishable by a fine of not more than \$10,000 or by imprisonment for not more than five years, or both (see 42 U.S.C. 3220; 18 U.S.C. 1001).

Subject: Re: Documents to be signed
From: Matthew Reid <matt.reid@landanddesign.com>
Date: Tue, 6 Dec 2011 18:48:09 -0800
To: Sherri Oslund <sherrio@ci.garden-grove.ca.us>
CC: Kathleen Angel <kathleenm@ci.garden-grove.ca.us>, Greg Blodgett <greg1@ci.garden-grove.ca.us>

Matthew Reid

Land & Design, Inc.
8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942
619.335.5896 Google voice | 619.462.4144 fax
Skype – [matthew.reid.ca](https://www.skype.com/people/matthew.reid.ca)
matt.reid@landanddesign.com

On Dec 6, 2011, at 5:09 PM, Sherri Oslund wrote:

Attached please find a document to be printed out and signed by you. Please return the signed document, by fax to 714/741-5136, by the end of business on Wednesday Dec 7th so that we may complete grant paperwork in reference to your project.

Sherri Oslund
City of Garden Grove
Economic Development Department
sherrio@ci.garden-grove.ca.us
714/741-5120 Direct
714/741-5136 Fax

<Land and Design.pdf>

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Part 1.1.3

Part 1.1.3	Content-Type: text/html Content-Encoding: quoted-printable
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Exhibit A.

ASSURANCES OF COMPLIANCE With Civil Rights and Other Legal Requirements (To Be Executed by "Other Parties")	
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Applicant's Name: City of Garden Grove	"Other Party" Name: Land & Design, Inc.
Address: Street 1: 11222 Acacia Parkway Street 2: City: Garden Grove County: State: CA: California Province: Country: USA: UNITED STATES Zip/Postal Code: 92840 Phone Number: 714-741-5124	
The obligations incurred under this form apply only to the building, port, facility, or industrial, commercial or business park constructed or improved in whole or in part with investment assistance from the EDA. This form must be executed by an "Other Party" who satisfies the following conditions:	
<input checked="" type="checkbox"/> The "Other Party" will (or intends to) create and/or save fifteen (15) or more permanent jobs (estimated number of jobs <input)="" <u="" a="" as="" assistance;="" eda="" investment="" of="" result="" the="" type="text" value="400"/> and (check applicable section below)	
<input checked="" type="checkbox"/> (a) is specifically named in the application for EDA investment assistance as benefiting from the project; or	
<input type="checkbox"/> (b) is or will be located in a building, port, facility, or industrial, commercial or business park constructed or improved in whole or in part with EDA investment assistance before EDA has made its final disbursement of EDA funds.	
ASSURANCES OF COMPLIANCE WITH THE U.S. DEPARTMENT OF COMMERCE AND EDA REGULATIONS (13 C.F.R. § 302.20) UNDER SECTION 601 OF TITLE VI OF THE CIVIL RIGHTS ACT OF 1964, SECTION 112 OF PUBLIC LAW 92-65, TITLE IX OF THE EDUCATION AMENDMENTS OF 1972, SECTION 504 OF THE REHABILITATION ACT OF 1973, AND THE AGE DISCRIMINATION ACT OF 1975, ALL AS AMENDED.	
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In accordance with these assurances and without limiting the above, the "Other Party" agrees that these assurances shall be binding upon it and any grantees, assignees, transferees, lessees, and successors in interest. These assurances shall also be binding through any modification or amendment to the financial assistance award or to the project.

The "Other Party" acknowledges that it is aware that if there appears to be a failure or threatened failure to comply with these assurances and the noncompliance or threatened noncompliance cannot be corrected by informal means, compliance may be effected by the suspension or termination of, or refusal to grant or to continue, federal financial assistance or by any other means authorized by law.

NOTICE

This form must be executed by an official authorized to make the aforementioned assurances, with full authority to bind the "Other Party" identified herein. If the "Other Party" is a corporation, this form must be executed by a corporate officer or person so authorized to make such assurances, and the title block must clearly indicate such authority. Assurance forms executed by employees other than corporate officers will not be accepted unless they are accompanied by a separate certification signed by a corporate officer or corporate counsel stating that the assessor has full authority to legally bind the "Other Party" identified below. In the case of an individual executing this assurance form as a sole owner, the sole owner's title must be indicated. For circumstances other than those discussed herein, contact the EDA Regional Office for instructions.

ACCEPTANCE OF ASSURANCES OF COMPLIANCE

These assurances are made binding for:

Name of "Other Party":

Address:

Street 1:
Street 2:
City: County:
State:
Province:
Country:
Zip/Postal Code: Telephone Number:

By: Prefix: First Name: Middle Name:
Last Name: Suffix:

*(Title of Corporate Officer)

(Signature of Official)  (Date)

* If the person signing this form is not a corporate officer, the company's corporate officer or corporate counsel must certify in writing that the signatory is authorized to legally bind the company. Such written certification should be included as an electronic signature through www.Grants.gov or in hardcopy.

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Subject: Market analysis of limited service product
From: "Matthew Reid (Land & Design)" <matt.reid@landanddesign.com>
Date: Thu, 8 Dec 2011 20:36:43 -0800
To: Greg Blodgett <greg1@ci.garden-grove.ca.us>

Greg,

We have a foreign group underwriting the deal right now. We have a conference call tomorrow at 3pm and they would like to see market information on the limited service hotel product in the Anaheim/Garden Grove area. Do you have anything you can email me to share with them?

Thanks.

Sent from my iPad

Matthew W Reid
619.335.5896 Google voice | 619.462.4144 f
Skype - matthew.reid.ca

Subject: Re: Market analysis of limited service product
From: "Florida Booth" <FBooth@HorwathHTL.com>
Date: Fri, 9 Dec 2011 09:10:12 -0800
To: "Greg Blodgett" <greg1@zimbra.ci.garden-grove.ca.us>
CC: <matt.reid@landanddesign.com>

Greg - I emailed my contact at PKF to get the most recent OJ Trends (which isolates Anaheim). Although it reports all levels of properties in its totals, it has rate categories that you can compare with occupancies, which should certainly give you an idea of the trending. I will forward it as soon as I get it.

Also, I know that you collect hotel occupancy taxes - can you just isolate the limited service properties via your computer for RevPAR trending? I don't think you could order a STR report at this late a date - however, you might be able to get a recent STR report from one of your participating limited service properties - it should give information on competing properties that might be very helpful.

----- Original Message -----

From: Greg Blodgett
To: Florida Booth
Sent: Friday, December 09, 2011 12:36 AM
Subject: Fwd: Market analysis of limited service product

Do you have some data for select service hotels

Sent from my iPhone

Begin forwarded message:

From: "Matthew Reid (Land & Design)" <matt.reid@landanddesign.com>
Date: December 8, 2011 8:36:43 PM PST
To: Greg Blodgett <greg1@ci.garden-grove.ca.us>
Subject: Market analysis of limited service product

Greg,
We have a foreign group underwriting the deal right now. We have a conference call tomorrow at 3pm and they would like to see market information on the limited service hotel product in the Anaheim/Garden Grove area. Do you have anything you can email me to share with them?

Thanks.

Sent from my iPad

Matthew W Reid
619.335.5896 Google voice | 619.462.4144 f
Skype - [matthew.reid.ca](https://www.skype.com/people/matthew.reid.ca)

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1873 / Virus Database: 2102/4669 - Release Date: 12/09/11

Subject: Re: Market analysis of limited service product
From: "Florida Booth" <FBooth@HorwathHTL.com>
Date: Mon, 12 Dec 2011 10:27:53 -0800
To: "Greg Blodgett" <greg1@zimbra.ci.garden-grove.ca.us>
CC: <matt.reid@landanddesign.com>

Sorry this is too late for your meeting, but I just received it today and figured it might be helpful in the future, at least.

----- Original Message -----

From: Greg Blodgett
To: Florida Booth
Sent: Friday, December 09, 2011 12:36 AM
Subject: Fwd: Market analysis of limited service product

Do you have some data for select service hotels

Sent from my iPhone

Begin forwarded message:

From: "Matthew Reid (Land & Design)" <matt.reid@landanddesign.com>
Date: December 8, 2011 8:36:43 PM PST
To: Greg Blodgett <greg1@ci.garden-grove.ca.us>
Subject: Market analysis of limited service product

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Thanks.

Sent from my iPad

Matthew W Reid
619.335.5896 Google voice | 619.462.4144 f
Skype - matthew.reid.ca

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1873 / Virus Database: 2102/4669 - Release Date: 12/09/11

OC ETrends 10-2011.pdf

Content-Type: application/pdf
Content-Encoding: base64

Re: Address of the site

Subject: Re: Address of the site
From: Matthew Reid <matt.reid@landanddesign.com>
Date: Thu, 15 Dec 2011 09:28:25 -0800
To: Greg Blodgett <Greg1@ci.garden-grove.ca.us>

Were you able to get anything here?

Matthew Reid

Land & Design, Inc.
8130 La Mesa Blvd | Suite 808 | La Mesa, CA 91942
619.335.5896 Google voice | 619.462.4144 fax
Skype – [matthew.reid.ca](https://www.skype.com/user/matthew.reid.ca)
matt.reid@landanddesign.com

On Dec 14, 2011, at 12:49 PM, Matthew Reid wrote:

Greg,

What do you think the address of our project would be? Is there an old address of the RV park? We are verifying that we fall within a TEA.

Matthew Reid

Land & Design, Inc.
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Skype – [matthew.reid.ca](https://www.skype.com/user/matthew.reid.ca)
matt.reid@landanddesign.com

Subject: Site C Harbor Addresses

From: Paul Guerrero <paulg@ci.garden-grove.ca.us>

Date: Thu, 15 Dec 2011 15:27:14 -0800 (PST)

To: matt.reid@landanddesign.com, Greg Blodgett <greg1@ci.garden-grove.ca.us>

Matt,

the following are Site C Harbor Addresses:

12252 harbor Bowen

12272 Harbor Kil

12282 Harbor

12286 Harbor

12292 Harbor

12296 Harbor

12302 Harbor Neff